

United Microelectronics Corporation 2021 Annual Report

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UMC annual report is available at:

<https://www.umc.com>

<https://mops.twse.com.tw>



Annual Report 2021

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EMPOWER THE FUTURE

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Letter to Shareholders

First of all, we would like to thank our shareholders for supporting and believing in UMC. The impact of the COVID-19 pandemic continued to ripple through the global economy and the semiconductor industry in 2021. Thanks to the efforts made by all our colleagues, and the trust from our partners and customers, UMC achieved remarkable results and demonstrated our resilience in the face of challenges. The year capped off with the 12th straight quarter of monthly revenue increase, bringing full-year sales to NT\$213 billion and full-year profit to NT\$55.78 billion. The company also ranked first among semiconductor peers in the 2021 Dow Jones Sustainability Indices (DJSI).

The company is forging long-term strategic partnerships with customers through an innovative collaboration model, which we expect will enhance our value proposition and further strengthen UMC's position in the industry. Looking ahead, we will continue to capture growth opportunities as well as advance our efforts in promoting sustainability in order to maximize value for our shareholders and stakeholders.

2021 Business Summary

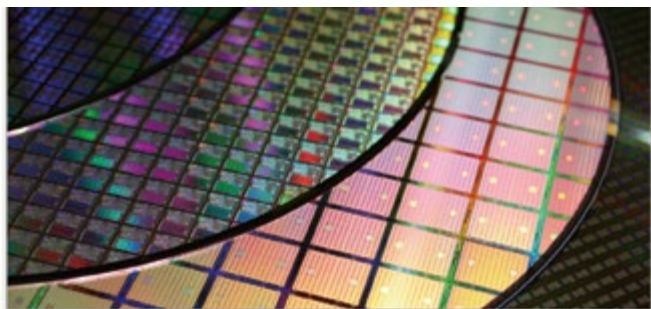
In 2021, UMC shipped a total of 9.9 million 8-inch equivalent wafers, up 10.6% from a year earlier, while the overall utilization rate across our fabs exceeded 100%. Revenue for the year rose 20.5% year-on-year to NT\$213 billion. Gross margin was 33.3% while operating margin was 24.3%. Profit attributable to the shareholders of the parent company surged 91.1% year-on-year to NT\$55.78 billion, with a full-year EPS of NT\$4.57.

Capital expenditure in 2021 amounted to US\$1.8 billion, which was mainly for the expansions at Fab 12A in Taiwan's Tainan Science Park and Fab 12X in Xiamen, China. The remainder was used in the optimization of the product mix across all fabs.

To address growing demand and the shortage of foundry capacity, UMC is partnering with several leading global customers to expand Fab 12A. The total investment for this project will be approximately NT\$100 billion, and it is expected that the company's accumulated investment in the Tainan Science Park will be around NT\$150 billion over the next three years. This expansion will contribute to steady growth for the company while also ensuring long-term profitability and strengthening our market position.

Technology Leadership and Development

In 2021, UMC invested NT\$12.9 billion in research and development to enhance our foundry processes required for end markets such as 5G, AI, IoT, and electric vehicles. Benefiting from the rising penetration of 5G smartphones, we are seeing strong demand for our image signal processor (ISP), OLED display driver IC (DDI), and Radio Frequency Silicon on Insulator (RFSOI) products, which is further solidifying the company's position in the smartphone market. With the normalization of remote work and remote learning, we expect demand will remain stable for our power management IC (PMIC) and WiFi products. Automotive and AR/VR applications are also demanding more silicon content, and UMC's technology portfolio can fully support our customers' needs in these areas.



UMC's advanced technology platforms including 14nm FinFET compact (14FFC), 22nm ultra-low power (22ULP), 22nm ultra-low leakage (22ULL), and 28nm high performance computing (28HPC+) manufacturing processes are all in volume production. The development of 22nm ISP and 22nm and 28nm mmWave processes is well under way.

For specialty technologies, our RFSOI and complementary solutions offer both high performance and reasonable cost for wireless RF chips. UMC led the industry in applying the RFSOI process to 12-inch wafers and our global share of the RFSOI market has reached 16%. UMC's Bipolar-CMOS-DMOS (BCD) technology accommodates multiple voltage device options for various PMIC applications and is widely used in end products including smartphones, laptop computers, desktop computers, and automotive electronics. It is the fastest growing segment in our 8-inch wafer business. As for our high voltage (HV) platform, UMC maintains the largest market share among foundries in the global OLED and LCD DDI market, and our 28nm DDI solution was the first in the industry to enter volume production. Ranging from 180nm to 28nm, UMC's embedded non-volatile memory platform caters to a wide range of applications from IoT and industrial, to consumer and communication.

In addition, UMC is actively investing in the development of gallium nitride (GaN) and microwave platforms to penetrate high-efficiency power component and 5G microwave component markets. The company will continue to enhance its specialty portfolio as well as develop newer technologies including silicon carbide (SiC), Resistive Random Access Memory (ReRAM), Magneto-resistive Random Access Memory (MRAM), and 3DIC.

Intellectual Property

Intellectual property is the foundation of the semiconductor industry. With industry players racing to develop and secure technologies, the company is actively taking steps to protect our intellectual property rights as well as those of our partners. The overall number of patents granted to UMC has grown steadily over the years. In 2021, UMC obtained a total of 432 domestic and foreign patents, including 206 US patents, 60 ROC patents, and 166 patents from mainland China, bringing the accumulated number of patents to 14,423.

To enhance trade secret protection, UMC has enhanced internal compliance training and established a comprehensive intellectual property management system. In 2021, the company introduced the Taiwan Intellectual Property Management System (TIPS), the official benchmark for Taiwan enterprises, demonstrating our determination to strengthen our IP management and corporate governance.

Corporate Sustainability

UMC's sustainability vision is for the environment and our communities to flourish together. While pursuing operational growth, we are committed to balance business needs with the advancement of our environment, social, and governance (ESG) responsibilities, as guided by the UN Sustainable Development Goals. In 2021, UMC became the first semiconductor foundry globally to pledge net-zero carbon emissions by 2050, and the company also joined the RE100 renewal energy initiative. We plan to achieve our target through active carbon reduction, 100% renewable energy usage, and investment in net-zero carbon technologies.

Honors and Awards

Listed in the "DJSI Dow Jones Sustainability Index World Index" for 14

consecutive years, and included in the "Emerging Market Index"

Received the "Taiwan Corporate Sustainability Report Award" for 14 consecutive years and was awarded the highest level Platinum Award for the fourth time

Received the best rating in the top 5% of the "Corporate Governance Evaluation" for 7 consecutive years

Awarded the "National Enterprise Environmental Protection Award" for 19 consecutive years

Won the "Taiwan Top Ten Sustainability Model Award" for the third time

Outlook

The continuous penetration of 5G smartphones, the acceleration of electric vehicle adoption, and the fast proliferation of IoT are leading to higher silicon content in end devices. These mega-trends are and will



President: SC Chien

Chairman: Stan Hung

President: Jason Wang

Signature of SC Chien

Signature of Stan Hung

Signature of Jason Wang

continue to generate strong demand for UMC's specialty technologies in the foreseeable future and enable the company to expand our market share.

The demand-supply imbalance in the foundry industry over the past two years has spurred a structural transformation in the value chain towards closer partnerships. The company is already working closely with our customers, and even customers of customers, to address the supply challenges in our industry, aiming to bring greater visibility and transparency to the supply chain.

We will continue to deepen collaboration with customers through our differentiated specialty technologies, manufacturing excellence, and capacity expansions closely linked to the demands of our partners. At

the same time, we will keep pushing for cost reduction and meticulously manage our capital expenditure in order to deliver sustainable and healthy returns for our shareholders. Finally, we are pleased to receive a number of important recognitions in the past year for our relentless focus on sustainability. Sustainability is at the core of everything we do, and we will continue prioritizing resources to drive critical ESG initiatives.

Once again, we are grateful for the support from all our shareholders. UMC is committed to realizing our vision of unleashing the power of technology for a better world, and we are excited to share this journey with you.

To unleash the power of technology
for a better world.

Corporate Profile

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Corporate Profile and Date of Establishment

Founded on May 22, 1980 as Taiwan's first semiconductor company, UMC has grown to become a leading global semiconductor foundry. The company provides high quality IC production with a focus on both logic and specialty technologies to serve every major sector of the electronics industry. UMC's comprehensive technology and manufacturing solutions include Logic/Mixed-Signal, embedded High-Voltage, embedded Non-Volatile-Memory, RFSOI and BCD etc., and IATF-16949 automotive manufacturing certification for all its manufacturing facilities. UMC operates 12 fabs with combined capacity of more than 800,000 8-inch equivalent wafers per month.

UMC led the development of the commercial semiconductor industry in Taiwan. It was the first local company to offer foundry services, as well as the first semiconductor company to list on the Taiwan Stock Exchange (1985). UMC has an extensive network of service offices in Taiwan, China, Europe, Japan, Korea, Singapore, and the United States with approximately 20,000 employees worldwide to meet the needs of its global customer base. UMC will continue to provide customers with robust process technologies and comprehensive foundry solutions, enabling customers to continuously strengthen their competitive advantage in today's rapidly changing industry.

Four of UMC's 12 wafer fabs are advanced 12-inch fabs. Fab 12A in Tainan, Taiwan has been in volume production for customer products since 2002 and is currently manufacturing products down to 14nm. UMC's second 12-inch fab, Fab 12i, is located in Singapore. This facility is the company's specialty technology center that provides highly

specialized processes on 12-inch manufacturing to serve a diverse range of product applications. United Semi, located in Xiamen, China, was established as southern China's first 12-inch foundry fab and began volume production in 2016. United Semi serves China's vast IC market and provides high quality, geographically diversified manufacturing for our foundry customers. Japan-based USJC, fully acquired in October of 2019, is UMC's fourth 300mm fab. USJC offers foundry volume production for mature specialty nodes ranging from 90-nanometer to 40-nanometer.

In addition, UMC's manufacturing expertise and over 40 years of experience ensure industry-leading cycle times and defect densities. Comprehensive process control systems with advanced methodologies and a strong engineering team support fast product ramp. UMC's advanced automation, mature defect density, fast cycle times and ample capacity enable UMC to provide the most competitive manufacturing advantages for our foundry customers.

Company establishment date: May 22, 1980.

Corporate Milestones

May, 1980	Established
July, 1985	Officially listed on the TWSE
July, 1995	Transformed into a pure-play foundry company
July-September, 1995	Formed joint ventures with 11 IC design houses from North America to establish three foundry companies
September, 1995	8-inch fab started mass production
January, 1996	0.35-micron technology process started production
October, 1997	0.25-micron technology process started production
April, 1998	Acquired Holtek Semiconductor fab (now known as Fab 8E)
December, 1998	Acquired Nippon Steel Semiconductor Corp. fab (renamed UMCJ in 2001)
March, 1999	0.18-micron technology process started production
November, 1999	Official construction began for UMC's 12-inch fab in Tainan Science Park
January, 2000	UMC Group 5-in-1 Millennium (Consolidated UMC, United Semiconductor Corp. (USC), United Integrated Circuits Corp. (UICC), United Silicon, Inc. (USIC) and UTEK Semiconductor Corp. into a single UMC)
March, 2000	Manufactured first IC using all-copper interconnects
May, 2000	Manufactured first 0.13-micron process IC
September, 2000	Listed on the New York Stock Exchange
December, 2000	Groundbreaking for the world's most advanced 12-inch fab in Singapore (UMCi)
January, 2003	UMCi announced 12-inch fab equipment move-in
March, 2003	Manufactured the first 90nm process IC
March, 2004	UMCi started mass production
May, 2004	90nm process was fully verified and started mass production
July, 2004	UMC acquired SiS Microelectronics (now known as Fab 8S)
December, 2004	Acquired its subsidiary UMCi and changed its name to Fab 12i
June, 2005	Manufactured the first 65nm customer IC

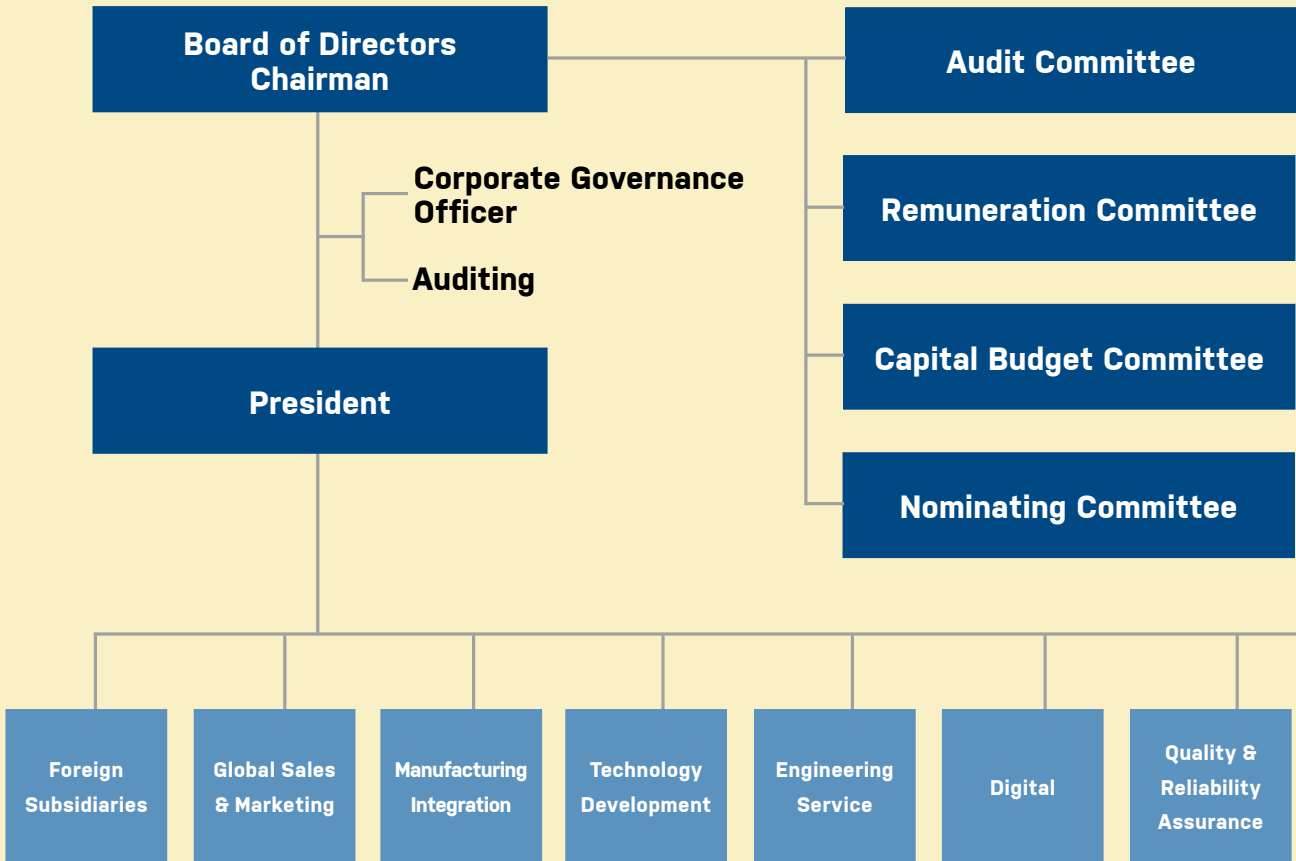
August, 2005	90nm wafer shipments exceeded 100,000
June, 2006	Became the first semiconductor manufacturer in the world to complete QC-080000 IECQ HSPM certification for all company-wide sites
November, 2006	Manufactured the first 45nm IC
January, 2007	Expanded production site and completed a new R&D building in Tainan Science Park
September, 2008	Listed as a constituent stock by Dow Jones Sustainability Indexes
October, 2008	Announced foundry industry's first 28nm SRAMs
April, 2009	Delivered customer ICs produced on its high performance 40nm logic technology
December, 2009	Announced completion of tender offer to UMC Japan
May, 2010	Celebrated 30th Anniversary
December, 2010	12-inch fab Fab 12A Phase 3 began production
October, 2011	28nm process began pilot production
May, 2012	Groundbreaking ceremony for Fab 12A's new Phase 5 & 6 in Tainan Science Park
March, 2013	Acquired HeJian Fab based in Suzhou, China
May, 2013	Established its Specialty Technology Center of Excellence in Singapore
August, 2014	Joined Fujitsu's new foundry company
March, 2015	Groundbreaking of United Semi (Xiamen) Fab
November, 2016	Held grand opening ceremony for new 12-inch fab in Xiamen, China and the fab started mass production
February, 2017	Entered mass production for 14nm customer ICs
June, 2018	Board approved 100% acquisition of MIFS fab in Japan from Fujitsu
October, 2019	Acquired 100% of MIFS 300mm fab, renamed USJC
May, 2020	Celebrated 40th Anniversary
April, 2021	UMC partnered with customers for capacity expansion at 300mm Fab 12A P6 in Tainan
June, 2021	UMC joined RE100 and pledged net zero emissions by 2050
November, 2021	UMC selected as a DJSI global component for 14th consecutive year



Corporate Governance Report

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Corporate Organization



Organizational Functions

Foreign Subsidiaries

- Responsible for client and regional market development in the Americas, Europe, and Asia, and provide technical support and services.

Global Sales and Marketing

- Responsible for global customer and operational management and market development, and provide technical support and services.
- Undertake UMC's objectives, analyze market information and integrate UMC's internal resources and external competition. Formulate technical development blueprints, strategic recommendations and advanced market development to serve as reference for UMC's future business direction.

Manufacturing Integration

- Responsible for managing 8-inch and 12-inch operations, product manufacturing, manufacturing technology development, and integration of production and services.

Technology Development

- Design, develop and manage intellectual property core for customer product needs.
- Research and develop advanced process technology platforms, and develop and apply advanced material technology platforms.
- Research and develop technologies for various mature and special process platforms.

Engineering Service

- Responsible for product engineering, malfunction and material analysis, product introduction and yield improvement for all fabs.
- Provide company-wide photomask service, management, quality control and improvements.
- Provide company-wide back-end encapsulation testing, quality control and improvements.

Digital

- Through innovative digital technologies, combined IoT, big data and artificial intelligence and integrated semiconductor expertise (OT) and information technology (IT). Construct data-driven advanced semiconductor smart manufacturing systems to improve product quality and yield. Improve and optimize production efficiency and production costs to achieve world-class quality of production services. Ensure information security and service quality to achieve customer satisfaction, company operational efficiency, and research and development momentum.

Quality and Reliability Assurance

- Responsible for comprehensive quality management, strengthening quality awareness and improving product reliability testing to meet customer demand for quality and improve quality control for mass products.



Corporate and Operation Planning

- Develop capacity plans and operational resource integration, and assist in production and sales coordination.

Manufacturing Resource Integration

- Responsible for company-wide plant operations, plant expansion planning and environmental safety and risk management.

Finance

- Responsible for UMC's finances and accounting management, and serve as spokesperson for UMC.

Corporate Development

- Responsible for corporate development and strategy planning.

Legal, Intellectual Property and Compliance

- Responsible for domestic and international intellectual property rights management, legal affairs, and compliance with domestic and foreign laws and regulations.

Human Resources

- Responsible for the selection, utilization, cultivation and retention of human resource and ensuring a suitable working environment for employees.
- Responsible for ensuring the physical safety of UMC's personnel, affairs and objects through tangible actions.

New Business Development

- Responsible for developing, assessing and managing new ventures.

Auditing

- Responsible for assisting the Board of Directors and managers to independently and objectively assess the effectiveness of designs and implementation of internal control system. Provide timely recommendations for improvement to ensure compliance with UMC's policies and relevant laws and regulations.

Directors' and Managers' Information

Directors' Information

Title	Nationality /Place of Incorporation	Name	Gender Age	Date Elected (Date Assumed) <Date First Elected>	Term Expires	Shareholding When Elected		Present Shareholding	
						Common Shares	%	Common Shares	%
Chairman	R.O.C.	Stan Hung	Male 61 years old	2021.07.07 <2008.07.16>	2024.07.06	49,301,452	0.40	49,301,452	0.39
Independent Director	R.O.C.	Wenyi Chu	Female 55 years old	2021.07.07 <2015.06.09>	2024.07.06	0	0	0	0
Independent Director	R.O.C.	Lih J. Chen	Male 75 years old	2021.07.07 <2018.06.12>	2024.07.06	0	0	0	0
Independent Director	R.O.C.	Jyuo-Min Shyu	Male 68 years old	2021.07.07 <2018.06.12>	2024.07.06	0	0	0	0
Independent Director	R.O.C.	Kuang Si Shiu	Male 70 years old	2021.07.07 <2021.07.07>	2024.07.06	0	0	0	0

Spouse & Minor Shareholding		Experience (Education)	Selected Current Position at UMC and Other Companies
Common Shares	%		
1,269,435	0.01	Chairman, UMC Bachelor in Accounting, Tamkang University	Chairman & Chief Strategic Officer, UMC; Chairman, Fortune Venture Capital Corp.; Chairman, TLC Capital Co., Ltd.; Chairman, Faraday Technology Corporation; Chairman, UMC Capital Corp.; Director, Triknight Capital Corporation; Director, United Microelectronics (Europe) B.V.; Executive Director, UnitedDS Semiconductor (Shandong) Co., Ltd.
0	0	Professor, Department of Business Administration, National Taiwan University Deputy Vice President for Academic Affairs, National Taiwan University Ph.D. of London Business School	None
0	0	Academician, Academia Sinica Distinguished Chair Professor, National Tsing Hua University President, National Tsing Hua University Deputy Minister, National Science Council Ph.D. in Physics, University of California, Berkeley	None
0	0	Emeritus Professor, National Tsing Hua University Minister, Ministry of Science and Technology President, Industrial Technology Research Institute Dean, College of Electrical Engineering and Computer Science, National Tsing Hua University Professor, Department of Computer Science, National Tsing Hua University Ph.D. in Electrical Engineering and Computer Science, University of California, Berkeley	Independent Director, Qisda Corporation; Independent Director, Far EasTone Telecommunications Co., Ltd.; Director, Iridium Medical Technology Co., Ltd; Director, GeoThings, Inc.; Director, Alpha Ring Asia Inc.
0	0	Chairman & President, Mega Financial Holding Co., Ltd. Chairman & President, Mega International Commercial Bank Co., Ltd. Chairman, Hua Nan Financial Holdings Co., Ltd. Chairman, Hua Nan Commercial Bank Ltd. Chairman, Land Bank of Taiwan Co., Ltd. Executive Vice President, Chiao Tung Bank Co., Ltd. Master in Business Administration, Indiana University	Independent Director, Yuanta Financial Holdings Co., Ltd.; Independent Director, Yuanta Commercial Bank Co., Ltd.

Directors' Information (Continue)

Title	Nationality /Place of Incorporation	Name	Gender Age	Date Elected (Date Assumed) <Date First Elected>	Term Expires	Shareholding When Elected		Present Shareholding	
						Common Shares	%	Common Shares	%
Independent Director	R.O.C.	Wen-Hsin Hsu	Female 45 years old	2021.07.07 <2021.07.07>	2024.07.06	0	0	0	0
Director	R.O.C.	Ting-Yu Lin	Male 60 years old	2021.07.07 <2009.06.10>	2024.07.06	12,547,222	0.10	12,547,222	0.10
Director	R.O.C.	Hsun Chieh Investment Co., Ltd.	N/A	2021.07.07 <1995.06.21>	2024.07.06	441,371,000	3.55	441,371,000	3.54
	R.O.C.	Representative: SC Chien	Male 64 years old	2021.07.07 <2016.03.01>	2024.07.06	9,294,648	0.07	9,294,648	0.07
Director	R.O.C.	Silicon Integrated Systems Corp.	N/A	2021.07.07 <2005.06.13>	2024.07.06	285,380,424	2.30	285,380,424	2.29
	U.S.A.	Representative: Jason Wang	Male 59 years old	2021.07.07 <2015.06.09>	2024.07.06	18,715,000	0.15	18,715,000	0.15
Former Independent Director	R.O.C.	Cheng-Li Huang	Male N/A	2018.06.12 <2009.06.10>	2021.06.11	0	0	N/A	N/A

Note 1: Present shareholding figures are actual number of shares held on January 31, 2022.

Note 2: Directors' election date is the same date they assumed their positions.

Note 3: Directors are not spouses or relatives within the second degree of kinship of other managers and directors.

Note 4: Directors did not hold shares through other parties.

Note 5: Presidents and Chairman are not the same person, spouses or relatives within the first degree of kinship.

Note 6: The term of Independent Director, Cheng-Li Huang is expired on July 7, 2021.

Spouse & Minor Shareholding		Experience (Education)	Selected Current Position at UMC and Other Companies
Common Shares	%		
0	0	Professor, Department of Accounting, National Taiwan University Associate Dean, International affairs, College of Management School, National Taiwan University Director, Global MBA, National Taiwan University Director, Case Center, National Taiwan University Secretary General, Taiwan Accounting Association Ph.D. in Accounting & Finance, Lancaster University	Independent Director, Unitech Printed Circuit Board Corp.; Independent Director, ANT Precision Industry Co., Ltd.; Director, Universal Venture Capital Investment Corporation; Director, Taiwan Insurance Guaranty Fund
0	0	Chairperson, Sunrox International Inc. Master in International Finance, Meiji University	Director, Unimicron Technology Corp.
N/A	N/A	N/A	N/A
0	0	Director, UMC Bachelor in Chemical Engineering, National Taiwan University	President, UMC; Director, Fortune Venture Capital Corp.; Director, TLC Capital Co., Ltd.; Director, Unimicron Technology Corp.; Director, UMC Capital Corp.
N/A	N/A	N/A	N/A
0	0	Director, UMC Business Administration, San Jose State University	President, UMC; Director, Fortune Venture Capital Corp.; Director, TLC Capital Co., Ltd.; Director, UMC Group (USA); Director, United Microelectronics (Europe) B.V.; Director, UMC Capital Corp.; Director, United Microtechnology Corporation (California)
N/A	N/A	Certified Public Accountant, Zheng Ji Accounting Firm Professor, Department of Accounting, Tamkang University Ph.D. of Business School, the University of Warwick	N/A

Major Shareholders of UMC's Institutional Shareholders

Name of Institutional Shareholders	Major Shareholders (Holding Percentage)
Hsun Chieh Investment Co., Ltd.	Shieh Yong Capital Co., Ltd. (63.51%); UMC (36.49%)
Silicon Integrated Systems Corp.	UMC (19.01%); Hsun Chieh Investment Co., Ltd. (4.80%); Hsing-Shen Liu (1.38%); Vanguard Emerging Markets Stock Index Fund, a series of Vanguard International Equity Index Funds (1.12%); JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (0.96%); Standard Chartered Bank Limited as custodian of Credit Suisse International (0.90%); Cong-Ming Zhuang (0.46%); Wen-Chi Chen (0.45%); Vanguard FTSE All-World ex-US Small-Cap Index Fund, a series of Vanguard International Equity Index Funds (0.35%); Vanguard Fiduciary Trust Company Institutional Stock Market Index Trust II (0.35%)

Major Shareholders of UMC's Major Institutional Shareholders

Name of Institutional Shareholders	Major Shareholders (Holding Percentage)
Shieh Yong Capital Co., Ltd.	Unimicron Technology Corp. (16.67%); Silicon Integrated Systems Corp. (16.67%); Novatek Microelectronics Corp. (15.15%); Yann Yuan Investment Co., Ltd. (12.20%); Faraday Technology Corporation (12.12%); King Yuan Electronics Co., Ltd. (7.58%)

Directors' Professional Qualification & Independent Directors' Independence Information:

Name	Criteria Professional Qualification & Experience (Note 1)	Independence Status	Number of Companies also Serves as Independent Director for
Stan Hung	<ul style="list-style-type: none"> Financial accounting and strategic management Electronics-related industrial experience 		0
Wenyi Chu	<ul style="list-style-type: none"> Financial accounting and strategic management Electronics-related industrial experience 	Meet the independence criteria (Note 2)	0
Lih J. Chen	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 	Meet the independence criteria (Note 2)	0
Jyuo-Min Shyu	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 	Meet the independence criteria (Note 2)	2
Kuang Si Shiu	<ul style="list-style-type: none"> Financial accounting and organizational leadership Banking Finance and business policy-making 	Meet the independence criteria (Note 2)	2
Wen-Hsin Hsu	<ul style="list-style-type: none"> Financial accounting and corporate sustainability Electronics-related industrial experience 	Meet the independence criteria (Note 2)	2
Ting-Yu Lin	<ul style="list-style-type: none"> Financial accounting and strategic management Electronics-related industrial experience 		0
SC Chien	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 		0
Jason Wang	<ul style="list-style-type: none"> Financial accounting and organizational leadership Electronics-related industrial experience 		0

The Diversity & Independence of the Board of Directors:

(1) The Diversity of the Board of Directors:

UMC has established the Policy for Nomination and Election of Directors that takes into account the Company's organizational culture, business model and long-term development, and also established criteria to ensure the diversity of the Board members. There are currently two seats reserved for female directors. Based on our policy of gender equality, UMC will increase the female director seats progressively. The tenures of independent directors are also diversified; there is one director who has served for six years, two directors for three years and two directors who were newly elected on July 7, 2021. The board of UMC is composed of members with diversified backgrounds of industry, government and academia. The experiences of Board members include the president of a national university, a fellow of Academia Sinica, the Minister of Science and Technology, the president of ITRI, financial experts in finance, accounting and strategy management fields, and professionals from the semiconductor industry and ICT business administration. The directors satisfy basic criteria and professionalism requirements, and through activities of the sub-committees, can also contribute their experiences to supervise and govern issues related to corporate governance, environmental sustainability, corporate social responsibility, legal compliance and human rights protection. Please refer to UMC's Policy for Nomination and Election of Directors for UMC Board diversification criteria, the Directors' Information and the Skill Matrix of Board members for implementation of Board diversification on the Company's website: https://www.umc.com/en/IR_Director/directors_information.

(2) The Independence of the Board of Directors:

The UMC Board of Directors comprises of nine members, including five seats for independent directors and one for a non-executive director; three serve as administrative directors. More than one half of the director seats are independent directors.

Note 1: The Company's Financial Experts of the Audit Committee are independent directors Wenyi Chu, Kuang Si Shiu and Wen-Hsin Hsu. All directors are not under any condition pursuant to Article 30 of the Company Act. Please refer to Page 16-19 of the Annual Report & the Company's website: https://www.umc.com/en/IR_Director/directors_information for Directors' relevant industrial experience.

Note 2: The Company's independent directors, their spouses and relatives within the second degree of kinship are not directors, supervisors or employees of the Company or its affiliates; the Company's independent directors, their spouses and relatives within the second degree of kinship (or in the name of other persons) do not own the Company's outstanding shares, nor are directors, supervisors or employees of companies which have specific relationship with the Company; the Company's independent directors, their spouses and relatives within the second degree of kinship do not provide the Company and its affiliates with services of business, legal affairs, finance and accounting in the past two years to get payment.

Managers' Information

Title	Nationality	Name	Gender	Date Elected (Date Assumed)	Present Shareholding		Spouse & Minor Shareholding	
					Common Shares	%	Common Shares	%
Chairman & Chief Strategic Officer	R.O.C.	Stan Hung	Male	2008.07.16	49,301,452	0.39	1,269,435	0.01
President	R.O.C.	SC Chien	Male	2004.11.23	9,294,648	0.07	0	0
President	U.S.A.	Jason Wang	Male	2014.12.24	18,715,000	0.15	0	0
Executive Vice President	R.O.C.	Ming Hsu	Male	2015.06.08	2,483,000	0.02	0	0
Senior Vice President	R.O.C.	Oliver Chang	Male	2020.02.26	1,090,589	0.01	0	0
Senior Vice President & Chief Financial Officer	R.O.C.	Chitung Liu	Male	2005.10.20	3,200,217	0.03	150,000	0.00
Senior Vice President & General Counsel	R.O.C.	Lucas S Chang	Male	2018.01.01	550,000	0.00	0	0
Vice President	R.O.C.	TS Wu	Male	2013.01.01	1,535,809	0.01	304	0.00
Vice President	R.O.C.	C C Hsu	Male	2013.01.01	2,052,068	0.02	0	0
Vice President	R.O.C.	M C Lai	Male	2015.03.30	2,126,863	0.02	0	0
Vice President	R.O.C.	S F Tzou	Male	2013.01.01	879,108	0.01	0	0
Vice President	R.O.C.	Osbert Cheng	Male	2014.08.01	755,000	0.01	0	0

Experience/Education	Selected Current Position at Other Companies
Chairman & Chief Strategic Officer, UMC Bachelor in Accounting, Tamkang University	Chairman, Fortune Venture Capital Corp.; Chairman, TLC Capital Co., Ltd.; Chairman, Faraday Technology Corporation; Chairman, UMC Capital Corp.; Director, Triknight Capital Corporation; Director, United Microelectronics (Europe) B.V.; Executive Director, UnitedDS Semiconductor (Shandong) Co., Ltd.
President, UMC Bachelor in Chemical Engineering, National Taiwan University	Director, Fortune Venture Capital Corp.; Director, TLC Capital Co., Ltd.; Director, Unimicron Technology Corp.; Director, UMC Capital Corp.
President, UMC Business Administration, San Jose State University	Director, Fortune Venture Capital Corp.; Director, TLC Capital Co., Ltd.; Director, UMC Group (USA); Director, United Microelectronics (Europe) B.V.; Director, UMC Capital Corp.; Director, United Microtechnology Corporation (California)
Executive Vice President, UMC Master in Science Electrical Engineering, University of Southern California	Director, United Semiconductor Japan Co., Ltd.
Senior Vice President, UMC Bachelor in Physics, Chinese Culture University	None
Senior Vice President & Chief Financial Officer, UMC EMBA in Business Administration, National Taiwan University	Chairman, HeJian Technology (Suzhou) Co., Ltd.; Chairman, United Semiconductor (Xiamen) Co., Ltd.; Director, Fortune Venture Capital Corp.; Director, TLC Capital Co., Ltd.; Director, Unimicron Technology Corp.; Director, Novatek Microelectronics Corp.; Director, UMC Group (USA); Director, Green Earth Limited; Director, ECP Vita Pte. Ltd.; Director, UMC Capital Corp.; Director, United Microchip Corporation; Director, United Semiconductor Japan Co., Ltd.
Senior Vice President & General Counsel, UMC J.D. in Law, University of Santa Clara	Director, Alpha and Omega Semiconductor Limited
Vice President, UMC Master in Electronic Engineering, National Chiao Tung University	None
Vice President, UMC Master in Materials Science & Engineering, National Tsing Hua University	Vice Chairman, United Semiconductor (Xiamen) Co., Ltd.
Vice President, UMC Bachelor in Materials Science & Engineering, National Tsing Hua University	Chairman, Wavetek Microelectronics Corporation; Director, Wavetek Microelectronics Investment (Samoa) Limited; Director, HeJian Technology (Suzhou) Co., Ltd.
Vice President, UMC Master in Materials Science & Engineering, National Tsing Hua University	Chairman, United Semiconductor Japan Co., Ltd.
Vice President, UMC Ph.D. in Electrical Engineering, National Chiao Tung University	None

Managers' Information (Continue)

Title	Nationality	Name	Gender	Date Elected (Date Assumed)	Present Shareholding		Spouse & Minor Shareholding	
					Common Shares	%	Common Shares	%
Vice President	R.O.C.	G C Hung	Male	2015.01.28	1,940,791	0.02	0	0
Vice President	R.O.C.	Steven Hsu	Male	2016.03.16	510,000	0.00	2,889	0.00
Vice President	R.O.C.	Wenchi Ting	Male	2017.01.03	0	0	0	0
Vice President	R.O.C.	Jerry CJ Hu	Male	2013.04.02	1,245,000	0.01	0	0
Vice President	R.O.C.	Y S Shen	Male	2014.01.13	950,000	0.01	0	0
Vice President	R.O.C.	Steven S Liu	Male	2017.04.24	1,800,000	0.01	0	0
Vice President	R.O.C.	SR Sheu	Male	2008.07.16	1,418,892	0.01	786,017	0.01
Vice President	R.O.C.	M L Liao	Male	2008.07.16	3,190,809	0.03	152,138	0.00
Vice President	R.O.C.	S S Hong	Male	2013.01.01	266,406	0.00	0	0
Vice President	R.O.C.	Francia Hsu	Female	2016.03.16	877,000	0.01	7,000	0.00
Vice President	R.O.C.	Mindy Lin	Female	2018.05.14	1,599,925	0.01	781,408	0.01
Vice President	R.O.C.	Linwu Kuo	Male	2021.06.15	0	0	0	0
Vice President & Chief Human Resources Officer	R.O.C.	Eric Chen	Male	2011.02.14	1,260,000	0.01	0	0
Associate Vice President	R.O.C.	Johnson Liu	Male	2014.11.04	511,413	0.00	401,631	0.00
Associate Vice President	R.O.C.	Victor Chuang	Male	2019.03.28	364,671	0.00	13,943	0.00

Experience/Education	Selected Current Position at Other Companies
Vice President, UMC Master in Chemical Engineering, National Taiwan University	Director, Wavetek Microelectronics Corporation
Vice President, UMC Master in Electronic Engineering, National Chiao Tung University	None
Vice President, UMC Ph.D. in Computer Information Science, University of Texas at Austin	None
Vice President, UMC Ph.D. in Materials Science & Engineering, Stanford University	None
Vice President, UMC Bachelor in Electronic Engineering, Feng Chia University	Director, Faraday Technology Corporation
Vice President, UMC Master in Science Electrical Engineering, University of Southern California	None
Vice President, UMC Master in Electrical Engineering, The University of New Mexico	None
Vice President, UMC Bachelor in Electronic Engineering, National Taiwan Institute of Technology	None
Vice President, UMC Bachelor in Material Science & Engineering, National Tsing Hua University	None
Vice President, UMC Master in Industrial Engineering, National Chiao Tung University	None
Vice President, UMC Master in Business Administration, University of Leicester	None
Vice President, UMC Master in European Studies, University of Katholieke Universiteit Leuven	Independent Director, Shine Trend International Multimedia Technology Co., Ltd.
Vice President & Chief Human Resources Officer, UMC EMBA in Finance, National Taiwan University	Director, Best Elite International Limited
Associate Vice President, UMC Bachelor in Physics, Tamkang University	None
Associate Vice President, UMC Bachelor in Electrical Engineering, National Cheng Kung University	None

Managers' Information (Continue)

Title	Nationality	Name	Gender	Date Elected (Date Assumed)	Present Shareholding		Spouse & Minor Shareholding	
					Common Shares	%	Common Shares	%
Associate Vice President	R.O.C.	Chuck Chen	Male	2019.03.28	550,000	0.00	0	0
Associate Vice President	R.O.C.	JT Lin	Male	2021.09.16	365,000	0.00	0	0
Associate Vice President	R.O.C.	Yau Kae Sheu	Male	2014.01.13	1,000,000	0.01	0	0
Associate Vice President	R.O.C.	J Y Wu	Male	2014.05.01	720,191	0.01	587	0.00
Associate Vice President	Singapore	Purakh Raj Verma	Male	2017.08.09	1,200,000	0.01	0	0
Associate Vice President	R.O.C.	Yanan Mou	Male	2019.07.01	0	0	140,146	0.00
Associate Vice President	R.O.C.	Remi Yu	Male	2019.11.15	353,000	0.00	0	0
Associate Vice President	R.O.C.	Cedric Lee	Male	2022.01.20	150,000	0.00	13,000	0.00
Associate Vice President	R.O.C.	Michael CY Wang	Male	2019.12.31	0	0	0	0
Associate Vice President	R.O.C.	C P Yen	Male	2015.09.16	710,645	0.01	464,000	0.00
Associate Vice President	R.O.C.	Pang Min Wang	Male	2018.09.14	221,126	0.00	16	0.00
Associate Vice President	R.O.C.	Ray Yang	Male	2020.07.01	176,274	0.00	200,117	0.00
Associate Vice President	R.O.C.	Bellona Chen	Female	2020.08.01	405,126	0.00	0	0
Associate Vice President	R.O.C.	Louis Hsieh	Male	2020.10.01	191,000	0.00	0	0
Former Associate Vice President	R.O.C.	Ji Fu Kung	Male	2013.01.01	N/A	N/A	N/A	N/A
Former Associate Vice President	R.O.C.	Le Tien Jung	Male	2013.01.01	N/A	N/A	N/A	N/A

Note 1: Ji Fu Kung and Le Tien Jung, former managers, were dismissed in 2021 and 2022, respectively.

Note 2: Present shareholding figures are actual number of shares held on January 31, 2022.

Note 3: Managers did not hold shares through other parties.

Note 4: Managers are not spouses or relatives within the second degree of kinship of other managers.

Note 5: Managers' election date is the same date they assumed their positions.

Note 6: Presidents and Chairman are not the same person, spouses or relatives within the first degree of kinship.

Experience/Education	Selected Current Position at Other Companies
Associate Vice President, UMC Master in Engineering Science, National Cheng Kung University	None
Associate Vice President, UMC Master in Materials Science & Engineering, National Tsing Hua University	None
Associate Vice President, UMC Master in Electrical Engineering, University of Missouri	None
Associate Vice President, UMC Master in Physics, Tamkang University	None
Associate Vice President, UMC Master in Microelectronics, Nanyang Technological University	None
Associate Vice President, UMC Master in Electrical Engineering, State University of New York at Stony Brook	None
Associate Vice President, UMC Bachelor in Electrophysics, National Chiao Tung University	None
Associate Vice President, UMC Master in Material Engineering, National Chiao Tung University	None
Associate Vice President, UMC Master in Chemical Engineering, Cornell University	None
Associate Vice President, UMC Master in Engineering Science, National Cheng Kung University	None
Associate Vice President, UMC Master in Integrated Manufacturing Systems Engineering, North Carolina State University	None
Associate Vice President, UMC Master in Electrical Engineering, The Ohio State University	None
Associate Vice President, UMC Master in Business Administration, Columbia University	Director, ITE Tech Inc.; Director, ECP Vita Pte. Ltd.; Supervisor, Fortune Venture Capital Corp.
Associate Vice President, UMC Master in Chemistry department, University of Missouri Rolla Campus	None
Former Associate Vice President, UMC Ph.D. in Materials Science, University of Connecticut	N/A
Former Associate Vice President, UMC Ph.D. in Electrical Engineering, University of Texas at Austin	N/A

Remuneration Paid to Directors (Including Independent Directors), Presidents and Vice Presidents

Directors' Remuneration (Including Independent Directors')

Title	Name	Director's Remuneration								Total Remuneration and (A+B+C+D) as a % of Net Income (%)	
		Base Compensation (A)		Severance Pay and Pensions(B)		Compensation to Directors(C)		Business Execution Expenses(D)			
		The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements
Chairman	Stan Hung										
Director	Ting-Yu Lin										
Director	Hsun Chieh Investment Co., Ltd.	0	0	0	0	11,229	11,229	1,300	1,530	12,529	12,759
	Representative: SC Chien									0.02%	0.02%
Director	Silicon Integrated Systems Corp.										
	Representative: Jason Wang										
Independent Director	Wenyi Chu										
Independent Director	Lih J. Chen										
Independent Director	Jyuo-Min Shyu										
Independent Director	Kuang Si Shiu	0	0	0	0	14,036	14,036	4,490	4,490	18,526	18,526
										0.03%	0.03%
Independent Director	Wen-Hsin Hsu										
Former Independent Director	Cheng-Li Huang										

Note: In addition to the information disclosed in the table above, has any Director of the Company provided services to any of the companies included in the Financial Statements and received compensation for such services (e.g. provided consultation services in a non-employee capacity): None.

In Thousand NT\$

Compensation Earned by a Director Who Is an Employee of UMC or UMC's Consolidated Entities								Total Compensation and (A+B+C+D+E+F+G) as a % of Net Income (%)	Compensation from Other Non-Consolidated Entities Invested by the Company	
Base Compensation Bonuses and Special Expenses etc. (E)		Severance Pay and Pensions (F)		Employees' Profit Sharing Bonus (G)						
The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements	The Company		Companies in the Consolidated Financial Statements		The Company	Companies in the Consolidated Financial Statements	
				Cash	Stock	Cash	Stock			
366,920	423,041	295	295	39,194	0	46,110	0	418,938 0.75%	482,205 0.86%	7,171
0	0	0	0	0	0	0	0	18,526 0.03%	18,526 0.03%	None

Remuneration Paid to Directors (Including Independent Directors), Presidents and Vice Presidents (Continue)

Remuneration Range for Each Director in the Company	Names of Directors			
	Sum of the First 4 Items (A+B+C+D)		Sum of the First 7 Items (A+B+C+D+E+F+G)	
	The Company	Companies in the Consolidated Financial Statements	The Company	All Consolidated Entities and Non-consolidated Affiliates
Lower than NT\$1,000,000	SC Chien , Jason Wang, Cheng-Li Huang	SC Chien , Jason Wang, Cheng-Li Huang	Cheng-Li Huang	Cheng-Li Huang
NT\$1,000,000 (inclusive)~ NT\$2,000,000 (exclusive)				
NT\$2,000,000 (inclusive)~ NT\$3,500,000 (exclusive)	Stan Hung, Kuang Si Shiu, Wen-Hsin Hsu, Hsun Chieh Investment Co., Ltd., Silicon Integrated Systems Corp.	Stan Hung, Kuang Si Shiu, Wen-Hsin Hsu, Hsun Chieh Investment Co., Ltd., Silicon Integrated Systems Corp.	Kuang Si Shiu, Wen-Hsin Hsu, Hsun Chieh Investment Co., Ltd., Silicon Integrated Systems Corp.	Kuang Si Shiu, Wen-Hsin Hsu, Hsun Chieh Investment Co., Ltd., Silicon Integrated Systems Corp.
NT\$3,500,000 (inclusive)~ NT\$5,000,000 (exclusive)	Wenyi Chu, Lih J. Chen, Jyuo-Min Shyu, Ting-Yu Lin	Wenyi Chu, Lih J. Chen, Jyuo-Min Shyu, Ting-Yu Lin	Wenyi Chu, Lih J. Chen, Jyuo-Min Shyu, Ting-Yu Lin	Wenyi Chu, Lih J. Chen, Jyuo-Min Shyu, Ting-Yu Lin
NT\$5,000,000 (inclusive)~ NT\$10,000,000 (exclusive)				
NT\$10,000,000 (inclusive)~ NT\$15,000,000 (exclusive)				
NT\$15,000,000 (inclusive)~ NT\$30,000,000 (exclusive)				
NT\$30,000,000 (inclusive)~ NT\$50,000,000 (exclusive)				
NT\$50,000,000 (inclusive)~ NT\$100,000,000 (exclusive)				
NT\$100,000,000 or More			Stan Hung, SC Chien , Jason Wang,	Stan Hung, SC Chien , Jason Wang,
Total	12	12	12	12



Remuneration Paid to Directors (Including Independent Directors), Presidents and Vice Presidents (Continue)

Compensation Paid to Presidents and Vice Presidents

Title	Name	Salary(A)		Severance Pay and Pensions(B)		Bonuses and Special Expenses etc. (C)	
		The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements
Chairman & Chief Strategic Officer	Stan Hung						
President	SC Chien						
President	Jason Wang						
Executive Vice President	Ming Hsu						
Senior Vice President	Oliver Chang						
Senior Vice President & Chief Financial Officer	Chitung Liu						
Senior Vice President & General Counsel	Lucas S Chang						
Vice President	TS Wu						
Vice President	C C Hsu						
Vice President	M C Lai						
Vice President	S F Tzou	86,056	102,233	2,322	2,322	1,006,690	1,065,007
Vice President	Osbert Cheng						
Vice President	G C Hung						
Vice President	Steven Hsu						
Vice President	Wenchi Ting						
Vice President	Jerry CJ Hu						
Vice President	Y S Shen						
Vice President	Steven S Liu						
Vice President	SR Sheu						
Vice President	M L Liao						
Vice President	S S Hong						
Vice President	Francia Hsu						
Vice President	Mindy Lin						
Vice President	Linwu Kuo						
Vice President & Chief Human Resources Officer	Eric Chen						

Note: Mr. Osbert Cheng, Mr. Steven Hsu and Mr. S F Tzou were promoted to vice presidents in January 2022, so there was no declared amount in year 2021.

In Thousand NT\$

The Company		Companies in the Consolidated Financial Statements		Total Compensation and (A+B+C+D) as a % of Net Income (%)	Compensation from Other Non-Consolidated Entities Invested by the Company
Cash	Stock	Cash	Stock		
177,509	0	197,060	0	1,272,577 2.28%	1,366,622 2.45%
					8,832

Remuneration Paid to Directors (Including Independent Directors), Presidents and Vice Presidents (Continue)

Compensation Range for Each President and Vice President in the Company	Names of Presidents and Vice Presidents	
	The Company	All Consolidated Entities and Non-consolidated Affiliates
Lower than NT\$1,000,000		
NT\$1,000,000 (inclusive)~ NT\$2,000,000 (exclusive)		
NT\$2,000,000 (inclusive)~ NT\$3,500,000 (exclusive)		
NT\$3,500,000 (inclusive)~ NT\$5,000,000 (exclusive)		
NT\$5,000,000 (inclusive)~ NT\$10,000,000 (exclusive)	Linwu Kuo	Linwu Kuo
NT\$10,000,000 (inclusive)~ NT\$15,000,000 (exclusive)		
NT\$15,000,000 (inclusive)~ NT\$30,000,000 (exclusive)	Mindy Lin	Mindy Lin
NT\$30,000,000 (inclusive)~ NT\$50,000,000 (exclusive)	Lucas S Chang, TS Wu, M C Lai, G C Hung, Wenchi Ting, Jerry CJ Hu, Y S Shen, Steven S Liu, SR Sheu, M L Liao, S S Hong, Francia Hsu, Eric Chen	TS Wu, M C Lai, G C Hung, Wenchi Ting, Jerry CJ Hu, Y S Shen, Steven S Liu, SR Sheu, M L Liao, S S Hong, Francia Hsu, Eric Chen
NT\$50,000,000 (inclusive)~ NT\$100,000,000 (exclusive)	Ming Hsu, Oliver Chang, Chitung Liu, C C Hsu	Ming Hsu, Oliver Chang, Chitung Liu, Lucas S Chang, C C Hsu
NT\$100,000,000 or More	Stan Hung, SC Chien, Jason Wang	Stan Hung, SC Chien, Jason Wang
Total	22	22

Remuneration Paid to Directors (Including Independent Directors), Presidents and Vice Presidents (Continue)

Employees' Profit Sharing Bonus Paid to Management Team

In Thousand NT\$

Title	Name	Stock	Cash	Total	Ratio of Total Profit Sharing Bonus to Net Income (%)
Chairman & Chief Strategic Officer	Stan Hung				
President	SC Chien				
President	Jason Wang				
Executive Vice President	Ming Hsu				
Senior Vice President	Oliver Chang				
Senior Vice President & Chief Financial Officer	Chitung Liu				
Senior Vice President & General Counsel	Lucas S Chang				
Vice President	TS Wu				
Vice President	C C Hsu				
Vice President	M C Lai				
Vice President	S F Tzou				
Vice President	Osbert Cheng				
Vice President	G C Hung				
Vice President	Steven Hsu				
Vice President	Wenchi Ting				
Vice President	Jerry CJ Hu				
Vice President	Y S Shen				
Vice President	Steven S Liu				
Vice President	SR Sheu				
Vice President	M L Liao				
Vice President	S S Hong				
Vice President	Francia Hsu	0	278,939	278,939	0.05%
Vice President	Mindy Lin				
Vice President	Linwu Kuo				
Vice President & Chief Human Resources Officer	Eric Chen				
Associate Vice President	Johnson Liu				
Associate Vice President	Victor Chuang				
Associate Vice President	Chuck Chen				
Associate Vice President	JT Lin				
Associate Vice President	Yau Kae Sheu				
Associate Vice President	J Y Wu				
Associate Vice President	Purakh Raj Verma				
Associate Vice President	Yanan Mou				
Associate Vice President	Remi Yu				
Associate Vice President	Cedric Lee				
Associate Vice President	Michael CY Wang				
Associate Vice President	C P Yen				
Associate Vice President	Pang Min Wang				
Associate Vice President	Ray Yang				
Associate Vice President	Bellona Chen				
Associate Vice President	Louis Hsieh				
Former Associate Vice President	Ji Fu Kung				
Former Associate Vice President	Le Tien Jung				

Comparison of Compensation of Directors, Presidents and Vice Presidents in the Past Two Years

	2021		2020	
	The Company	Companies in the Consolidated Financial Statements	The Company	Companies in the Consolidated Financial Statements
Net Income Stated in the Parent Company Only Financial Reports (In Thousand NT\$)	55,780,255	55,780,255	29,189,489	29,189,489
The Percentage of Directors' Remuneration to Net Income (%)	0.06	0.06	0.14	0.22
The Percentage of Executive Officer's Compensation to Net Income (%)	2.28	2.45	2.01	2.12

Note: The directors' remuneration includes Base Compensation, Severance Pay and Pensions, Compensation to Directors and Business Execution Expenses. The executive officer's compensation includes Salary, Severance Pay and Pensions, Bonuses and Special Expenses etc., and Employees' Profit Sharing Bonus.

The Company's compensation for Directors and Executive officers is based on UMC's Articles of Incorporation and formulations, and is distributed in proper ratios.

The Standards and Policies, and Portfolios for Payment of Emoluments, Procedures for Setting Emoluments, and Correlations with Business Performance and Future Risks.

Policy for Directors' (Including Independent Directors) Compensation

Pursuant to UMC's Articles of Incorporation, Article 21-1, the Company shall allocate no more than 0.2% of profit as directors' (including Independent Directors) compensation for each profitable fiscal year after offsetting any cumulative losses. Directors (including Independent Directors) may only receive compensation in cash. In accordance with Article 17, remunerations for all directors (including Independent 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.

UMC shall assess the performance of directors and officers according to the Rules for Performance Assessment of the Board of Directors and the Performance Appraisal for employees of UMC, in order to decide their compensation. An adequate compensation scheme will be calculated by referencing the Company's operation results, future risks, corporate strategies, industry trends, and also individual contribution. The performance assessment and compensation proposals were reviewed and approved by Remuneration Committee and Board of Directors. The Company will review the remuneration policy foresaid based on macroeconomics and business strategies to achieve both corporate sustainability and interest of stakeholders.

Policy for Management Team's Compensation

The Company annually evaluates its salary level with similar industries to ensure the Company's salary is competitive. The Company's salary structure can be divided into fixed and variable. The compensation is set to fully reflect the achievements for individuals and teams.

Corporate Governance Practices

Information of Board Meeting Operation

Board meetings were held 9 times in 2021; all independent directors attended each meeting in person; the average attendance rate of all directors was 98.72%; the attendances of directors were as follows:

Title	Name	Attendance in Person	By Proxy	Attendance Rate (%)	Remarks
Chairman	Stan Hung	9	0	100.00	Re-elected
Independent Director	Wenyi Chu	9	0	100.00	Re-elected
Independent Director	Lih J. Chen	9	0	100.00	Re-elected
Independent Director	Jyuo-Min Shyu	9	0	100.00	Newly elected on July 7, 2021
Independent Director	Kuang Si Shiu	6	0	100.00	Newly elected on July 7, 2021
Independent Director	Wen-Hsin Hsu	6	0	100.00	Re-elected
Director	Ting-Yu Lin	9	0	100.00	Re-elected
Director	Hsun Chieh Investment Co., Ltd. Representative: SC Chien	9	0	100.00	Re-elected
Director	Silicon Integrated Systems Corp. Representative: Jason Wang	8	1	88.89	Re-elected
Former Independent director	Cheng-Li Huang	3	0	100.00	Term expired on July 7, 2021

Other mentionable items:

- If any of the following circumstances occur, the dates of the meetings, sessions, contents of motion, all independent directors' opinions and the company's response should be specified:
 - Matters referred to in Article 14-3 of the Securities and Exchange Act: The Company has established an Audit Committee, and Article 14-3 of the Securities and Exchange Act is not applicable to the Company. Please refer to Page 39-41 of the Annual Report for related information of the operation status of the Audit Committee.
 - Other matters involving objections or expressed reservations by independent directors that were recorded or stated in writing that require a resolution by the board of directors: None.
- If there are directors' avoidance of motions in conflict of interest, the directors' names, contents of motion, causes for avoidance and voting should be specified:
 - Proposal for UMC's donation to UMC Science and Culture Foundation on February 24, 2021: Chairman Stan Hung and Director SC Chien were in conflict of interest and avoided the discussion and vote of the proposal since Chairman Stan Hung and Director SC Chien also served concurrently as the Directors of UMC Science and Culture Foundation. The proposal was approved without dissent by all other Directors in attendance.
 - Proposal for approving the distributable compensation for managerial officers on February 24, 2021 and July 28, 2021: Directors who also served concurrently as the Company's managerial officers were in conflict of interest and avoided the discussion and vote of the proposal. The proposal was approved without dissent by all other Directors in attendance.
 - Proposal to sign an industry-academia cooperation and academic reward contract with National Taiwan University on July 7, 2021: Independent Director Wenyi Chu and Independent Director Wen-Hsin Hsu were in conflict of interest and avoided the discussion and vote of the proposal since Independent Director Wenyi Chu and Independent Director Wen-Hsin Hsu were also the professors of National Taiwan University. The proposal was approved without dissent by all other Directors in attendance.
 - Proposal to sign an industry-academia cooperation and academic reward contract with National Tsing Hua University on July 7, 2021: Independent Director Lih J. Chen was in conflict of interest and avoided the discussion and vote of the proposal since Independent Director Lih J. Chen was also the professor of National Tsing Hua University. The proposal was approved without dissent by all other Directors in attendance.
- For the information of evaluation cycles, periods, scope, method and content of self-evaluation of the Board of Directors, please refer to the execution status of self-evaluation of the Board of Directors.
- Measures taken to strengthen the functionality of the board:

To implement corporate governance and enhance the Nomination and Election of the Board, the Company designated a Company Secretary in 2019, and the "Policy for Nomination and Election of Directors" and "Skill Matrix of Board Members," which are references for composition structure of the Board are established by the Nominating Committee. In addition to conducting a board performance evaluation every year, the Company also engaged with Taiwan Corporate Governance Association to implement performance evaluation of the Board of Directors in 2020; please refer to the Company's website for the evaluation report: https://www.unc.com/en/IR_Director/directors_information

The UMC Board of Directors re-elected at the 2021 Annual General Meeting comprises nine members, including five seats for independent directors and one for a non-executive director; three serve as administrative directors. More than one half of the director seats are independent directors. There are two seats currently reserved

Note : Attendance rate is calculated using the number of meetings each board member actually attends and total number of board meetings held within his or her service period.

Execution Status of the Board Evaluation

Evaluation Cycle	Evaluation Period	Evaluation Scope	Evaluation Method	Evaluation Content
Annually	2021/1/1~2021/12/31	The Company's board self-evaluation scope covers the evaluation of the board, functional committees (including the Audit Committee, Remuneration Committee, Capital Budget Committee and Nominating Committee) and individual board members.	Self-evaluation of the board, its functional committees and individual board members' performance	<p>1. The self-evaluation of the board of directors includes the following aspects:</p> <ol style="list-style-type: none"> (1) Participation in the operation of the company; (2) Improvement of the quality of the board of directors' decision making; (3) Composition and structure of the board of directors; (4) Election and continuing education of the directors; and (5) Internal control. <p>2. The self-evaluation of the functional committees includes the following aspects:</p> <ol style="list-style-type: none"> (1) Participation in the operation of the company; (2) Awareness of the duties of the functional committee; (3) Improvement of quality of decisions made by the functional committee; (4) Composition of the functional committee and election of its members; and (5) Internal control. <p>3. The self-evaluation of board members includes the following aspects:</p> <ol style="list-style-type: none"> (1) Familiarity with the goals and missions of the company; (2) Awareness of the duties of a director; (3) Participation in the operation of the company; (4) Management of internal relationships and communication; (5) The director's professionalism and continuing education; and (6) Internal control.

Operation of the Audit Committee

The Audit Committee assists the Board of Directors in performing its supervision functions. It is also responsible for tasks defined by the Company Act, Securities and Exchange Act and other relevant regulations. Since UMC is listed on the NYSE, it also has to comply with the U.S. regulations regarding foreign issuers. The Audit Committee is comprised of all independent directors, with 3 financial experts, all members' professionalism requirements and experience, please refer to page 16-19 on Directors' Information and page 21 on Directors' Professional Qualification & Independent Directors' Independence Information of this annual report. It's operating according to the Audit Committee Charter (please refer to the Company's website at https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Audit_Committee/Audit_Committee_Charter_Eng.pdf). According to the relevant regulations, the Audit Committee shall convene at least four regular meetings per year. In 2021 a total of seven meetings were convened; it shall also maintain good communication channels with the Company's internal auditors, Chief of Corporate Governance Officer, independent auditors, and management.

The Audit Committee is responsible for periodic review of the following important annual matters :

- Financial statements
- Internal control system
- Material transactions of assets, derivatives, loans, endorsements, guarantees
- Audit plans of internal and external auditors and their execution status
- Engaging and removing the Company's independent auditors and accessing such auditors' remuneration and independence
- Risks and control procedures of compliance with government law
- Execution of documentation that involves government agencies
- Implementation of Whistleblower Program and Code of Conduct

Information of Audit Committee Operation

There were seven Audit Committee meetings in 2021, and the attendance status is shown in the following table:

Title	Name	Attendance	Proxy Attendance	Actual Attendance Rate (%)	Note
Independent Director	Lih J. Chen	7	0	100.00	Audit Committee convener Re-elected
Independent Director	Wenyi Chu	7	0	100.00	Re-elected
Independent Director	Jyuo-Min Shyu	7	0	100.00	Re-elected
Independent Director	Kuang Si Shiu	5	0	100.00	Newly elected on July 7, 2021
Independent Director	Wen-Hsin Hsu	5	0	100.00	Newly elected on July 7, 2021
Former Independent Director	Cheng-Li Huang	2	0	100.00	Term expired on July 7, 2021

Operation of the Audit Committee (Continue)
Other Matters to Be Recorded:

1. If the Audit Committee operates in any of the following circumstances, the date and session of the Audit Committee meeting, the content of motion, the independent directors' opinions expressing objections, reservations or major suggestions, the resolution of Audit Committee, and the company's response to the opinion of the Audit Committee should be specified:

(1) Items listed in Article 14-5 of Securities and Exchange Act:

Date/Session of Audit Committee	Content of Motion	Content of the independent directors' opinions expressing objections, reservations or major suggestions	Resolution of the Audit Committee	Company's Response to the Opinion of the Audit Committee
February 24, 2021, the 15th meeting of the 4th session	1. Approved the 2020 Consolidated Financial Statements (including Parent Company only Financial Statements). 2. Approved the 2020 Business Report. 3. Approved the 2020 Earnings Distribution Chart. 4. Approved the 2020 Statement of Internal Control System. 5. Approved the content of appointed service and fee for the independent auditor appointed in 2021. 6. Approved the Company's donation to UMC Science and Culture Foundation. 7. Approved termination of the issuance plan for private placement, which was approved at the 2020 Annual General Meeting. 8. Approved the proposal for private placement based on future operation needs and will propose this at the 2021 Annual General Meeting for discussion. 9. Approved the acquisition of the Right-of-Use Asset from subsidiary Wavetek Microelectronics Corporation. 10. Approved the issuance of unsecured straight corporate bonds. 11. Approved engagement in derivatives trading.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.
April 28, 2021, the 16th meeting of the 4th session	1. Approved the Q1, 2021 Consolidated Financial Statements. 2. Approved issuance of unsecured zero coupon euro exchangeable bonds. 3. Approved the investment in TGWest Asia Partners II (Taiwan), L.P. 4. Approved lending funds to Wavetek Microelectronics Corporation. 5. Approved UMC's donation to National Tsing Hua University.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.
July 28, 2021, the 1st meeting of the 5th session	1. Approved the Q2, 2021 Consolidated Financial Statements. 2. Approved to decrease the endorsement and guarantee of the loan for United Semiconductor (Xiamen) Co., Ltd.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.
September 3, 2021, the 2nd meeting of the 5th session	1. Approved the Share exchange between the Company and Chipbond Technology Corporation.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.
October 27, 2021, the 3rd meeting of the 5th session	1. Approved the Q3, 2021 Consolidated Financial Statements. 2. Approved to adjust the endorsement and guarantee of the loan for United Semiconductor (Xiamen) Co., Ltd.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.
December 15, 2021, the 5th meeting of the 5th session	1. Approved the revision of the internal control system and internal audit implementation rules. 2. Approved to decrease the endorsement and guarantee of the loan for United Semiconductor (Xiamen) Co., Ltd.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.

Operation of the Audit Committee (Continue)

Date/Session of Audit Committee	Content of Motion	Content of the independent directors' opinions expressing objections, reservations or major suggestions	Resolution of the Audit Committee	Company's Response to the Opinion of the Audit Committee
February 24, 2022, the 6th meeting of the 5th session	1. Approved the 2021 Consolidated Financial Statements (including Parent Company only Financial Statements). 2. Approved the 2021 Business Report. 3. Approved the 2021 Earnings Distribution Chart. 4. Approved the cash distribution from capital surplus. 5. Approved the 2021 Statement of Internal Control System. 6. Approved the content of appointed service and fee for the independent auditor appointed in 2022. 7. Approved the issuance of Restricted Stock Awards. 8. Approved amendment of the UMC Acquisition or Disposal of Assets Procedure. 9. Approved the Company's donation to UMC Science and Culture Foundation.	None.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.

- (2) There were no other resolutions that were not approved by the Audit Committee but were approved by two thirds or more of all directors in 2021.
2. Implementation of avoidance of independent director with respect to motion of stake: there was no such situation in the Audit Committee in 2021.
3. The communication channels between the independent directors, internal auditors, and independent auditors:
- (1) The Company's Audit Division sends the audit reports and follow-up reports on deficiencies to independent directors each month. Besides these measures, the Internal Audit head presents the findings of all audit reports and communicates follow-up reports with independent directors during the Audit Committee's quarterly meetings and semi-annually separate meeting.
 - (2) The Company's independent auditors present the findings of their review or audit reports regarding the financial results and internal control of the Company and its subsidiaries during the Audit Committee's quarterly meetings and separate meeting at least once a year. The independent auditors are also required to communicate to the Audit Committee the impact of IFRSs updates and announcements, any issues under applicable laws and regulations that might affect the financial reports, and whether to adjust the entries.
 - (3) The Internal Audit head, the independent auditors and independent directors can contact each other as needed. The communication channels are seamless.
 - (4) For the communication between independent directors, internal audit head, and independent auditors, please refer to the Company's website: https://www.umc.com/en/IR_Audit/audit_committee.

Corporate Governance Implementation Status and Deviations from “The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies”

Evaluation Item		
	Yes	No
1. Has the company established and does it disclose the Corporate Governance Best-Practice Principles based on “Corporate Governance Practice Principles for TWSE/TPEX Listed Companies?”	✓	
2. Shareholding Structure & Shareholders' Rights		
(1) Has the company established an internal operating procedure to deal with shareholders' suggestions, doubts, disputes and litigations, and implement it based on the procedure?		✓
(2) Does the company possess the list of its major shareholders as well as the ultimate owners of those shares?	✓	
(3) Has the company established and does it execute the risk management and firewall system within its conglomerate structure?	✓	
(4) Has the company established internal rules against insiders trading with undisclosed information?	✓	
3. Composition and Responsibilities of the Board of Directors		
(1) Does the Board develop and implement a diversified policy for the composition of its members?	✓	
(2) Has the company voluntarily established other functional committees in addition to the Remuneration Committee and the Audit Committee?	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
<p>The UMC Corporate Governance Practice Principles is posted in the Corporate Governance section of UMC's website for stakeholders to download. Please refer to: https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/UMC_Corporate_Governance_Practice_Principles_20191030_eng.pdf.</p>	None
<p>UMC has designated a specific contact window (ir@umc.com) and included an Investor Relations section on the Company's website to deal with shareholders' suggestions, doubts, disputes and litigations. Please refer to the Company's website for stakeholders' contact: https://www.umc.com/en/Html/stakeholder_contacts.</p>	<p>UMC deals with shareholders' suggestions, doubts, disputes and litigation based on "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies." UMC has not establish an internal operating procedure.</p>
<p>UMC possesses the list of its major shareholders as well as the ultimate owners of those shares.</p>	None
<p>UMC has established relevant control mechanisms within its internal regulations and internal control systems in accordance with laws and regulations (including "Rules for Regulating Related Party Transactions").</p>	None
<p>UMC has formulated the Provisions on Insider Trading Prevention Policies and Control Procedures and is committed to advocating policies against insider trading.</p>	None
<p>UMC has established the Policy for Nomination and Election of Directors that takes into account the Company's organizational culture, business model, and long-term development, and has also established criteria to ensure the diversity of the Board members. The UMC Board of Directors comprises nine members, including five seats for independent directors and one for a non-executive director; three serve as administrative directors. More than one half of the director seats are independent directors. There are two seats currently reserved for female directors. Based on our policy of gender equality, UMC will increase the female director seats progressively. The tenures of independent directors are also diversified; there is one director that has served for six years, two director for three years, and two directors are newly elected on July 7, 2021. The Board of UMC is composed of members with diversified backgrounds of industry, government and academia. The experiences of Board members include the president of a national university; a fellow of Academia Sinica; the Minister of Science and Technology; the president of ITRI; experts in finance, accounting and strategy management fields; and professionals from the semiconductor industry and ICT business administration. The directors satisfy basic criteria and professional requirements, and through activities of the sub-committees, can also contribute their experiences to supervise and govern issues related to corporate governance, environmental sustainability, corporate social responsibility, legal compliance and human rights protection. Please refer to UMC's Policy for Nomination and Election of Directors for UMC Board diversification criteria, and the Directors' Information and the Skill Matrix of Board members for the implementation of Board diversification on the Company's website: https://www.umc.com/en/Html/nominating_committee.</p>	None
<p>To meet the needs of industry characteristics and operations, UMC has established the Capital Budget Committee. The Committee currently comprises five independent directors responsible for assisting UMC with its long-term development strategy, financial planning, and business performance. For the sustainable development of UMC and assisting the Board with enhancing its management mechanism and improving corporate governance, UMC established the Nominating Committee. The Committee comprises all independent directors who are responsible for searching and reviewing the candidate list of the directors and executives accordingly, executing the performance assessment of the directors and executives, and supervision of corporate governance. For information on the Capital Budget Committee and the Nominating Committee, please refer to UMC's website at https://www.umc.com/en/Html/capital_budget_committee and https://www.umc.com/en/Html/nominating_committee.</p>	None

Corporate Governance Implementation Status and Deviations from “The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies” (Continue)

Evaluation Item	Yes	No
	<p>(3) Has the company established a standard to measure the performance of the Board, and has it been implemented annually? Are the implemented results reported to the Board, and used as a reference for individual directors' compensation and nomination renewal?</p>	✓
<p>(4) Does the company regularly evaluate the independence of CPAs?</p>	✓	
<p>4. Does the company have an adequate number of corporate governance personnel with appropriate qualifications, and has a Chief Corporate Governance Officer been appointed to be in charge of corporate governance affairs (including but not limited to providing information for directors and supervisors to perform their functions, assisting directors and supervisors with legal compliance, handling matters relating to board meetings and shareholders meetings according to laws, producing minutes of board meetings, and shareholders meetings)?</p>	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
<p>UMC has formulated Rules for Performance Evaluation of the Board of Directors and implemented it accordingly.</p> <p>A. The Company conducted annual self-evaluation of the Board of Directors, its functional committees (including the Audit Committee, Remuneration Committee, Capital Budget Committee and Nominating Committee) and individual board members' performance. In 2021, the Nominating Committee conducted the self-evaluation of the Board of Directors, functional committees and individual board members, and reported the result to the Nominating Committee and Board of Directors on February 24, 2022. The performance result was 'Excellent'. For the training of directors, the Company will continue to arrange director training programs according to the actual needs of directors to assist the development of directors' professional knowledge and skills.</p> <p>B. The performance of the Board is also assessed by an external independent professional institution or a panel of external experts and scholars at least once every three years. After the first performance evaluation conducted by an external assessment institution in 2018, the Company re-engaged with an external assessment institution, Taiwan Corporate Governance Association, to implement performance evaluation of the Board of Directors in 2020. Please refer to the Company's website for "The Rules for Performance Evaluation of the Board of Directors": https://www.umc.com/en/IR_Director/directors_information. The Company's Directors' Compensation is regulated in the Company's Articles of Incorporation. The Company shall allocate no more than 0.2% of profit as directors' compensation for each profitable fiscal year, and Directors' Compensation is linked to the performance of the Company's operation and the Board. According to the Policy for Nomination and Election of Directors, performance assessment of the Board is used as a reference for nomination and election of Directors.</p>	None
<p>UMC's Audit Committee regularly evaluates the internal quality control procedures and independence of independent auditors, and is evaluated by the Board of Directors. The evaluation results of the most recent two years were completed on February 26, 2020 and February 24, 2021. The evaluation items are as follows:</p> <p>A. Auditor Independence Declaration.</p> <p>B. All audit and non-audit services provided by independent auditors are first reviewed by the Audit Committee to ensure that non-audit services do not influence audit outcome.</p> <p>C. The same independent auditor has not performed audit services for more than five consecutive years.</p> <p>D. UMC evaluates the independence and competence of the external auditor annually, including the size and reputation of the accounting firm; the nature and extent of non-audit service; peer review; quality of audit services; external auditors' experience; the communication and interaction between external auditors, management, and internal audit supervisors; whether UMC's independent directors and relevant senior executives are independent from the external auditor; whether an auditor from the accounting firm has worked at the Company as a senior financial supervisor or a role with significant authority; and whether there are any legal proceedings, etc.</p>	None
<p>Upon nomination by the Nominating Committee of UMC, the Board of Directors appointed Mr. Chitung Liu, the Senior Vice President and CFO of UMC, as the Chief Corporate Governance Officer on March 6, 2019. The position is accountable for corporate governance matters, including preparation and execution of agenda and matters relating to the Shareholders' Meeting, the Board, Audit Committee, Compensation Committee, Capital Budget Committee and Nominating Committee, assistance in fulfilling requests by directors to perform duties and provide information, and is also responsible for ensuring legal compliance of the Board, promoting communication and dialogue between the management team and the directors, and among the board members, and communicating with the independent directors on corporate governance-related affairs on a regular basis every year. The Chief Corporate Governance Officer has been in a managerial position for at least three years in a public company in handling financial and stock affairs, and completed professional training in accordance with laws and regulations.</p>	None

Corporate Governance Implementation Status and Deviations from “The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies” (Continue)

Evaluation Item	Yes	No
5. Has the company established a communication channel and built a designated section on its website for stakeholders (including but not limited to shareholders, employees, customers, and suppliers), responded appropriately to stakeholders on corporate social responsibility issues?	✓	
6. Has the company appointed a professional shareholder service agency to deal with shareholder affairs?	✓	
7. Information Disclosure		
(1) Does the company have a corporate website to disclose both financial standings and the status of corporate governance?	✓	
(2) Does the company have other information disclosure channels (e.g. building an English website, appointing designated people to handle information collection and disclosure, creating a spokesman system, webcasting investor conferences)?	✓	
(3) Does the company announce the annual financial report within 2 months after the end of the fiscal year, and announce the Q1, Q2, Q3 financial reports and monthly operation status before the deadlines?	✓	
8. Is there any other important information to facilitate a better understanding of the company's corporate governance practices (e.g., including but not limited to employee rights, employee wellness, investor relations, supplier relations, rights of stakeholders, directors' and supervisors' training records, the implementation of risk management policies and risk evaluation measures, the implementation of customer relations policies, and purchasing insurance for directors and supervisors)?	✓	
9. Please explain the improvements which have been made in accordance with the results of the Corporate Governance Evaluation System released by the Corporate Governance Center, Taiwan Stock Exchange, and provide the priority enhancement measures.		

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
<p>UMC's Corporate Sustainability Committee is responsible for stakeholders and identifying issues across the Company. The Committee is also responsible for establishing consultation and communication channels with stakeholders in accordance with internal operational mechanisms, designating specialists to receive, record and respond to messages and input from various stakeholders. The Corporate Sustainability Committee conducts annual review of key corporate social responsibility issues and contingency plans to determine appropriate responses and publicly discloses relevant stakeholder communication information through the annual Corporate Social Responsibility Report and UMC's website, and at the same time reports key stakeholder concerns and countermeasures at Board meetings.</p>	None
<p>UMC has appointed Horizon Securities Co., Ltd., a professional shareholder service agency, to deal with shareholder affairs.</p>	None
<p>The Company has built a corporate website and exclusive webpage to publish up-to-date information for both financial situation and the status of corporate governance at all times for investors' reference. Please refer to the Company's website for related information: https://www.umc.com/en/IR/ir_overview.</p>	None
<p>The Company has built Chinese and English websites, and has appointed a designated person to handle information collection and disclosure, including the information of investor conferences. The Company also has designated a spokesperson, acting spokesperson(s), and a specific contact window (ir@umc.com) to deal with shareholders' suggestions as per regulation. Please refer to the Company's website for related information: https://www.umc.com.</p>	None
<p>The Company announces its monthly operation status within the prescribed deadlines and announces the annual and the quarterly financial reports before the deadlines. The Company's announcement of the 2021 annual financial report was completed on February 24, 2022.</p>	None
<p>(1) Continuing Education/Training of Directors: To strengthen the competency of the Board, UMC informs its directors periodically of professional courses held by relevant organizations. For Continuing Education/Training of Directors, please refer to pages 48-49 of this annual report.</p> <p>(2) Board meeting attendance: Please refer to Page 37-41 on Board of Directors Operations and Audit Committee Operations, and Page 54-55 on Remuneration Committee Operations in this annual report.</p> <p>(3) Risk management policies and risk measurement standards implementation: Please refer to Page 133 on Risk Management and Evaluation in this annual report.</p> <p>(4) Customer policy implementation: Please refer to Page 116 on Overview of Market, Production, and Sales in this annual report and the UMC Sustainability Report on the UMC website at https://www.umc.com/en/Download/corporate_sustainability_reports.</p> <p>(5) Employee Rights, Employment Care, Investor Relations, Supplier Relationships and Stakeholders Rights Implementation: Please refer to the UMC Sustainability Report on the UMC website at https://www.umc.com/en/Download/corporate_sustainability_reports.</p> <p>(6) The status of liability insurance for directors and supervisors purchased by the Company: UMC has purchased liability insurance for directors since 2000. The renewal of liability insurance for directors was completed in 2021 and was reported during the last Board Meeting.</p> <p>(7) UMC website for corporate governance policies and implementation: https://www.umc.com/en/Html/ir_corporate_governance.</p>	None
<p>UMC was ranked in the top 5% of companies in "Corporate Governance Evaluation" every year since 2015. The UMC Board of Directors re-elected at the 2021 Annual General Meeting comprises nine members, including five seats for independent directors and one for a non-executive director; three serve as administrative directors. More than one half of the director seats are independent directors. There are two seats currently reserved for female directors. Based on our policy of gender equality, UMC will increase the female director seats progressively.</p>	

Continuing Education/Training of Directors in 2021:

Title	Name	Study Period		Sponsoring Organization	Course	Training Hours	Compliance with Regulations (Note)
		From	To				
Chairman	Stan Hung	2021.09.10	2021.09.10	INDEPENDENT DIRECTOR ASSOCIATION TAIWAN	The Prevention & Correspondence of Insider Trading	3 hrs	Yes
		2021.10.26	2021.10.26	INDEPENDENT DIRECTOR ASSOCIATION TAIWAN	The Practical Case & Preventive Strategy of Related Party Transaction & Non-arm's Length Transaction	3 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes
Independent Director	Wenyi Chu	2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	3 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenge & Opportunity of Enterprise Operation to Net Zero Emissions	3 hrs	Yes
		2021.12.17	2021.12.17	SECURITIES & FUTURES INSTITUTE	Listed Company-How to Use Futures Commodities for Hedging Operation and Corporate Sustainable Development Seminar	3 hrs	Yes
Independent Director	Lih J. Chen	2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	3 hrs	Yes
		2021.10.13	2021.10.13	SECURITIES & FUTURES INSTITUTE	Insider Equity Trading Regulations Advocacy Meeting in 2021	3 hrs	Yes
Independent Director	Jyuo-Min Shyu	2021.04.27	2021.04.27	SECURITIES & FUTURES INSTITUTE	The Discussion of Strategy and Tool of Employee Compensation	3 hrs	Yes
		2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	6 hrs	Yes
		2021.09.08	2021.09.08	TAIWAN ACADEMY OF BANKING AND FINANCE	Digital Transformation of Enterprises	3 hrs	Yes
		2021.11.19	2021.11.19	TAIWAN CORPORATE GOVERNANCE ASSOCIATION	Enterprise Risk Management	3 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes

Continuing Education/Training of Directors in 2021:

Title	Name	Study Period		Sponsoring Organization	Course	Training Hours	Compliance with Regulations (Note)
		From	To				
Independent Director	Kuang Si Shiu	2021.05.04	2021.05.04	TAIWAN SECURITIES ASSOCIATION	The Practice & Case Study of Anti-Money Laundering & Combating the Financing of Terrorism	3 hrs	Yes
		2021.08.03	2021.08.03	TAIWAN SECURITIES ASSOCIATION	The Challenge & Strategy to Information Security	3 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes
		2021.12.17	2021.12.17	SECURITIES & FUTURES INSTITUTE	Listed Company-How to Use Futures Commodities for Hedging Operation and Corporate Sustainable Development Seminar	3 hrs	Yes
Independent Director	Wen-Hsin Hsu	2021.04.14	2021.04.14	INDEPENDENT DIRECTOR ASSOCIATION TAIWAN	The M&A Strategy & Ingenious Method of Enterprise's Transformation from Board of Directors' Point of View	3 hrs	Yes
		2021.05.07	2021.05.07	INDEPENDENT DIRECTOR ASSOCIATION TAIWAN	In-depth Analysis of the Material Meaning of Financial Report from the Chairman's altitude	3 hrs	Yes
		2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	6 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes
Director	Ting-Yu Lin	2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	3 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes
Representative of Juristic-Person Director	SC Chien	2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	3 hrs	Yes
		2021.09.10	2021.09.10	INDEPENDENT DIRECTOR ASSOCIATION TAIWAN	The Prevention & Correspondence of Insider Trading	3 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes
Representative of Juristic-Person Director	Jason Wang	2021.09.01	2021.09.01	FINANCIAL SUPERVISORY COMMISSION	The 13th Taipei Corporate Governance Forum	6 hrs	Yes
		2021.12.15	2021.12.15	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3 hrs	Yes

Note: Regulations are Applicable Subjects, Continuing Education Hours, Continuing Education Scope, Continuing Education System and Continuing Education Arrangements and Information Disclosure specified in "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies."

Continuing Education/Training of Managers in 2021:

Title	Name	Course Date	Organizer	Course Title	Course Hours
Senior Vice President & Chief Financial Officer	Chitung Liu	2021.03.19	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	New Policies for Sustainable Development of Enterprises and Analysis of Fraud Prevention Cases	3
		2021.03.30	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	Legal Compliance Audit Practices of the Company's "Shareholders' Meeting"	3
		2021.05.25	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	Analyze the Positive Impact of ESG on Companies	3
		2021.05.27	ACCOUNTING RESEARCH AND DEVELOPMENT FOUNDATION	Practical Cases of "Inside Trading" and Discussion on Legal Liability	3
President	SC Chien				
President	Jason Wang				
Executive Vice President	Ming Hsu				
Senior Vice President	Oliver Chang				
Senior Vice President & Chief Financial Officer	Chitung Liu				
Senior Vice President & General Counsel	Lucas S Chang				
Vice President	M C Lai				
Vice President	S F Tzou				
Vice President	Osbert Cheng				
Vice President	G C Hung				
Vice President	Steven Hsu				
Vice President	Jerry CJ Hu				
Vice President	Y S Shen				
Vice President	SR Sheu				
Vice President	M L Liao	2021.02.03	UNITED MICROELECTRONICS CORP.	【Legal Course】 Introduction of Trade Secrets Act	2
Vice President	S S Hong				
Vice President	Francia Hsu				
Vice President & Chief Human Resources Officer	Eric Chen				
Associate Vice President	Chuck Chen				
Associate Vice President	JT Lin				
Associate Vice President	Yau Kae Sheu				
Associate Vice President	J Y Wu				
Associate Vice President	Yanan Mou				
Associate Vice President	Remi Yu				
Associate Vice President	Cedric Lee				
Associate Vice President	Michael CY Wang				
Associate Vice President	Pang Min Wang				
Associate Vice President	Bellona Chen				
Associate Vice President	Louis Hsieh				

Continuing Education/Training of Managers in 2021:

Title	Name	Course Date	Organizer	Course Title	Course Hours
Executive Vice President	Ming Hsu				
Senior Vice President	Oliver Chang				
Vice President	Osbert Cheng				
Vice President	Steven Hsu				
Vice President	Jerry CJ Hu				
Vice President	Steven S Liu				
Vice President & Chief Human Resources Officer	Eric Chen	2021.04.19 2021.05.14	UNITED MICROELECTRONICS CORP.	【Executive Program】 Organizational Development Theory and Practice	3
Associate Vice President	Victor Chuang				
Associate Vice President	Chuck Chen				
Associate Vice President	Remi Yu				
Associate Vice President	Michael CY Wang				
Associate Vice President	C P Yen				
Senior Vice President	Oliver Chang				
Senior Vice President & Chief Financial Officer	Chitung Liu				
Vice President	TS Wu				
Vice President	M C Lai				
Vice President	S F Tzou				
Vice President	Osbert Cheng				
Vice President	G C Hung				
Vice President	Steven Hsu				
Vice President	Wenchi Ting				
Vice President	Jerry CJ Hu				
Vice President	Steven S Liu				
Vice President	SR Sheu				
Vice President	M L Liao				
Vice President	S S Hong				
Vice President	Mindy Lin				
Vice President & Chief Human Resources Officer	Eric Chen				
Associate Vice President	Victor Chuang	2021.04.21	UNITED MICROELECTRONICS CORP.	Regulations and Practices to Prevent Insider Trading and Insider Equity Trading	3
Associate Vice President	Chuck Chen	2021.04.22	UNITED MICROELECTRONICS CORP.	Regulations and Practices to Prevent Insider Trading and Insider Equity Trading	3
Associate Vice President	JT Lin				
Associate Vice President	Yau Kae Sheu				
Associate Vice President	J Y Wu				
Associate Vice President	Yanan Mou				

Continuing Education/Training of Managers in 2021:

Title	Name	Course Date	Organizer	Course Title	Course Hours
Associate Vice President	Remi Yu				
Associate Vice President	Cedric Lee				
Associate Vice President	Michael CY Wang				
Associate Vice President	C P Yen				
Associate Vice President	Pang Min Wang				
Associate Vice President	Ray Yang				
Associate Vice President	Louis Hsieh				
Former Associate Vice President	Ji Fu Kung				
Former Associate Vice President	Le Tien Jung				
Vice President	TS Wu				
Vice President	M C Lai				
Vice President	Linwu Kuo				
Vice President & Chief Human Resources Officer	Eric Chen	2021.09.03	UNITED MICROELECTRONICS CORP.	Second Curve Thinking Model	2
Associate Vice President	Michael CY Wang				
Associate Vice President	Pang Min Wang				
Executive Vice President	Ming Hsu				
Senior Vice President	Oliver Chang				
Vice President	TS Wu				
Vice President	M C Lai				
Vice President	S F Tzou				
Vice President	Osbert Cheng				
Vice President	G C Hung				
Vice President	Steven Hsu				
Vice President	Jerry CJ Hu				
Vice President	Steven S Liu				
Vice President	SR Sheu				
Vice President	M L Liao				
Vice President & Chief Human Resources Officer	Eric Chen	2021.09.28	UNITED MICROELECTRONICS CORP.	【2021 Master Forum】Giant's World-key Decisions	2
Associate Vice President	Victor Chuang				
Associate Vice President	Chuck Chen				
Associate Vice President	JT Lin				
Associate Vice President	Yau Kae Sheu				
Associate Vice President	J Y Wu				
Associate Vice President	Cedric Lee				
Associate Vice President	Michael CY Wang				

Continuing Education/Training of Managers in 2021:

Title	Name	Course Date	Organizer	Course Title	Course Hours
Associate Vice President	Pang Min Wang				
Associate Vice President	Ray Yang				
Associate Vice President	Bellona Chen				
Chairman & Chief Strategic Officer	Stan Hung				
President	SC Chien				
President	Jason Wang				
Senior Vice President	Oliver Chang				
Senior Vice President & Chief Financial Officer	Chitung Liu				
Vice President	Osbert Cheng				
Vice President	G C Hung				
Vice President	Steven Hsu				
Vice President	SR Sheu				
Vice President	M L Liao				
Vice President	S S Hong				
Vice President	Mindy Lin	2021.12.15	UNITED MICROELECTRONICS CORP.	The Challenges & Opportunities of Net Zero Emissions for Enterprises	3
Vice President & Chief Human Resources Officer	Eric Chen				
Associate Vice President	Bellona Chen				
Associate Vice President	Victor Chuang				
Associate Vice President	Chuck Chen				
Associate Vice President	JT Lin				
Associate Vice President	Michael CY Wang				
Associate Vice President	Ray Yang				
Vice President	Osbert Cheng				
Vice President	Steven Hsu				
Associate Vice President	Victor Chuang				
Associate Vice President	Chuck Chen	2021.12.17 2021.12.22	UNITED MICROELECTRONICS CORP.	Disadvantage Innovation: Advantech's Strategic Response	4
Associate Vice President	JT Lin				
Associate Vice President	Michael CY Wang				
Associate Vice President	Ray Yang				

Note: The implementation of the development plan for senior executives of each department was carried out, and the senior management training program planning will be based on the results in 2021. The senior executive courses are as follows:

【2021 Master Forum】A total of one sessions were held, with a total of 98 supervisors participating, and a course satisfaction rating of 96%.

【Executive Program】A total of two sessions were held, with a total of 59 supervisors participating, and a course satisfaction rating of 87.1%.

If the Company Has Adopted Corporate Governance Best-Practice Principles and Related Bylaws, Disclose How These Are to Be Searched

UMC's website has established a "Corporate Governance" section to explain the corporate governance policies and implementation. Investors can inquire about and download Corporate Governance related information from: https://www.umc.com/en/Html/ir_corporate_governance. For corporate governance implementation status, please refer to pages 37-78 of this annual report.

Procedures for Handling Proprietary/Strictly Confidential Information

These procedures were established to create an effective system for the handling and disclosure of proprietary/strictly confidential information to prevent inappropriate disclosure, ensure the consistency and accuracy of all information publicly released by the company and provide timely education for all directors, managers and employees to follow.

Please refer to the Company's website for related information:

https://www.umc.com/en/Download/major_internal_policies.

Information on the Members of the Remuneration Committee

Title (Note 1)	Name	Professional Qualifications and Experience	Meets Criteria of Independence(Note 2)	Number of Other Public Companies Where the Member Concurrently Serves as a Member in the Remuneration Committee
Independent Director*	Wenyi Chu	<ul style="list-style-type: none"> Financial, accounting and strategy management A significant background in electronics industry 	Meet	0
Independent Director	Lih J. Chen	<ul style="list-style-type: none"> Engineering technology and organizational leadership A significant background in electronics industry 	Meet	0
Independent Director	Jyuo-Min Shyu	<ul style="list-style-type: none"> Engineering technology and organizational leadership A significant background in electronics industry 	Meet	1
Independent Director	Kuang Si Shiu	<ul style="list-style-type: none"> Financial, accounting and organizational leadership Banking finance and operation & strategy making 	Meet	2
Independent Director	Wen-Hsin Hsu	<ul style="list-style-type: none"> Financial, accounting and leading sustainability of organizations A significant background in electronics industry 	Meet	2

Note 1. For further information of Independent Directors, please refer to Directors' Professional Qualification & Independent Directors' Independence Information on page 21. (* is the convener).

Note 2.Criteria of Independence: None of the Independent Directors of the Company, their spouses, or relatives within the second degree of kinship serve as directors, supervisors or employees of the company or its affiliates or having a specific relationship with the Company. None of them (or in the name of others) hold any shares of the Company. In the last two years, they do not receive any remuneration for providing business, legal, financial, accounting and other services to the Company or its affiliates.

Information of the Remuneration Committee Operation

1. The Company has a Remuneration Committee composed of five members.
2. Term of the current Committee: From July 7, 2021 to July 6, 2024.

The Company convened two Remuneration Committee meetings in 2021 with the following attendance:

Title	Name	Number of Actual Attendance	Number of Proxy Attendance	Rate of Actual Attendance (%)	Note
Convener	Wenyi Chu	2	0	100.00	Re-elected
Committee Member	Lih J. Chen	2	0	100.00	Re-elected
Committee Member	Jyuo-Min Shyu	2	0	100.00	Re-elected
Committee Member	Kuang Si Shiu	1	0	100.00	Newly elected on July 7, 2021
Committee Member	Wen-Hsin Hsu	1	0	100.00	Newly elected on July 7, 2021
Former Committee Member	Cheng-Li Huang	1	0	100.00	Term expired on July 7, 2021

Note: Attendance rate (%) is based on the committee member's attendance during her/his term of service.

Other Matters to Be Recorded:

1. If the Board of Directors chooses not to adopt or revise recommendations proposed by the Remuneration Committee, the date of the Directors' Meeting, session, contents of proposals, results of meeting resolutions, and the Company's disposition of opinions provided by the Remuneration Committee shall be described in detail (also, where the salary and compensation approved by the Directors' Meeting is better than that recommended by the Remuneration Committee, the differences and the reason for the approval shall be described in detail): None.
2. For the decisions made by the Remuneration Committee, if there are members who hold objection or reservation to a resolution and such objection or reservation is on record or raised through a written statement, the date, session, contents of proposals, all members' opinions, and ways in handling these opinions should be elaborated: None.
3. Major resolutions of the Remuneration Committee in 2021:

Date/Meeting	Proposal	Resolution	The Company's Handling of the Opinions of the Remuneration Committee
February 24, 2021, The 11th meeting of the 4th session.	1. Directors' remuneration and attendance fees 2. Executive officer's compensation structure and performance evaluation system review and executives officer's compensation and internal audit supervisor's compensation proposals.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.
July 28, 2021, The 1st meeting of the 5th session	1. Executive officer's salary increase in 2021. 2. Proposal of executive officer's compensation.	Approved by all members present in the meeting.	Approved by directors participating in the discussion and voting in the board meeting.

Nominating Committee

The Nominating Committee, comprised of independent directors, shall assist the Board to enhance the management mechanism and to improve corporate governance with regard to the Company’s sustainable development. The objectives of the Committee include: 1. To incorporate the nomination policy and succession plans of the directors and the executives and then search for, review, and propose the candidate list of the directors and executives accordingly; 2. To construct and develop the operation of the Board and the sub-committees, as well as to plan and execute the performance assessment of the Board, the sub-committees, and the executive(s); 3. To enhance corporate sustainability strategies, corporate governance system and practices in order to protect the interests of stakeholders.

Information of Nominating Committee Operation

- There are five members in the Nominating Committee.
- The term for elected committee members is three years, starting from July 7, 2021 to July 6, 2024. A total of two Nominating Committee meetings were held in 2021. The attendance of the committee members was as follows:

Title	Name	Professional Qualification & Experience	Attendance in Person	By Proxy	Attendance Rate (%)	Remarks
Convener	Jyuo-Min Shyu	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 	2	0	100.00	Re-elected
Committee Member	Wenyi Chu	<ul style="list-style-type: none"> Financial accounting and strategic management Electronics-related industrial experience 	2	0	100.00	Re-elected
Committee Member	Lih J. Chen	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 	2	0	100.00	Re-elected
Committee Member	Kuang Si Shiu	<ul style="list-style-type: none"> Financial accounting and organizational leadership Banking Finance and business policy-making 	1	0	100.00	Newly elected on July 7, 2021
Committee Member	Wen-Hsin Hsu	<ul style="list-style-type: none"> Financial accounting and corporate sustainability Electronics-related industrial experience 	1	0	100.00	Newly elected on July 7, 2021
Former Committee Member	Cheng-Li Huang	<ul style="list-style-type: none"> Financial accounting and corporate sustainability Electronics-related industrial experience 	1	0	100.00	Term expired on July 7, 2021

Other mentionable items:

- Major resolutions of Nominating Committee in 2021:
 - Meeting on February 24, 2021, the 6th meeting of the 2nd term:
 - Amended UMC Sustainable Development Best Practice Principle.
 - Nominated the Company’s 15th term of Directors.
 - Meeting on October 27, 2021, the 1st meeting of the 3rd term:
 - Approved the ESG KPI-linked Employees’ Compensation Scheme.
 - Approved additional employees’ compensation based on ESG achievement.
- Content of the committee member’s opinions expressing objections, reservations or major suggestions: None.
- Company’s response to the opinion of the Nominating Committee: Approved.

Notes: Attendance Rate (%) is based on the committee member’s attendance during her/his term of service.

Capital Budget Committee

The Capital Budget Committee comprises independent directors to assist in the Company's long-term development strategy, financial planning, and business performance. The committee discusses plan implementations, modifies and follows up on the Company's capital expenditure budget by auditing its cost-effectiveness and tracking its performance.

Information of Capital Budget Committee Operation

- There are five members in the Capital Budget Committee.
- The term for elected committee members is three years, starting from July 7, 2021 to July 6, 2024. A total of five Capital Budget Committee meetings were held in 2021. The attendance of the committee members was as follows:

Title	Name	Professional Qualification & Experience	Attendance in Person	By Proxy	Attendance Rate (%)	Remarks
Convener	Kuang Si Shiu	<ul style="list-style-type: none"> Financial accounting and organizational leadership Banking Finance and business policy-making 	3	0	100.00	Newly elected on July 7, 2021
Committee Member	Wenyi Chu	<ul style="list-style-type: none"> Financial accounting and strategic management Electronics-related industrial experience 	5	0	100.00	Re-elected
Committee Member	Lih J. Chen	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 	5	0	100.00	Re-elected
Committee Member	Jyuo-Min Shyu	<ul style="list-style-type: none"> Engineering technology and organizational leadership Electronics-related industrial experience 	5	0	100.00	Re-elected
Committee Member	Wen-Hsin Hsu	<ul style="list-style-type: none"> Financial accounting and corporate sustainability Electronics-related industrial experience 	3	0	100.00	Newly elected on July 7, 2021
Former Committee Member	Cheng-Li Huang	<ul style="list-style-type: none"> Financial accounting and corporate sustainability Electronics-related industrial experience 	2	0	100.00	Term expired on July 7, 2021
Former Committee Member	Ting-Yu Lin	<ul style="list-style-type: none"> Financial accounting and strategic management Electronics-related industrial experience 	2	0	100.00	Term expired on July 7, 2021

Other mentionable items:

- Major resolutions of Capital Budget Committee in 2021:
Approved capital budget expenses of NT\$238,733 million in 2021.
- Content of the committee member's opinions expressing objections, reservations or major suggestions: None.
- Company's response to the opinion of the Capital Budget Committee: Approved.

Notes: Attendance Rate (%) is based on the committee member's attendance during her/his term of service.

Promotion of Sustainable Development and Deviations from "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies"

Evaluation Item	Yes	No
1. Does the company have a governance framework to promote sustainable development in place, with a division authorized by the Board to exclusively or concurrently promote corporate social responsibility policies and responsible for reporting back to the Board?	✓	
2. Does the company identify environmental, social, and corporate governance issues related to the company's operations in accordance with the materiality principle?	✓	
3. Environmental Issues		
(1) Does the Company have environmental management systems appropriate for its industry in place?	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
Abstract Explanation	
<p>UMC's sustainable governance structure includes the Board of Directors (including the Nominating Committee), the ESG Steering Committee, the Corporate Sustainability Committee, and the Enterprise Risk Management Committee.</p> <p>In 2020, UMC reorganized its sustainable governance structure and established the ESG Steering Committee, consisting of our core operating executives, and appointed the Co-Presidents as the Chairmen. The ESG Steering Committee meets every quarter to determine UMC's sustainable governance strategy/blueprint/long-term goals, and also reports to the Nomination Committee and the Board of Directors annually on the sustainable performance and plans, as well as key issues and countermeasures that stakeholders are concerned about. The Board of Directors plays a supervisory and coaching role, assessing the strategy's viability, regularly reviewing the progress of the strategy, and urging the management team to make adjustments when needed. The main points of the proposal reported in 2021 include (1) ESG governance structure reorganization; (2) UMC Sustainability Strategy and Blueprint; (3) ESG achievements and stakeholder communication; and (4) future focus. The proposal of employee's remuneration linked to ESG KPI was also approved by Nomination Committee and the Board of Directors in this meeting. Other annual resolutions of the Board of Directors related to sustainability include "Donation to the UMC Science and Culture Foundation" and the green investment in the "Capital Budget Execution".</p> <p>The Corporate Sustainability Committee was established in 2008 and is responsible for stipulating the direction and goals of sustainability. The Committee reviews the performance and target achievements of eight functional groups, which include Corporate Governance, Customer Relationship Management, Responsible Supply Chain Management, Sustainable Innovation, Environmental Planning and Management, Green Operation, Human Rights and Employee Development/Welfare, and Social Participation. The representative of the Corporate Sustainability Committee reports the quarterly CSR promotion results and plans to the ESG Steering Committee. The scope of the report includes the management and review of material issues in the area of economics/governance, environment and society.</p>	None
<p>Through the Corporate Sustainability Committee, the Company keeps itself current on the development of domestic and international sustainable development standards and changes in the corporate environment, reviews and improves the sustainable development system of UMC, and identifies environmental, social and corporate governance issues related to the company's operations in accordance with the materiality principle.</p> <p>In addition, the Enterprise Risk Management Committee has also formulated enterprise risk management policies. Through risk management methods and organizations, the committee effectively prevents and controls enterprise risks, identifies possible opportunities, comprehensively implements them in daily operations, shapes and deepens the risk culture, and establishes complete and transparent risk communication with all stakeholders to maintain steady operations. It also develops response strategies for major risk issues, reports to the ESG Steering committee quarterly and the Board of Directors annually for approval, and reviews and updates relevant standard operating procedures to ensure the effectiveness of risk management.</p> <p>For related risk (including environmental, social and corporate governance issues), please refer to the section "Risk Management and Evaluation" of this annual report and UMC Sustainability Report.</p>	None
<p>All our fabs established environmental management systems in accordance with ISO 14001 and continue to obtain third-party verification. UMC combines daily management and comprehensive quality management activities, and incorporates environmental safety management plans into actual plant operations to achieve implementation goals. In terms of environmental safety and health risks in its operations, UMC systematically assesses the possible impact of all process activities from raw material use to waste production on the environment and employees. Projects with potentially significant environmental impact are managed and controlled through raw material assessment, substitution and reduction, process pollution source control and reduction, effective treatment of end-of-pipe pollution, and reuse of surplus by-products. Employee safety and health are protected through equipment safety, chemical safety and operational safety management.</p> <p>For carbon emission management, UMC established its greenhouse gas (GHG) inventory standard mechanism in accordance with inventory guidelines defined by domestic and international organizations, including the ISO14064-1 and World Resource Institute "Greenhouse Gas Protocol". The company inventories the GHG emissions of all its fabs annually to fully determine the status of its GHG and verify the effectiveness of their reduction.</p> <p>To achieve sustainable operations, UMC adopts a clean production and zero-incident approach to environmental protection and safety, and sets environmental health and safety management system goals every year. By promoting programs that reduce environmental impact and strengthen safety, UMC continuously improves its performance in environmental protection and safety management.</p>	None

Promotion of Sustainable Development and Deviations from "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies" (Continue)

Evaluation Item	Yes	No
	(2) Does the company endeavor to utilize all resources more efficiently and use renewable materials which have low impact on the environment?	✓
(3) Does the company evaluate the potential risks and opportunities of climate change on its operations and take actions?	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
Abstract Explanation	
<p>In 2001, UMC became the first company in Taiwan's semiconductor industry to pass integrated environmental protection, safety and health management system certifications. Please refer to the Environmental Protection, Safety and Health Management chapters in this annual report for details on greenhouse gas reduction and management, energy conservation management, water conservation management, waste and resource recovery management, and pollution discharge and control.</p> <p>For more detailed descriptions of various energy efficiency measures, please refer to UMC's Sustainability Report, which is summarized below:</p> <ul style="list-style-type: none"> • Green building: UMC has incorporated energy conservation, carbon reduction and green building into its operational guidelines and goals, and introduced green building certification into all its new fabs. • Green production: To achieve the goal of zero pollution, UMC has established a comprehensive new material evaluation process to effectively screen and control new materials introduced into the development of new processes so as to avoid or reduce the use of raw material with harmful environmental impact. • Green process: The semiconductor process uses a wide variety of raw materials of high purity and high quality. Through improving process design and technology, UMC reduces raw material consumption, which not only reduces emissions at the source, but also reduces operating costs. UMC has established a comprehensive information database to manage the importing and requisition of raw materials for processing. In addition, in special projects to promote carbon credit, source reduction is achieved through process optimization, workflow improvement and target management. • Green design: As a leader in semiconductor wafer technology, UMC not only ensures that its output wafers meet the low toxicity requirements of customers, but is also committed to reducing the environmental impact of manufacturing and developing numerous high-performance and low-cost chip design processes. • Green products: Although UMC does not produce its own branded products, it continues to develop and incorporate numerous low-toxicity, low-energy green product technologies to provide customers with the most complete service for meeting the requirements of the green energy era. In 2006, UMC led global semiconductor manufacturers in completing third-party verification and audit of the Hazardous Substance Process Management (HSPM) system, becoming the first semiconductor manufacturer company in the world to obtain QC-080000 IECQ HSPM certification for all its fabs. • Packaging material management: The materials used for shipping UMC products are in full compliance with the requirements of the European RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment). All packaging materials are supplied by raw material suppliers, and are verified by impartial laboratory reports. As much as possible, packaging materials with low environmental impact are used. • Resource Recycling and Reuse Research: UMC prioritizes the reuse of recycled output waste, and continuously evaluates and introduces new technologies for reuse. UMC collaborates with qualified recycling vendors on numerous recycling projects, and makes on-site improvements (such as changing liquid waste pipelines and segregated collection) to increase the types of recyclable waste. 	None
<p>The Company formulated the UMC Climate Change Policy in 2010 as the Company's highest guiding principle in response to climate change. UMC has also formulated the UMC Low Carbon Commitment as a guide for future carbon reduction projects. Echoing the Paris Climate Agreement and pursuing efforts to limit global warming to not more than 1.5°C, UMC announced its pledge in 2021 to reach net zero carbon emissions by 2050. In the meantime, UMC has obtained admission into RE100, becoming the second semiconductor wafer foundry in this initiative, and committed to use 100% renewable energy by 2050 by setting progressive goals of 15% by 2025 and 30% by 2030.</p> <ul style="list-style-type: none"> • Climate Change Policy <ol style="list-style-type: none"> 1. Expectations to reach carbon neutral 2. To be the low carbon solutions provider 3. To promote the development of a low carbon economy • Low Carbon Commitment <ol style="list-style-type: none"> 1. Low-carbon design process 2. Energy efficiency optimization 3. Installing high efficiency FCs abatement in new tools 4. Adopting green building standard for new buildings 5. Carbon partnerships with customers and suppliers 6. Complete carbon footprint inventory for all fabs 7. Investing in the green technology industry • Greenhouse gas emission reduction goals <ol style="list-style-type: none"> 1. (2013-2025) Reduce fluorinated greenhouse gas emissions intensity by 65%. Note: With 2010 as base year. 2. (2016-2025) Reduce electricity consumption intensity by 15% in ten years. Note: With 2015 as base year. <p>UMC has constructed the UMC Climate Change Risk and Opportunity Assessment tool based on multiple data points: TCFD (Task Forced on Climate-related Financial Disclosures), ISO 14090 Adaptation to Climate Change, and the assessment procedure in the UK Climate Impact Programme (UKCIP). The Climate Change Risk and Opportunity Assessment Team conducts assessments every year. The assessment is based on the aspects such as policies, regulations, changes in the market and technologies, reputation, and physical risk, and the results are submitted to the Corporate Sustainability Committee for approval. In May 2021, UMC met the TCFD performance assessment at management level of "Pioneer", which was verified by SGS Taiwan Ltd., an endorsement of the credibility and transparency of the Company's climate change risk assessment system and disclosure. For details of greenhouse gas emissions, potential risks and opportunities of climate change, and related management and responding measures, please refer to the company's annual Sustainability Report. Also, UMC disclosed relevant information through involvement in international CDP organization initiatives.</p>	None

Promotion of Sustainable Development and Deviations from “Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies” (Continue)

Evaluation Item	Yes	No
(4) Did the company keep track of its greenhouse gas emissions, water consumption, and total weight of waste over last two years, and has the Company established strategies for greenhouse gas reduction, water conservation, and waste management?	✓	
4. Social Issues		
(1) Does the company have appropriate management policies and procedures in place according to relevant regulations and the International Bill of Human Rights?	✓	
(2) Does the company declare reasonable employee welfare measures (including salary remuneration policy, regulations for leaves and others) and integrate the company’s performance with employees’ reward?	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
<p>The environmental information of UMC in the past four years, such as greenhouse gas emissions, water consumption, and total weight of waste, is disclosed in the "UMC Corporate Social Responsibility Report" every year, which is verified by a third party.</p> <p>UMC has also formulated an environmental protection policy, climate change policy, and water resources management policy, and promoted the reduction plans and targets at various stages as a guideline for continuous improvement.</p>	None
<p>UMC Code of Conduct follows Responsible Business Alliance Code of Conduct, RBA, the UN Global Compact, International Labor Office Tripartite Declaration of Principles, the OECD Guidelines for Multinational Enterprises, the UN Universal Declaration of Human Rights, the UN Human Rights Norms for Business, the UN Guiding Principles on Business and Human Rights and related international standards and complies with the requirement of local laws and regulations.</p> <p>For scope of application and related information, please refer to the UMC Code of Conduct website at https://www.umc.com/en/Html/UMC_code_of_conduct and UMC Human Rights Policy Declaration website at https://www.umc.com/en/Html/labor_and_human_rights#umc_human_rights_policy_declaration.</p>	None
<ul style="list-style-type: none"> • Compensation and Benefits <p>UMC conducts and implements reasonable employee compensation and welfare measures. UMC's employee compensation is based on educational level, performance and market value, regardless of gender, race, religion, political position, and marital status. The compensation is in line with all applicable local laws and regulations in terms of minimum wage, retirement pension, leaves, and other mandatory benefits to safeguard the rights of employees. The Company provides various welfare benefits including holidays, insurance, financial assistance for emergencies, subsidies for marriage/childbirth/funerals, discounts in designated shops, and employee assistance service. Please refer to the employee benefits of operations overview in this annual report and Chapter 4 of the latest Sustainability Reports.</p> <ul style="list-style-type: none"> • Workplace Diversity and Equality <p>UMC encourages a diverse, open, and equal workplace culture. In addition to guaranteeing gender equality in the workplace, the Company supports and respects promotion and development opportunities for women, the unique culture of ethnic minorities, and the employment of persons with disabilities. Please refer to Chapter 4 of the Sustainability Report for relevant information.</p> <ul style="list-style-type: none"> • Performance-oriented Compensation System <p>UMC offers salary adjustment, differentiated bonus/employee compensation, and stock remuneration (employee stock option certificates and treasury shares) based on individual performance, job responsibilities, and future development potential to attract, retain, and motivate outstanding employees. UMC also actively joins the remuneration surveys of well-known global enterprises to ensure that the overall remuneration offered by UMC is competitive in the market. The Company shall allocate no less than 5% of profit as employees' compensation for each profitable fiscal year after offsetting any cumulative losses (please refer to Employees' and Directors' Compensation in the section Capital and Operations Overview in this report).</p>	None

Promotion of Sustainable Development and Deviations from "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies" (Continue)

Evaluation Item	Yes	No
	(3) Does the company provide a healthy and safe working environment, and organize training on health and safety for its employees on a regular basis?	✓

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
Abstract Explanation	None
<p>UMC has three categories of safety and health education based on job characteristics:</p> <ul style="list-style-type: none"> • Company-wide general education and training in safety and health. • Plant safety and health education organized by each fab. • Safety and health related training formulated by each division according to divisional characteristics. <p>"Safety First. Prioritize Safety Over Production" is UMC's commitment to employees. The Company plans implements necessary safety and health education and training for work and prevention of disasters. Training is divided into company-wide general education courses, factory-run courses, and department-specific courses, so that employees can develop safety awareness and knowledge, with the aim of reducing accidents caused by unsafe behavior. In addition to regular courses, safety-related training courses for specific events or major cases are also introduced occasionally. In 2021, 2,203 classes were offered, attracting a total of 53,225 participants. The courses include e-learning courses so that employees can learn safety and health knowledge without being limited by the schedule of physical courses.</p> <p>UMC's headquarters and foundries have ISO 14001 and ISO 45001 certification, and the headquarters and Taiwan fabs have passed Taiwan's occupational safety and health management system (TOSHMS) certification. In 2021, there was a total of 11 employee occupational incidents, accounting for 0.06% of the total number of employees.</p> <p>For any occupational incident, the accident department must fill in the UMC Incident Report System to analyze and explain the root cause of the incident, propose prevention actions for the root cause, and track the improvement measures through the system to prevent similar incidents from happening again.</p> <p>UMC actively promotes healthy workplace related management, promotion, and charity activities. In 2021, UMC promoted a healthy workplace lifestyle themed "Earning Health Together in 2021-Connecting Game" to create a healthy living workplace. Due to the COVID-19 epidemic, in order to reduce the gathering of people, adjustments were made to on-site activities. The results in 2021 are as follows:</p> <p>1.The health promotion activities attracted 13,000 participants; actual number of participants was 3,023, and overall satisfaction rate was 97%.</p> <p>Q1 "FUN-Relieve Pressure Together"</p> <p>In order to reduce the COVID-19 epidemic, the health center has promoted health education on the Company's homepage and electronic bulletin board, providing new knowledge to strengthen epidemic prevention and correct hygiene concepts. More than 35 articles on epidemic prevention concepts and habits was be promoted in 2021.</p> <p>Q2 "Do Health Examination Together"</p> <p>The second quarter of each year coincides with Mother's Day. UMC cooperates with medical institutions to conduct breast ultrasound examinations to raise awareness of preventive medicine among female colleagues. The activity attracted a total of 161 participants. Subsequently, due to the severe epidemic situation in Taiwan, the ultrasound examinations were cancelled, and the medical examinations required by the law were extended to the third quarter.</p> <p>As the epidemic situation improved, this program will continue until June 30, 2022. Official leave and subsidy for the health check-up are offered to allow more flexibility for colleagues to arrange their appointments.</p> <p>Q3 "Move and Slim Down Together"</p> <p>The "Connecting Game" health promotion attracted a total of 1,066 participants. Activities include the establishment of a health declaration, a health column, healthy weight loss, and regular blood pressure measurement. In addition, in response to the epidemic, medical institutions across the country suspended non-regulatory health examination. To comply with the limit of 100 people for indoor gatherings, the number of health checkups was adjusted in August 2021. A total of 1,159 people in the Company completed the health examination for the required subjects and health checkup items.</p> <p>Q4 "Listen to Consultation Together"</p> <p>Two health seminars were conducted in 2021. "Autonomic Disorders, and Physical and Mental health" was held on 14 December and 166 people attended. "Daily Pain Control" was held on 23 December and 139 people attended.</p> <p>2. 6,360 people consulted with in-house physicians.</p> <p>3. 709 people donated blood, totaling 1,064 bags of blood.</p> <p>4. 161 people received breast ultrasound exam, and satisfaction rate was 96.7%.</p> <p>5. 298 people received flu vaccination, and satisfaction rate was 98.9%.</p> <p>6. There were a total of 441 health management consultations for emergency personnel, and the health consultation rate was 100%.</p> <p>7. There were 546 notifications of nursing care and first aid assistance.</p> <p>8. There were 1,787 new medical examinations.</p>	

Promotion of Sustainable Development and Deviations from "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies" (Continue)

Evaluation Item		
	Yes	No
(4) Does the company provide its employees with career development and training sessions?	✓	
(5) Does the company comply with relevant regulations and international standards about customers' health, safety, privacy, advertise and label of goods and services and establish consumer protection policy?	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
<p>Abstract Explanation</p> <ul style="list-style-type: none"> Employee health care The Company provides employees with physical examinations for new hires and annual health checks. Based on the results, health center organizes health promotion activities for health management, and conducts case-by-case management for special operation employees. The Company cooperates with medical institutions to hire doctors to provide on-site health consultation services for employees. Effective health risk management and case management are implemented for all employees with abnormal test results. By integrating the "health care system", the Company can notify and track to minimize health risks in the workplace. 1. In 2021, a total of 1,159 employees in the Company received physical checkup, and satisfaction rate was 97.1%. 2. Health examination reports and online questionnaire outcomes were classified according to the risks. Health management and consultation by on-site doctors are then arranged accordingly to achieve 100% follow-up care. Employee consulting and assistance program To assist employees with physical and mental issues, the Company provides each employee with 6 free sessions of individual counseling per year. Appointments for individual counseling are arranged through a one-on-one privacy protection mechanism. In 2021, a total of 220 individuals received the free telephone counseling service and 91 individuals received face-to-face paid services. UMC's promotion and cultivation of a healthy workplace is deeply recognized by enterprises. At present, the UMC headquarters and other sites have obtained the "Excellent Self-Managed Healthy Workplace" certification, and their health promotion certifications are still current. It demonstrates UMC's active protection of employee health and concern for their physical and psychological well-being. 	
<p>The UMC training roadmaps are based on different job categories and ranks. In addition, to encourage ongoing learning and career development, company-wide education and training plans for the following year are formulated according to the outcome of the annual executive and employee training surveys.</p>	None
<p>UMC is committed to strengthening world-class process technology, manufacturing capability, and excellent service to enhance customer service value. UMC has always valued customers as partners and created an exceptional business philosophy based on the spirit of "United for Excellence". UMC works closely with customers to achieve win-win results, and customer satisfaction as one of the Company's key objectives. Customer-oriented behavior is to provide a complete solution to satisfy the customer's requirements for product and service quality. To achieve this end, UMC has introduced the MyUMC, MyHJTC (for HJ only) and MyUSC (for USCXM only) online service platforms for customers to easily check product status including the shipping date and product quality data. In addition, the website also provides an Engineering Data Analysis function for customers to analyze product data as needed.</p> <p>UMC has also incorporated the Voice of Customer (VOC) instant online complaint system within the MyUMC, MyHJTC, MyUSC and MyUSJC service platforms, which allows customers to make requests, comments, or suggestions about the Company's products or services at any time. The system replies to customers within one working day to inform them their requests have been passed to corresponding divisions. A dedicated person will then be assigned to the customer, who can check the progress at any time on the website. UMC's measures for responding to customer complaints must meet customer demand for product and service quality. To this end, there is a regular review for customer complaints, handling progress, and the quality of response, to ensure that each division not only offers corresponding measures but also provides subsequent series of related solutions to enhance overall customer satisfaction. UMC collects customer voice feedback in the VOC system and translates them into specific improvement actions for continuous and comprehensive improvement of the Company's product competitiveness and service quality.</p> <p>For consumer protection mechanisms, in order to strictly protect customer-related information, UMC has established external document management procedure. All specifications and technical documents from customers are strictly controlled by UMC's internal system. Therefore, we can prevent leakage of customer documents and ensure the documents are utilized and processed appropriately. In the future, UMC will continue to accumulate intellectual assets, provide better products and services, work with customers to tackle more difficult challenges in technology development and production, and achieve win-win results with customers.</p> <p>UMC is ISO 9001 & IATF 16949 & QC-080000 IECQ HSPM international standards certified. The Company's quality policies are based on these standards to provide customers with excellent product quality, reasonable price, and excellent and timely service. UMC adheres to the principle of continuous improvement. Through cultivating awareness among employees, improving quality control and technical improvement in design and production, offering products that meet regulatory and customer demand for harmful substance control, UMC strives to fulfill its responsibility as a corporate citizen to protect the environment and the health and safety of the global community.</p>	None

Promotion of Sustainable Development and Deviations from "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies" (Continue)

Evaluation Item		
	Yes	No
(6) Does the company have a supplier management policy to regulate suppliers on concern related to environmental protection, labor and human rights, safety, and health?	✓	
5. Does the company prepare a Sustainability Report that complies with international guidelines and is verified by a third party?	✓	
6. If the Company has established the sustainable development principles based on "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies," please describe any discrepancy between the Principles and their implementation:		
7. Other important information to facilitate better understanding of the company's sustainable development practices:		

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
<p>Based on UMC's GG-026-004-C sustainable supply chain management review guidelines for achieving a supply chain that fulfill environmental protection, social responsibility, labor and human rights, safety, health, and sustainable development, UMC has formulated evaluations for reviewing the sustainable development of its supply chain. The evaluation comprises a set of assessments to rate the sustainability of suppliers, and include indicators such as delivery time, quality, finance, and operations. Suppliers with unfavorable review outcomes are offered audit counseling for improvement, and in the case of severe issues, procurement or status as qualified suppliers are terminated. For other details, please refer to the UMC Sustainability Report on the UMC website.</p>	None
<p>As of 2021, UMC has publicly issued a non-financial related sustainability annual report for 21 consecutive years. At the same time, the 2020 UMC Corporate Social Responsibility Report is the 16th annual report disclosing UMC's corporate sustainable development. This report is compiled according to the GRI Standards of the Global Reporting Initiative, the Semiconductors Sustainability Accounting Standard 2018 issued by the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD), and is verified by SGS Taiwan Ltd. in accordance with the Account Ability 1000 Assurance Standard v3 Type 2, High level assurance. In 2022, UMC will compile the 2021 UMC Sustainability Report that will address major corporate social responsibility issues and stakeholder concerns, and will commission a third party to verify the report.</p>	None
<p>The Corporate Social Responsibility Principles were approved by the Board of Directors in October 2015, and revised to Sustainable Development Best Practice Principles and granted approval by the Board of Directors in February 2022. For details of the principles please refer to: https://www.umc.com/en/Download/major_internal_policies. The Company's corporate sustainable operations show no significance inconsistency from Sustainable Development Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies. For other details, please refer to the "Corporate Sustainable Development" of this Annual Report and the Sustainability Report on the UMC website.</p>	
<p>UMC is a current member of Business Council for Sustainable Development of Taiwan (BCSD- Taiwan), Taiwan Corporate Sustainability Forum (TCSF), The Allied Association for Science Park Industries (ASIP) and Taiwan Semiconductor Industry Association (TSIA). In addition to actively promoting environmental safety and health and corporate sustainability activities, UMC also serves as a representative to provide recommendations to government and academic institutions in their formulation and development of corporate social responsibility policies.</p> <p>For other details, please refer to the UMC Sustainability Report and the Corporate Sustainability webpage at https://www.umc.com/en/CSR/sustainability_overview on the UMC website.</p>	

Ethical Corporate Management and Deviations from “Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies”

Evaluation Item	Yes	No
	1. Establishment of ethical corporate management policies and programs	
(1) Does the company have an ethical corporate management policy approved by the Board of Directors, clearly state the policy and procedures in its guidelines and external documents, and demonstrate commitment from the Board of Directors and top management to implement the policy?	✓	
(2) Does the company have policies to prevent unethical conduct, analyze and evaluate the risk of unethical conduct in operating scope periodically, at least including appropriate precautions against high-potential unethical conduct or listed activities stated in Article 2, Paragraph 7 of the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies?	✓	
(3) Does the company have policies to prevent unethical conduct with clear statements regarding relevant procedures, guidelines of conduct, punishment for violation, rules of appeal, and the commitment to implement the policies and review the policies periodically?	✓	
2. Fulfill operations integrity policy		
(1) Does the company evaluate business partners' ethical records and include ethics-related clauses in business contracts?	✓	
(2) Does the company have an exclusively (or concurrently) dedicated unit supervised by the Board of Directors to be in charge of corporate integrity, implementation, and regularly reports to the Board, at least once a year?	✓	
(3) Does the company have policies to prevent conflicts of interest and provide appropriate communication channels?	✓	
(4) Has the company established effective accounting and internal control systems to facilitate ethical corporate management, and has the internal Audit Division formed and executive an audit plan based on unethical conduct risks, or engaged an external accountant to implement the audit?	✓	
(5) Does the company regularly hold internal and external educational trainings on operational integrity?	✓	

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
<p>UMC has formulated the Code of Ethics for Directors and Officers, the Employee Code of Conduct, and the Ethical Corporate Management Best Practice Principles with approval by the Board of Directors, and the UMC Code of Conduct as regulatory guidelines for all directors, managers and employees of the Company. Please refer to the UMC websites at https://www.umc.com/en/Html/ir_corporate_governance and https://www.umc.com/en/Html/UMC_code_of_conduct.</p>	None
<p>The Employee Code of Conduct and the UMC Ethical Corporate Management Best Practice Principles are provisions for regulating moral integrity, conflict of interest, and business conduct. The Company also establishes a risk assessment mechanism against unethical conduct. Other relevant education, training, or tests are conducted from time to time for employee education.</p>	None
<p>All suppliers have signed the Employment Ethics Terms and Conditions Agreement in which policies and reporting channels are clearly stated. Furthermore, to strengthen and implement policies on quality, penalties for violating the above Process Change Notification (PCN) are clearly stated in the purchase order in accordance with the UMC Raw Material Supplier PCN Application Management Method (GG-Q12-008-E).</p>	None
<p>The ESG Steering Committee is the highest-level corporate social responsibility organization within UMC. The committee formulates the direction and objectives of the Company's corporate social responsibility and sustainable development, and reports to the Board of Directors annually. (Report Date is Oct. 27, 2021.) Ethical management is only one part of corporate sustainability. For further information, please refer to UMC website at https://www.umc.com/en/Html/UMC_code_of_conduct.</p>	None
<p>Please refer to Employee code of conduct at https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/Employee_Code_of_Conduct-e.pdf for policies and reporting channels.</p>	None
<p>In order to facilitate ethical corporate management and issue a reliable, transparent and compliant report, UMC established an effective accounting system and designed relevant internal control systems based on evaluation results of risks including unethical conduct, code of conduct and regulations compliance. UMC Audit Division directly under the Board of Directors/Audit Committee performs relevant operation audits according to annual audit plans and regularly reports the audit results and improvement follow-up to the Board of Directors/Audit Committee. And through annual internal control self-assessment, UMC has also conducted a self-review of all fabs, departments and subsidiaries operation to achieve the effectiveness of internal control systems' design and implementation.</p>	None
<p>In addition, UMC is also listed on the New York Stock Exchange (NYSE) and subject to US regulations for foreign issuers. Since 2006, UMC has complied with the SOX 404 Act and has been audited by the independent auditors annually. To date, the independent auditors have issued unqualified audit reports for UMC's internal control design and implementation performance.</p>	
<p>UMC has formulated the Code of Ethics for Directors and Officers, the Employee Code of Conduct, and the Ethical Corporate Management Best Practice Principles as regulatory guidelines for all its directors, managers and employees. These regulations aim to enhance the quality of conduct and professional ethics of the Company and its entire staff. The abovementioned Employee Code of Conduct is implemented in the daily work of all employees through physical and online training courses and tests. In 2021, UMC fabs in Taiwan and Singapore have completed the training courses and passed relevant tests.</p>	None

Ethical Corporate Management and Deviations from “The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies” (Continue)

Evaluation Item	Yes	No
	3. Channel for reporting complaints	
(1) Does the company have a system to process complaints and offer reward incentives, a hotline for reporting complaints, and a designated personnel to follow up with complaints?	✓	
(2) Does the company have standard operating procedures for investigating complaints, follow-up actions, and ensuring the complaints are handled in a confidential manner?	✓	
(3) Does the company provide proper whistleblower protection?	✓	
4. Strengthening information disclosure		
Does the company disclose its ethical corporate management policies and the results of its implementation on the company's website and MOPS?	✓	
5. The company has established its ethical corporate management policies based on the Ethical Corporate Management Best-Practice Principles for TWSE/TPEX Listed Companies; please describe any discrepancy between the policies and their implementation.		
6. Other important information to facilitate a better understanding of the company's ethical corporate management policies (e.g., review and amend its policies).		

Implementation Status	Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" and Reasons
Abstract Explanation	
Article 6 of the Employee Code of Conduct describes measures to prevent ethics violations, and to protect whistleblowers and to prevent retaliatory action. Employees or any whistleblowers may report violations to relevant management and supervisory units through e-mail or hotlines, and the head of the Audit Division is promptly notified of the report.	None
After receiving a complaint, UMC will convene an investigative team to investigate the violation described in the report. Once the investigation results are confirmed, those found violating or breaching the Code of Conduct are to face adequate corrective action by the Company depending on the severity of the incident. The Company will protect any employee reporting ethics violations or frauds, or participating in the investigation, from unfair treatment or retaliation. For details, please refer to Employee code of conduct at https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/Employee_Code_of_Conduct-e.pdf .	None
The Company will protect any employee reporting ethics violation or fraud, or participating in the investigation, from unfair treatment or retaliation. For details, please refer to webpage at https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/Employee_Code_of_Conduct-e.pdf .	None
UMC discloses its principles on ethical corporate management, relevant regulations and status of implementation on its website and MOPS. In addition, UMC discloses relevant information in its Corporate Sustainability Report.	None
UMC has formulated the Code of Ethics for Directors and Officers, the Employee Code of Conduct, and the Ethical Corporate Management Best Practice Principles. All directors, managers and employees of the Company shall abide by the provisions of these Codes and related regulations. For employee compliance with the Employee Code of Conduct, please refer to Employee code of conduct at https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/Employee_Code_of_Conduct-e.pdf .	
For other relevant communications such as employee rights, employee care, investor relations, supplier relationships and stakeholder rights, please refer to the UMC Sustainability Report and the Corporate Sustainability webpage at https://www.umc.com/en/CSR/sustainability_overview on the UMC website.	

Ethical Corporate Management and Deviations from "The Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies" (Continue)

Specific Measures for Ethical Management in 2020-2021

Item	Implementation Status
Legal Compliance	<ul style="list-style-type: none"> • Inter-division regulatory compliance is coordinated by the Legal and Compliance Division, and other regulations are regularly reviewed by relevant divisions. • The Legal and Compliance Division has coordinated overall regulatory compliance with the EU General Data Protection Regulation since 2019; the Legal and Compliance Division also pays close attention to the Personal Information Protection Law of People's Republic of China that became effective in Nov, 2021 and will coordinate overall regulatory compliance with the law. • With respect to the frequent rule changes of the Export Administration Regulations of the United States starting in 2020, the Legal and Compliance Division is coordinating overall legal compliance with the regulations. • Legal and Compliance Division noticed China enacted new export control related laws and/or regulations to counteract the rule changes to the Export Administration Regulations of the United States, and will coordinate overall legal compliance in this regard. • In 2020, the Legal and Compliance Division conducted a training course for insider trading targeting all employees, managers and executives. In order to continuously strengthen the awareness of and emphasize the importance of insider trading and trade secret protection, and to prevent employees from unknowingly violating laws and regulations in connection with insider trading and trade secret protection, the Legal and Compliance Division conducts training courses on a regular basis. The Legal and Compliance Division conducted an online training and test for insider trading and trade secret protection in the third quarter of 2020. As total of 7,966 employees completed the online training and test, representing 99.5% of the targeted employees. • On April 21 and 22, 2021, the course "The Laws and Practices of Preventing Insider Trading and Insider Equity Transactions" aimed for managers of first level or above was arranged to promote the definition and legal elements of insider trading, criminal liability and penalty of violations, relevant corporate cases, and the Company's internal measures for preventing insider trading. A total of 99 managers participated in this three-hour course. • On July 21, 2021, the Company conducted awareness training on the laws and regulations related to the prevention of insider trading for new board members, and arranged for current board members to participate in "The Prevention and Response to Insider Trading" 3-hour course organized by the Independent Director Association Taiwan on September 10, 2021.
UMC Code of Conduct Implementation	<ul style="list-style-type: none"> • The content of the Codes is reviewed biannually: <ol style="list-style-type: none"> 1. Review of the Employee Code of Conduct was completed in April 2021. 2. Relevant penal provisions were added to the Employee Code of Conduct in December 2017. • Major violations of employee ethics are reported to the Audit Committee on a quarterly basis. In 2021, no major ethical violations were reported. • Employee Code of Conduct education and testing were conducted in July 2021, with 100% completion rate. • Employee Code of Conduct training course for new employees: 271 participants and a total of 406.5 hours in 2021.
UMC fair competition, intellectual property rights violations	<ul style="list-style-type: none"> • Litigation cases in each quarter of 2021 were reported to the Audit Committee. • The UMC Antitrust Policy for promoting fair competition can be found on the UMC website, and online testing is conducted regularly. Online testing for the Fair Trade Law (i.e. the Antitrust Law) was conducted in December 2021. • For intellectual property rights education, three weekly training courses are offered to new employees: Introduction to UMC Intellectual Property Rights, Trade Secret and Basic Legal and Risk Awareness on the Incoming Data. An online course and test was provided to all the employees regarding "copyright law" on eUMC on August, 2021 to strengthen their knowledge of copyright protection and promote the necessity of the enactment of the copyright law. • Introduction to UMC Intellectual Property Rights training course for new employees: 797 participants and a total of 199.3 hours in 2020; and 1,716 participants and a total of 429 hours in 2021. • Trade Secrets training course for new employees: separate from UMC Intellectual Property Rights as an individual course since December 2018 with 797 participants and a total of 127.5 hours in 2020; and 1,716 participants and a total of 274.6 hours in 2021. • Basic Legal and Risk Awareness on the Incoming Data training course for new employees: implemented since April 2018. A total of 797 participants and a total of 199.3 hours in 2020; and 1,716 participants and a total of 429 hours in 2021.
Financial reporting related internal control	<ul style="list-style-type: none"> • Annual audit by external auditors and internal Audit Division. • Results of internal audits for 2021 were reported at the Audit Committee/Board of Directors meetings on a quarterly basis.

Code of Ethics for Directors and Officers

Please refer to the website

https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/Code_of_Ethics_chi.pdf

Employee Code of Conduct

Please refer to the website

https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/Employee_Code_of_Conduct-e.pdf

UMC Ethical Corporate Management Best Practice Principles

Please refer to the website

https://www.umc.com/upload/media/08_Investors/Corporate_Governance/Major_Internal_Policies/UMC_Ethical_Corporate_Management_Best_Practice_Principles_eng.pdf

Internal Control System Execution Status

Statement of Internal Control System

Based on the findings of self-assessment, UMC states the following with regard to its internal control system during the year 2021.

1. UMC acknowledges and understands that establishing, operating and maintaining an internal control system are the responsibilities of its Board of Directors and management, and such a system has been established. The purpose of establishing the internal control system is to reasonably assure the following objectives: The effectiveness and efficiency of operations (including profitability, performance and the safeguarding assets); reliability, timeliness, transparency of our reporting, and compliance with applicable rulings, laws and regulations.
2. The internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can only provide reasonable assurance of accomplishing the aforementioned three objectives. Moreover, the effectiveness of an internal control system may be subject to changes of environmental or circumstances. Nevertheless, our internal control system contains self-monitoring mechanism and UMC takes corrective actions whenever a deficiency is identified.
3. UMC evaluates the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing Establishment of Internal Control Systems by Public Companies (herein below, the "Regulations"). The criteria adopted by the Regulations identify five components of internal control based on the process of management control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring activities. Each component further contains several items. Please refer to the Regulations for details.
4. UMC has evaluated the design and operating effectiveness of its internal control system according to the aforesaid Regulations.

5. Base on the findings of the assessment mentioned in the preceding paragraph, UMC believes that, on December 31, 2021, its internal control system (including its supervision and management of subsidiaries), had effectively assured that the following objectives had been reasonably achieved during the assessing period: effectiveness and efficiency of operations, reliability, timeliness, transparency of our reporting, and compliance with applicable rulings, laws and regulations.
6. This Statement is an integral part of the UMC's annual report and prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171 and 174 of the Securities and Exchange Act.
7. This Statement was passed by the Board of Directors in their meeting held on Feb. 24, 2022, with none of nine attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

United Microelectronics Corporation

Chairman: Stan Hung



President: S C Chien



President: Jason S Wang



Feb. 24, 2022

If a Certified Public Accountant (CPA) was Engaged to Conduct a Special Audit of the Internal Control System, Provide its Audit Report:

According to "Regulations Governing Establishment of Internal Control Systems by Public Companies," the Company was not required to engage a certified public accountant (CPA) to conduct any special audit of the internal control system in 2021.

Legal Liabilities of Company and Employees, Company Penalties Toward Employee Violation of Company Regulations, Key Oversights and Improvement

Punishment Cases	Improvement Status
The competent authority confirmed that the Company has "non-compliance procedure and process flaws" and the Company was fined NT\$170,000.	After communications with the competent authority, the Company has made improvements to the related findings.

Note: The data represented for 2022 was gathered until February 24, 2022.

Major Resolutions and Implementation Status of the Shareholders' Meeting and the Board of Directors' Meetings

The Major Resolutions from the Shareholders' Meeting

The Company's 2021 Annual General Meeting was held at No.9, Li-Hsin 3rd Rd., Hsinchu Science Park, (UMC Recreation Center) on July 7, 2021. The resolutions approved by the shareholders present in person or by proxy and its implementation status were as follows:

Items	Resolutions from the Annual General Meeting	Implementation Status
1.	Acceptance of the 2020 business report and financial statements.	<ul style="list-style-type: none"> In 2020, UMC's sales revenue was NT\$176,820,914 thousand, and full-year net income reached NT\$29,189,489 thousand, leading to an earnings per share of NT\$2.42.
2.	Acceptance of the 2020 Earning Distribution Chart.	<ul style="list-style-type: none"> Distribution of 2020 earnings with cash dividend of NT\$19,875,842,389. The ex-dividend record date was set for July 30, 2021, and cash dividend for common shares was paid on August 13, 2021.
3.	Approval of the issuance plan of private placement for common shares, DRs (including but not limited to ADS), or Euro/Domestic convertible bonds (including secured or unsecured corporate bonds). The amount of shares is proposed to be no more than 10% of total common shares issued plus the total common shares represented by the above equity-type securities which are fully issued.	<ul style="list-style-type: none"> The votes in favor of this agenda did not exceed two-third of the votes represented by the shareholders present (in person, by proxy and by e-voting) and thus this agenda is unable to proceed.
4.	Election of the Company's 15th Term of Directors	<ul style="list-style-type: none"> List of the Company's 15th term of directors elected: Stan Hung, Wenyi Chu, Lih J. Chen, Jyuo-Min Shyu, Kuang Si Shiu, Wen-Hsin Hsu, Ting-Yu Lin, SC Chien, representative of Hsun Chieh Investment Co., Ltd., and Jason Wang, representative of Silicon Integrated Systems Corp.

Major Resolutions and Implementation Status of the Shareholders' Meeting and the Board of Directors' Meeting (Continue)

The Major Resolutions from the Board of Directors' Meetings

Meeting Date	Major Resolutions
2021.02.24	<ul style="list-style-type: none"> • Approved the 2020 Business Report and Financial Statements. • Approved the 2020 distributable compensation for employees and directors. • Approved the 2020 Dividend Distribution. • Approved termination of the issuance plan for private placement, which was approved at the 2020 Annual General Meeting. • Approved the proposal for private placement based on future operation needs and will propose at the 2021 Annual General Meeting for discussion. • Approved the date of convening the 2021 Annual General Meeting, meeting agenda and submission period for shareholder proposals. • Approved capital budget execution. • Approved the acquisition of the Right-of-Use Asset from subsidiary Wavetek Microelectronics Corporation. • Approved the issuance of unsecured straight corporate bonds. • Approved UMC's donation to UMC Science and Culture Foundation.
2021.04.28	<ul style="list-style-type: none"> • Approved the Q1, 2021 Consolidated Financial Statements. • Approved capital budget execution. • Approved the Cancellation of Restricted Shares to Employees Stock Awards. • Approved to release the managerial officer from non-competition restrictions. • Approved UMC's donation to National Tsing Hua University. • Approved the investment in TGWest Asia Partners II(Taiwan), L.P. • Approved issuance of unsecured zero coupon euro exchangeable bonds.
2021.06.17	<ul style="list-style-type: none"> • Approved to change the date and the location of convening the 2021 Annual General Meeting.
2021.07.07	<ul style="list-style-type: none"> • Stan Hung is elected as Chairman unanimously by the Board of Directors. • Approved to appoint members of the 5th term of remuneration committee. • Approved to appoint members of capital budget committee. • Approved to appoint members of the 3rd term of nominating committee. • Approved the adjustment of 2020 cash dividend ratio. • Approved the record date for 2020 cash dividend.
2021.07.28	<ul style="list-style-type: none"> • Approved the Q2, 2021 Consolidated Financial Statements. • Approved capital budget execution.
2021.09.03	<ul style="list-style-type: none"> • Approved the Share exchange between the Company and Chipbond Technology Corporation.
2021.10.27	<ul style="list-style-type: none"> • Approved the Q3, 2021 Consolidated Financial Statements. • Approved capital budget execution. • Approved the Cancellation of Restricted Shares to Employees Stock Awards.
2021.12.15	<ul style="list-style-type: none"> • Approved capital budget execution.
2022.02.24	<ul style="list-style-type: none"> • Approved the 2021 Business Report and Financial Statements. • Approved the 2021 distributable compensation for employees and directors. • Approved the cash distribution from capital surplus. • Approved the 2021 Earnings Distribution Chart. • Approved the issuance of Restricted Stock Awards. • Approved the date of convening the 2022 Annual General Meeting, meeting agenda and submission period for shareholder proposals. • Approved capital budget execution. • Approved the Cancellation of Restricted Shares to Employees Stock Awards. • Approved UMC's donation to UMC Science and Culture Foundation.

Major Issues of Record or Written Statements Made by Any Director Dissenting to Important Resolutions Passed by the Board of Directors during 2021 and as of the Annual Report Printing Date:

None.

Resignation or Dismissal of Chairman, President, and Heads of Accounting, Finance, Internal Audit, Corporate Governance Officer and R&D during 2021 and as of the Annual Report Printing Date:

None.

Certification of Employees Whose Roles Are Related to the Release of the Company's Financial Information

Certification Name	Number of Employees		
	Audit	Accounting	Finance
Certified Public Accountants (CPA)	2	19	2
US Certified Public Accountants (US CPA)		6	1
Association of Chartered Certified Accountants Singapore (ACCA Singapore)		1	
Malaysian Institute of Accountants (CA Malaysia)		1	
Certified Internal Auditor (CIA)		3	
CABIAV Certificate of Certified Business Valuator		2	1

Certified Public Accountant (CPA) Fee Information

The Amount of Audit and Non-audit Fee Paid to the CPA, CPA Firm, and Its Affiliates and Content of Non-audit Service Should Be Disclosed

In Thousand NT\$

Name of CPA Firm	Name of CPA	CPA Audit Period	Audit Fee	Non-audit Fees	Total	Remarks
Ernst & Young, Taiwan	Wan-Ju Chiu, Hsin-Min Hsu	2021.01.01~ 2021.12.31	56,226	11,296	67,522	

Note: The non-audit fees mainly includes fees paid for tax compliance audit, documents related to issued unsecured exchangeable bonds and business registration, etc.

If the CPA Firm Changes, and the Audit Fee Paid in the Year of Such Change Is Reduced from the Audit Fee of the Previous Year, the Amounts of the Audit Fees Before and After such Change and the Reason of Such Change Should Be Disclosed

None.

If the Audit Fee Is Reduced by More than 10% from Last Year, the Amount, Ratio, and Reason for the Reduction of the Audit Fee Should Be Disclosed

Due to the classification of tax compliance audit as non-audit fees in accordance with the regulations.

Information of CPA Change

None.

UMC's Chairman, Presidents, Chief Financial Officer, and Managers in Charge of Its Finance and Accounting Operations Did Not Hold Any Positions in UMC's Independent Auditing Firm or Its Affiliates in the Most Recent Year.

Change in Shareholding of Directors, Managers and Major Shareholders Who Own 10% or More of UMC Shares

Unit: Shares

Title	Name	2022		2021	
		Holding Increase (Decrease)	Pledged Holding Increase (Decrease)	Holding Increase (Decrease)	Pledged Holding Increase (Decrease)
Chairman, CSO	Stan Hung	0	0	0	0
Director	Hsun Chieh Investment Co., Ltd.	0	0	0	0
Director	Silicon Integrated Systems Corp.	0	0	0	0
Independent Director	Wenyi Chu	0	0	0	0
Independent Director	Lih J. Chen	0	0	0	0
Independent Director	Jyuo-Min Shyu	0	0	0	0
Independent Director	Kuang Si Shiu	0	0	0	0
Independent Director	Wen-Hsin Hsu	0	0	0	0
Director	Ting-Yu Lin	0	0	0	0
President	SC Chien	0	0	0	0
President	Jason Wang	0	0	0	0
Executive Vice President	Ming Hsu	0	0	(70,000)	0
Senior Vice President	Oliver Chang	0	0	(393,000)	0
Senior Vice President & Chief Financial Officer	Chitung Liu	0	0	(80,000)	0
Senior Vice President & General Counsel	Lucas S Chang	0	0	(50,000)	0
Vice President	TS Wu	0	0	(37,000)	0
Vice President	C C Hsu	0	0	0	0
Vice President	M C Lai	0	0	(300,000)	(300,000)
Vice President	S F Tzou	0	0	(800,000)	0
Vice President	Osbert Cheng	0	0	0	0
Vice President	G C Hung	0	0	0	0
Vice President	Steven Hsu	0	0	0	0
Vice President	Wenchi Ting	0	0	(150,000)	0
Vice President	Jerry CJ Hu	0	0	0	500,000

Change in Shareholding of Directors, Managers and Major Shareholders Who Own 10% or More of UMC Shares (Continue)

Unit: Shares

Title	Name	2022		2021	
		Holding Increase (Decrease)	Pledged Holding Increase (Decrease)	Holding Increase (Decrease)	Pledged Holding Increase (Decrease)
Vice President	Y S Shen	0	0	0	0
Vice President	Steven S Liu	0	0	0	1,800,000
Vice President	SR Sheu	0	0	0	0
Vice President	M L Liao	0	0	0	0
Vice President	S S Hong	0	0	(350,000)	0
Vice President	Francia Hsu	0	0	(444,000)	0
Vice President	Mindy Lin	0	0	(44,000)	0
Vice President	Linwu Kuo	0	0	0	0
Vice President & Chief Human Resources Officer	Eric Chen	0	0	(290,000)	0
Associate Vice President	Johnson Liu	0	0	(25,000)	0
Associate Vice President	Victor Chuang	0	0	(100,000)	0
Associate Vice President	Chuck Chen	0	0	0	0
Associate Vice President	JT Lin	0	0	0	0
Associate Vice President	Yau Kae Sheu	0	0	(320,000)	0
Associate Vice President	J Y Wu	0	0	(280,000)	0
Associate Vice President	Purakh Raj Verma	0	0	1,200,000	0
Associate Vice President	Yanan Mou	0	0	0	0
Associate Vice President	Remi Yu	0	0	(30,000)	0
Associate Vice President	Cedric Lee	0	0	N/A	N/A
Associate Vice President	Michael CY Wang	0	0	0	0
Associate Vice President	C P Yen	0	0	(48,000)	0
Associate Vice President	Pang Min Wang	0	0	0	0
Associate Vice President	Ray Yang	0	0	(200,000)	0
Associate Vice President	Bellona Chen	0	0	(150,000)	0
Associate Vice President	Louis Hsieh	0	0	(9,000)	0
Former Independent Director	Cheng-Li Huang	N/A	N/A	0	0
Former Associate Vice President	Ji Fu Kung	N/A	N/A	0	0
Former Associate Vice President	Le Tien Jung	0	0	(140,000)	0

Note 1: No shareholder owns 10% or more of UMC shares.

Note 2: The data shown for 2022 is for the period January 1 to January 31, 2022.

Note 3: Counterparts of the shareholding transferred or pledged are not related parties.

Note 4: The shareholding changes for Kuang Si Shiu, Wen-Hsin Hsu, Linwu Kuo, JT Lin and Cedric Lee are calculated starting from the assumed date.

Note 5: The shareholding changes for Cheng-Li Huang, Ji Fu Kung and Le Tien Jung are reported until their resignation.

Note 6: The Holding Increase (Decrease) data consists of shares under Trust with Discretion Reserved.

Relationship Among the Top 10 Shareholders

Name	Shares Held		Shares Held by Spouse or Children of Minor Age		Total Shares Held in the Name of Other Persons		Relationship Between the Company's Top 10 Shareholders Who Are Either Related Parties, Spouses, or Relatives Within the Second Degree of Kinship, His/Her/Its Title (or Name) and Relationship		Remarks
	Shares	%	Shares	%	Shares	%	Title (or Name)	Relationships	
JPMorgan Chase Bank, N.A. acting in its capacity as depository and representative to the holders of ADRs	721,241,280	5.81	N/A	N/A	N/A	N/A	None	None	
Hsun Chieh Investment Co., Ltd.	441,371,000	3.55	N/A	N/A	N/A	N/A	None	None	Director of the Company
Representative: Chun Kuan	93,998	0.00	0	0	0	0	None	None	
Fubon Life Insurance Co., Ltd.	397,934,000	3.20	N/A	N/A	N/A	N/A	None	None	
Representative: Ming Hsing Tsai	Data unavailable								
Labor Pension Fund	299,178,200	2.41	N/A	N/A	N/A	N/A	None	None	
Silicon Integrated Systems Corp.	285,380,424	2.30	N/A	N/A	N/A	N/A	None	None	Director of the Company
Representative: Cheng Chien Chien	1,858	0.00	0	0	0	0	None	None	
CTBC Bank Employee Stock Ownership Trust Account of UNITED MICROELECTRONICS CORP.	195,498,000	1.57	N/A	N/A	N/A	N/A	None	None	
Yann Yuan Investment Co., Ltd.	174,000,000	1.40	N/A	N/A	N/A	N/A	None	None	
Representative: Wen Ching Lin	Data unavailable								
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	134,493,905	1.08	N/A	N/A	N/A	N/A	None	None	
Nan Shan Life Insurance Company, Ltd.	131,612,000	1.06	N/A	N/A	N/A	N/A	None	None	
Representative: Tang Chen	Data unavailable								
Yao-Hwa Co.,Ltd Management Commission	108,912,211	0.88	N/A	N/A	N/A	N/A	None	None	

Note: The data shown above was recorded on July 30, 2021, which was the record date for the distribution of 2021 cash dividend.

Shares Held by the Company, Directors, Managers and Companies Directly or Indirectly Controlled by the Company, and the Comprehensive Shareholding Ratio Based on Combined Calculation

Investee Companies	UMC		Shares Held by Directors, Managers and Companies Directly or Indirectly Controlled by the Company		Comprehensive Shareholding	
	Number of Shares	Percentage of Ownership (%)	Number of Shares	Percentage of Ownership (%)	Number of Shares	Percentage of Ownership (%)
UMC Group (USA)	16,437,500	100.00	0	0	16,437,500	100.00
United Microelectronics (Europe) B.V.	9,000	100.00	0	0	9,000	100.00
UMC Capital Corp.	71,662,977	100.00	0	0	71,662,977	100.00
TLC Capital Co., Ltd.	421,983,036	100.00	0	0	421,983,036	100.00
Green Earth Limited	977,000,000	100.00	0	0	977,000,000	100.00
Fortune Venture Capital Corp.	444,752,069	100.00	0	0	444,752,069	100.00
UMC Investment (Samoa) Limited	1,520,000	100.00	0	0	1,520,000	100.00
MTIC Holdings Pte. Ltd.	12,000,000	45.44	0	0	12,000,000	45.44
Unitech Capital Inc.	21,000,000	42.00	4,500,000	9.00	25,500,000	51.00
Hsun Chieh Investment Co., Ltd.	858,850,982	36.49	0	0	858,850,982	36.49
Best Elite International Limited	664,966,275	100.00	0	0	664,966,275	100.00
Wavetek Microelectronics Corporation	148,112,434	79.73	3,086,936	1.66	151,199,370	81.39
UMC Korea Co., Ltd.	110,000	100.00	0	0	110,000	100.00
Omni Global Limited	4,300,000	100.00	0	0	4,300,000	100.00
United Semiconductor (Xiamen) Co., Ltd.	0	0	N/A	69.95	N/A	69.95
Faraday Technology Corporation	34,240,213	13.78	1,698	0.00	34,241,911	13.78
Yann Yuan Investment Co., Ltd.	46,000,000	28.22	4,000,000	2.45	50,000,000	30.67
Sino Paragon Limited	2,600,000	100.00	0	0	2,600,000	100.00
Triknighr Capital Corporation	234,280,000	40.00	0	0	234,280,000	40.00
United Semiconductor Japan Co., Ltd.	116,246,616	100.00	0	0	116,246,616	100.00
Unimicron Technology Corp.	196,136,008	13.30	4,574,000	0.31	200,710,008	13.61

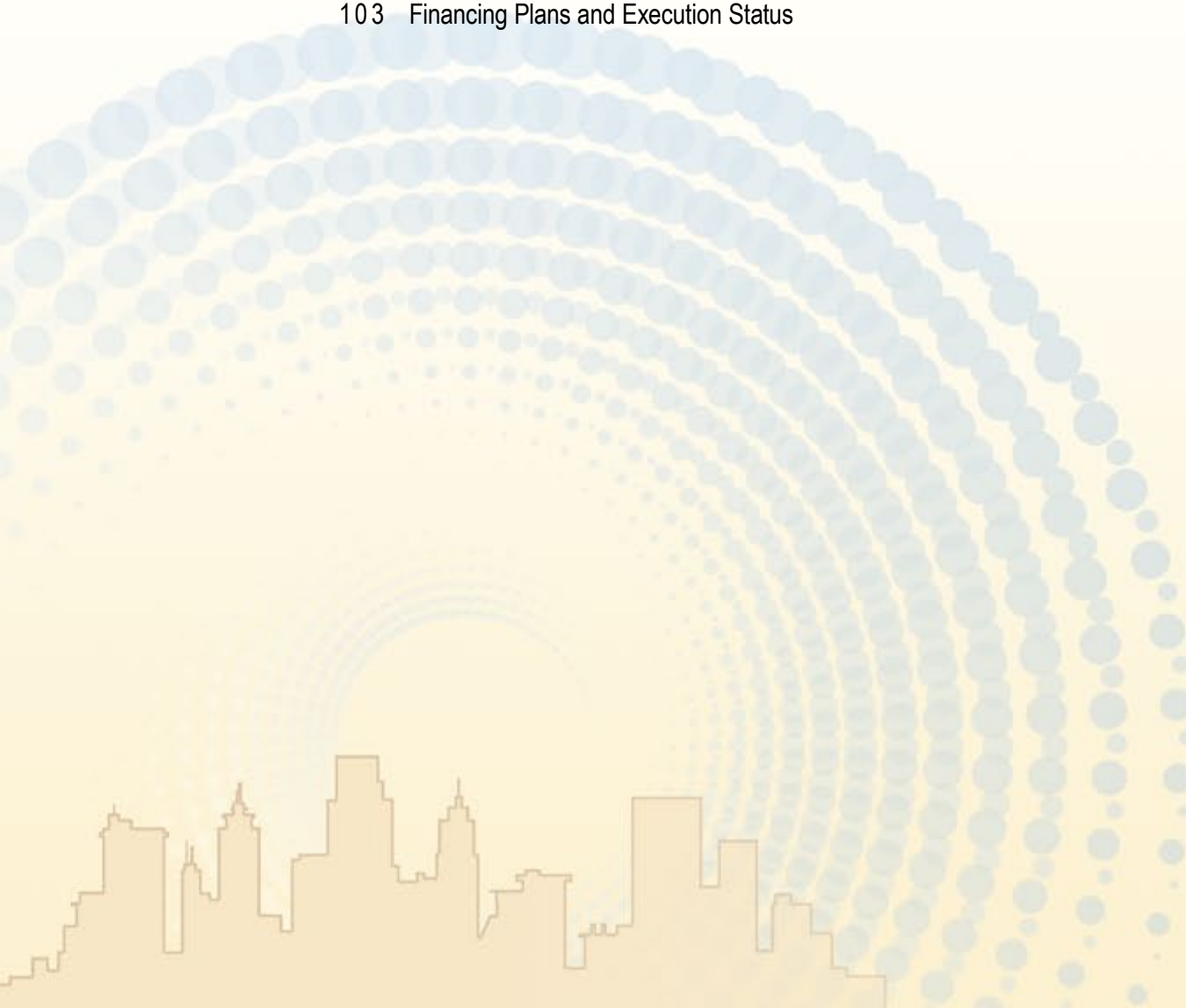
Note 1: The investee companies are the investees under the equity method and funds.

Note 2: The number of shares is based on the actual number of shares held on December 31, 2021.



Capital Overview

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91	Issuance of Corporate Bonds
97	Preferred Shares
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101	Status of New Shares Issuance in Connection with Mergers and Acquisitions
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Capital and Shares

Source of Capital

Month/Year	Issue Price (Per Share)	Authorized Capital		Paid-in Capital			Remarks	
		Shares (In Thousand)	Amount (In Thousand NT\$)	Shares (In Thousand)	Amount (In Thousand NT\$)	Source of Capital	Capital Increased by Assets Other than Cash	Other
May, 2021	NT\$10	26,000,000	260,000,000	12,422,001	124,220,015	Note 1	None	None
June, 2021	NT\$10	26,000,000	260,000,000	12,423,269	124,232,695	Note 2	None	None
November, 2021	NT\$10	26,000,000	260,000,000	12,484,377	124,843,773	Note 3	None	None
November, 2021	NT\$10	26,000,000	260,000,000	12,483,248	124,832,476	Note 4	None	None

Note 1: On May 4, 2021, the Hsinchu Science Park Bureau, Ministry of Science and Technology approved the capital reduction of NT\$4,000 thousand due to cancellation of the RSA. The Company's paid-in capital was decreased to NT\$124,220,015 thousand.

Note 2: On June 18, 2021, the Hsinchu Science Park Bureau, Ministry of Science and Technology approved the capital increase of NT\$12,680 thousand due to issuance of new RSA for employees. The Company's paid-in capital was increased to NT\$124,232,695 thousand.

Note 3: On November 15, 2021, the Hsinchu Science Park Bureau, Ministry of Science and Technology approved the capital increase of NT\$611,078 thousand due to share exchange between the Company and Chipbond Technology Corporation. The Company's paid-in capital was increase to NT\$124,843,773 thousand.

Note 4: On November 26, 2021, the Hsinchu Science Park Bureau, Ministry of Science and Technology approved the capital reduction of NT\$11,298 thousand due to cancellation of the RSA. The Company's paid-in capital was decreased to NT\$124,832,476 thousand.

Note5: The data shown above was gathered until February 24, 2022.

Type of Stock

Share Type	Authorized Capital			Allotment for Stock Option Certificate (Units)
	Issued Shares(Note 1)	Un-Issued Shares	Total Shares	
Common Stock	12,483,247,566	13,516,752,434	26,000,000,000	2,000,000,000

Note 1: The Company's issued shares are listed stock.

Note 2: The data shown above was gathered until February 24, 2022.

Information for Shelf Registration

Not Applicable.

Status of Shareholders

Common Shares

Item	Government Agencies	Financial Institutions	Other Juridical Persons	Natural Persons	Foreign Institutions and Natural Persons	Total
Number of Shareholders	15	238	1,345	790,772	2,306	794,676
Shareholding (Shares)	473,025,134	1,311,626,006	1,508,920,245	4,545,546,612	4,584,151,496	12,423,269,493
Percentage (%)	3.81	10.56	12.14	36.59	36.90	100.00

Note: The data shown above was recorded on July 30, 2021, which was the record date for the distribution of 2021 cash dividend.

Capital and Shares (Continue)

Shareholding Distribution Status

Common Shares

Class of Shareholding (Unit: Shares)	Number of Shareholders	Shareholding (Shares)	Percentage (%)
1~	999	196,547	0.43
1,000~	5,000	445,996	7.79
5,001~	10,000	80,259	5.02
10,001~	15,000	24,900	2.52
15,001~	20,000	15,100	2.24
20,001~	30,000	12,278	2.50
30,001~	40,000	5,393	1.55
40,001~	50,000	3,550	1.33
50,001~	100,000	5,703	3.29
100,001~	200,000	2,421	2.75
200,001~	400,000	1,107	2.52
400,001~	600,000	383	1.53
600,001~	800,000	150	0.84
800,001~	1,000,000	135	0.99
	Over 1,000,001	754	64.70
Total		794,676	100.00

Note: The data shown above was recorded on July 30, 2021, which was the record date for the distribution of 2021 cash dividend.

Preferred Shares

None.

List of Major Shareholders

Shareholder's Name	Shareholding	
	Shares	Percentage (%)
JPMorgan Chase Bank, N.A. acting in its capacity as depositary and representative to the holders of ADRs	721,241,280	5.81
Hsun Chieh Investment Co., Ltd.	441,371,000	3.55
Fubon Life Insurance Co., Ltd.	397,934,000	3.20
Labor Pension Fund	299,178,200	2.41
Silicon Integrated Systems Corp.	285,380,424	2.30
CTBC Bank Employee Stock Ownership Trust Account of UNITED MICROELECTRONICS CORP.	195,498,000	1.57
Yann Yuan Investment Co., Ltd.	174,000,000	1.40
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	134,493,905	1.08
Nan Shan Life Insurance Company, Ltd.	131,612,000	1.06
Yao-Hwa Co.,Ltd Management Commission	108,912,211	0.88

Note: The data shown above was recorded on July 30, 2021, which was the record date for the distribution of 2021 cash dividend.

Capital and Shares (Continue)

Market Price, Net Worth, Earnings, and Dividends Per Common Share

		In NT\$			
Item		2022 (Note 7)	2021	2020	
Market Price Per Share (Note 1)	Highest	65.50	72.00	51.70	
	Lowest	51.70	43.05	13.10	
	Average	58.56	56.29	28.13	
Net Worth Per Share	Before Distribution	-	22.51	19.00	
	After Distribution	-	*	17.39	
Earnings Per Share	Weighted Average Shares (shares)	-	12,218,346,550	12,072,969,148	
	Earnings Per Share (Note 2)	-	4.57	2.42	
	Earnings Per Share (Note 3)	-	*	2.42	
Dividends Per Share	Cash Dividends	-	*	1.59988820	
	Stock Dividends	Earning Distribution	-	*	-
		Capital Distribution	-	*	-
	Accumulated Undistributed Dividend	-	-	-	
Return on Investment	Price/Earnings Ratio (Note 4)	-	12.35	9.45	
	Price/Dividend Ratio (Note 5)	-	*	14.30	
	Cash Dividend Yield (Note 6)	-	*	0.07	

*Subject to change based on resolutions of the 2022 shareholders' meeting.

Note 1: Referred to TWSE website.

Note 2: EPS calculation was based on weighted average shares outstanding for the year.

Note 3: EPS calculation was based on retroactive adjustment for capitalization of unappropriated earnings, additional paid-in capital and employees' compensation - stock.

Note 4: Price/Earnings Ratio = Average Market Price/Earnings Per Share.

Note 5: Price/Dividend Ratio = Average Market Price/Cash Dividends Per Share.

Note 6: Cash Dividend Yield = Cash Dividends Per Share/Average Market Price.

Note 7: The data represented for 2022 was gathered until February 24, 2022.

Note 8: The average closing prices for years 2020, 2021 and 2022 were NT\$22.88, NT\$56.42, and NT\$58.85, respectively.

Capital and Shares (Continue)

Dividend Policy and Status

1. Dividend Policy in the Company's Articles of Incorporation

According to the Company's Articles of Incorporation, current year's earning, if any, shall be distributed in the following order:

- (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, plus the previous year's unappropriated earnings, shall be distributed 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.

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%.

2. The Company's operating status, funding requirements, capital expenditure forecast, changes in the overall internal and external environment, as well as shareholders' interest shall be taken into account to determine the Company's dividend policy; distribution of dividend is determined by the Board of Directors, and cash distributed to shareholders (i.e. cash dividend distributed from earnings and cash distributed from capital surplus) shall not be lower than 50% of the net increase in the Company's distributable earnings for the year, except in extraordinary situations.

Proposed Distribution of Dividend

The Company's proposal for the cash distribution of NT\$37,446,370,452 from capital surplus (NT\$3 per common share) was passed during the 7th board meeting of the 15th term and will be discussed at the Annual General Meeting.

Effect of Share Dividends to Operating Performance and EPS

Not applicable.

Capital and Shares (Continue)**Employees' and Directors' Compensation****Related Information of Employees' and Directors' Compensation in the Company's Articles of Incorporation**

Employees' and Directors' Compensation Policy in the Company's Articles of Incorporation is as follows:

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.

The Basis for Estimating the Amount of Employees and Directors' Compensation, the Basis for Calculating the Number of Shares to Be Distributed as Employees' Compensation, and the Accounting Treatment of the Discrepancy Between the Actual Distributed and the Estimated Amount.

The Company recognizes the employees and directors' compensation in the profit or loss during the periods when earned. 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. Information relevant to the aforementioned employees and directors' compensation can be obtained from the "Market Observation Post System" on the website of the TWSE.

The Distributable Compensation for Employees and Directors Passed During the Board Meeting.

The Company's 2021 distributable compensation for employees and directors was passed during the 7th board meeting of the 15th term. The distribution status is as follows:

The Company is to distribute NT\$4,770,909,436 as employee cash compensation and NT\$25,264,302 as directors' compensation.

There is no difference between the amount passed during the Board meeting and the recognized amount during 2021 of the aforementioned employees' and directors' compensation.

The Amount of Employees' Compensation Distributed in Stocks, and Such Amount as a Percentage of the Sum of Net Income Stated in the Parent Company Only Financial Reports and Total Employees' Compensation:

None.

Distribution of Employees and Directors' Compensation for 2020:

In Thousand NT\$

Item	Board Resolution (February 24, 2021)
Employees' compensation distributed in Cash	2,581,675
Directors' compensation	32,369

Note: The actual distribution of employees and directors' compensation for 2020 were consistent with the resolutions of the Board of Directors meeting held on February 24, 2021.

Buyback of Treasury Stock

(1) Completed Share Buyback Program: None.

(2) Uncompleted Share Buyback Program: None.

Issuance of Corporate Bonds

Name of Bond	United Microelectronics Corporation 1st Unsecured Straight Corporate Bond Issuance in 2014
Issue date	June 18, 2014
Denomination	NT\$1 million
Listing and trading	Taipei Exchange
Issue price	NT\$1 million
Total amount	NT\$5,000 million; 7-year bond for NT\$2,000 million and 10-year bond for NT\$3,000 million
Coupon rate	Fixed rate; 1.70% p.a. and 1.95% p.a. for 7-year and 10-year bonds, respectively
Tenor and maturity date	7-year bond: June 18, 2021 10-year bond: June 18, 2024
Guarantor	None
Trustee	Taiwan Cooperative Bank
Underwriter	None
Legal counsel	Chen & Lin Attorneys-at-Law
Independent auditor	Ernst & Young, Taiwan
Repayment	The principal of 7-year and 10-year bonds will be repaid respectively in June 2021 and June 2024 upon maturity. Interest will be paid annually for both 7-year and 10-year bonds.
Outstanding amount	NT\$3,000 million (Note)
Redemption clause	None
Restrictive clause	None
Name of credit rating agency, rating date and result of rating	Not applicable
Other rights of bondholders	None
Dilution effect or other adverse impact on existing shareholders' equity, if conversion, exchange, or subscription rights are attached	None
Custodian	None

Note: NT\$2,000 million for the 5-year bond was repaid on June 18, 2021.

Issuance of Corporate Bonds (Continue)

Name of Bond	United Microelectronics Corporation 1st Unsecured Straight Corporate Bond Issuance in 2017
Issue date	March 24, 2017
Denomination	NT\$1 million
Listing and trading	Taipei Exchange
Issue price	NT\$1 million
Total amount	NT\$8,300 million; 5-year bond for NT\$6,200 million and 7-year bond for NT\$2,100 million
Coupon rate	Fixed rate; 1.15% p.a. and 1.43% p.a. for 5-year and 7-year bonds, respectively
Tenor and maturity date	5-year bond: March 24, 2022 7-year bond: March 24, 2024
Guarantor	None
Trustee	CTBC Bank Co., Ltd.
Underwriter	MasterLink Securities Corp. as the lead underwriter
Legal counsel	Chen & Lin Attorneys-at-Law
Independent auditor	Ernst & Young, Taiwan
Repayment	The principal of 5-year and 7-year bonds will be repaid respectively in March 2022 and March 2024 upon maturity. Interest will be paid annually for both 5-year and 7-year bonds.
Outstanding amount	NT\$8,300 million
Redemption clause	None
Restrictive clause	None
Name of credit rating agency, rating date and result of rating	Not applicable
Other rights of bondholders	None
Dilution effect or other adverse impact on existing shareholders' equity, if conversion, exchange, or subscription rights are attached	None
Custodian	None

Issuance of Corporate Bonds (Continue)

Name of Bond	United Microelectronics Corporation 2nd Unsecured Straight Corporate Bond Issuance in 2017
Issue date	October 3, 2017
Denomination	NT\$1 million
Listing and trading	Taipei Exchange
Issue price	NT\$1 million
Total amount	NT\$5,400 million; 5-year bond for NT\$2,000 million and 7-year bond for NT\$3,400 million
Coupon rate	Fixed rate; 0.94% p.a. and 1.13% p.a. for 5-year and 7-year bonds, respectively
Tenor and maturity date	5-year bond: October 3, 2022 7-year bond: October 3, 2024
Guarantor	None
Trustee	CTBC Bank Co., Ltd.
Underwriter	MasterLink Securities Corp. as the lead underwriter
Legal counsel	Chen & Lin Attorneys-at-Law
Independent auditor	Ernst & Young, Taiwan
Repayment	The principal of 5-year and 7-year bonds will be repaid respectively in October 2022 and October 2024 upon maturity. Interest will be paid annually for both 5-year and 7-year bonds.
Outstanding amount	NT\$5,400 million
Redemption clause	None
Restrictive clause	None
Name of credit rating agency, rating date and result of rating	Not applicable
Other rights of bondholders	None
Dilution effect or other adverse impact on existing shareholders' equity, if conversion, exchange, or subscription rights are attached	None
Custodian	None

Issuance of Corporate Bonds (Continue)

Name of Bond	United Microelectronics Corporation 1st Unsecured Straight Corporate Bond Issuance in 2021
Issue date	April 22, 2021
Denomination	NT\$1 million
Listing and trading	Taipei Exchange
Issue price	NT\$1 million
Total amount	NT\$9,600 million; 5-year bond for NT\$5,500 million and 7-year bond for NT\$2,000 million and 10-year bond for NT\$2,100 million
Coupon rate	Fixed rate, 0.57% p.a., 0.63% p.a. and 0.68% p.a. for 5-year, 7-year and 10-year bond respectively
Tenor and maturity date	5-year bond: April 22, 2026 7-year bond: April 22, 2028 10-year bond: April 22, 2031
Guarantor	None
Trustee	CTBC Bank Co., Ltd
Underwriter	Yuanta Securities Co., Ltd as the lead underwriter
Legal counsel	Chen & Lin Attorneys-at-Law
Independent auditor	Ernst & Young, Taiwan
Repayment	The principal of 5-year, 7-year, and 10-year bonds will be repaid respectively in April 2026, April 2028, and April 2031 upon maturity. Interest will be paid annually for both 5-year, 7-year, and 10-year bonds.
Outstanding amount	NT\$9,600 million
Redemption clause	None
Restrictive clause	None
Name of credit rating agency, rating date and result of rating	Not applicable
Other rights of bondholders	None
Dilution effect or other adverse impact on existing shareholders' equity, if conversion, exchange, or subscription rights are attached	None
Custodian	None

Issuance of Corporate Bonds (Continue)

Name of Bond	United Microelectronics Corporation 2nd Unsecured Straight Corporate Bond Issuance in 2021
Issue date	December 17, 2021
Denomination	NT\$1 million
Listing and trading	Taipei Exchange
Issue price	NT\$1 million
Total amount	NT\$5,000 million
Coupon rate	Fixed rate; 0.63% p.a.
Tenor and maturity date	December 17, 2026
Guarantor	None
Trustee	CTBC Bank Co., Ltd
Underwriter	MasterLink Securities Corp. as a lead underwriter
Legal counsel	Chen & Lin Attorneys-at-Law
Independent auditor	Ernst & Young, Taiwan
Repayment	The principal of 5-year bond will be repaid in December 2026. Interest will be paid annually.
Outstanding amount	NT\$5,000 million
Redemption clause	None
Restrictive clause	None
Name of credit rating agency, rating date and result of rating	Not applicable
Other rights of bondholders	None
Dilution effect or other adverse impact on existing shareholders' equity, if conversion, exchange, or subscription rights are attached	None
Custodian	None

Issuance of Corporate Bonds (Continue)

Type	Currency Linked Zero Coupon Exchangeable Bonds due 2026
Issue date	July 7, 2021
Face amount	US\$200,000
Listing exchange	Singapore Exchange Securities Trading Limited
Issue amount	US\$200,000
Issue size	US\$400,000,000
Coupon rate	0%
Maturity	5 years; July 7, 2026
Guarantor	-
Trustee	Citicorp International Limited
Underwriter	Citi Global Markets Limited, Nomura International (Hong Kong) Ltd.
Legal counsel	Chen & Lin Attorneys-at-law
Auditor	Ernst & Young, Taiwan
Redemption	Unless previously redeemed, exchanged, or repurchased and cancelled, the Bonds will be redeemed by the Company on the Maturity Date at an amount equal to the principal amount of the Bonds plus a gross yield at the rate of -0.625% per annum, calculated on a semi-annual basis (the "Redemption Amount"). The Redemption Amount will be converted into NT\$ based on the Fixed Exchange Rate, and this fixed NT\$ amount will then be converted using the prevailing exchange rate for payment in US\$.
Principal payable	US\$400,000,000
Redemption or early redemption clause	<p>(a) Each Bondholder shall have the right to require the Company to redeem the Bonds, in whole or in part, on the third anniversary from the Issue Date at an amount equal to the principal amount of the Bonds plus a gross yield of -0.625% per annum, calculated on a semi-annual basis (the "Put Price").</p> <p>(b) 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 Taiwan Stock Exchange, each Bondholder shall have the right to require the Company to redeem the Bonds, in whole but not in part, at an amount equal to the principal amount of the Bonds plus a gross yield of -0.625% per annum, calculated on a semi-annual basis (the "Early Redemption Amount").</p> <p>(c) Upon the occurrence of a Change of Control (as defined in the Indenture) of the Company, each Bondholder shall have the right to require the Company to redeem the Bonds, in whole but not in part, at the Early Redemption Amount.</p> <p>(d) Each Bondholder shall exercise the redemption right and the Company shall handle such redemption in accordance with the procedure provided in the Indenture. The payment of the Put Price and the Early Redemption Amount will be made by the Company in cash on the payment date designated by the Company pursuant to the Indenture.</p> <p>(e) The Company may, at its option, redeem the bonds, in whole or in part at 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 Taiwan Stock Exchange, 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 then Exchange Price (converted into U.S. dollars at the Fixed Exchange Rate), divided by the principal amount of the Bonds.</p> <p>(f) The Company may, at its option, redeem the outstanding bonds in whole, but not in part, at the Early Redemption Amount, in the event that over 90% of the bonds has been previously redeemed, repurchased and cancelled or exchanged.</p> <p>(g) 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 of the Company, the Company may, at its option, 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.</p> <p>The Put Price/Early Redemption Amount will be converted into NT\$ based on the Fixed Exchange Rate, and this fixed NT\$ amount will then be converted using the prevailing rate for payment in US\$.</p>

Issuance of Corporate Bonds (Continue)

Covenant	-
Name of rating company, date and result of rating	-
Other obligation	Balance of amount converted to (exchangeable or warrant) shares, ADSs, or other types of securities as of the Annual Report Printing Date
	Policy of issuing or converting (exchangeable or warrant)
	The bondholders may from October 8, 2021 to June 27, 2026 exchange the bonds into common shares of Novatek as a substitute for the issuer's cash redemption. In addition, the bondholders will not be able to effect exchange into common shares of Novatek during any closed period.
Effect on the current shareholders due to dilution	The underlying exchange for the bond are common shares of Novatek. There won't be any material adverse effect on issuer's shareholders.
Name of custodian	Citibank, N.A., London Branch

Exchangeable Bonds Information

Type	Currency Linked Zero Coupon Exchangeable Bonds Due 2026		
Year/Item	2022	2021	2021.07.07 (Issue Date)
Amount of Reference Shares the Company Holds (Shares)	16,444,587	16,444,587	16,444,587
Exchangeable Price	NT\$709.2	NT\$709.2	NT\$731.25
Market Price High	US\$103.801	US\$103.799	-
Low	US\$98.583	US\$98.660	-
Average	US\$100.893	US\$101.314	-
Issue Date	July 7, 2021		
Reference Shares	Common shares of Novatek		

Note: The data shown for 2022 is for the period January 1 to February 24, 2022

Euro Convertible Bonds Information

None.

Shelf Registration for Issuing Bonds

None.

Corporate Bonds with Warrants

None.

Preferred Shares

None.

American Depositary Receipts

Issue Date	2008.09.19	2007.10.09	2006.11.06	2006.09.01	2005.09.01	2005.01.20	2004.11.16
Listing Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange
Issue Amount	Stock dividend	Capital Reduction	US\$108.2 million	Stock dividend	Stock dividend	US\$84.2 million	US\$76.3 million
Listing Price/Unit	-	-	US\$3.05	-	-	US\$3.33	US\$3.47
Issue Units	9,885,719	-95,425,183	35,456,000	2,831,465	25,833,137	25,290,000	22,000,000
Underlying Representing Shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares
Number of Equivalent Local Shares per ADS	5 shares	5 shares	5 shares	5 shares	5 shares	5 shares	5 shares
Rights and Obligations of ADS Holders	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder
Trustee	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Depository Bank	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.
Custodian Bank	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch
Outstanding Balance (Units)	The total outstanding balance is 132,145,927 units.						
Issuing Expenses and Maintenance Fees	Except for IPO and dividends, the issuing expense will be borne by the selling shareholders. The maintenance fees will be borne by the Company.						
Important Terms and Conditions of Depositary Agreement and Custodian Agreement	-	-	-	-	-	-	-

Note 1: The data shown above is current as of February 24, 2022.

Note 2: On October 21, 2009, the Depository bank was changed to JPMorgan Chase Bank, N.A., and the custodian bank was changed to JPMorgan Chase Bank, N.A. Taipei Branch.

American Depositary Receipt Trading Data

Closing Price per Share (US\$)	2022			2021		
	High	Low	Average	High	Low	Average
	11.69	9.24	10.34	12.54	8.01	10.13

Note: The data shown for 2022 is for the period January 1 to February 24, 2022.

American Depositary Receipts (Continue)

2004.08.19	2004.01.02	2003.12.23	2003.08.15	2002.09.09	2002.03.19	2001.08.17	2000.09.19
New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange	New York Stock Exchange
Stock dividend	US\$13.8 million	US\$24.4 million	Stock dividend	Stock dividend	US\$439.7 million	Stock dividend	US\$1,291.5 million
-	US\$4.92	US\$4.75	-	-	US\$9.25	-	US\$14.35
15,088,684	2,804,000	5,146,000	6,965,107	22,655,667	47,537,780	13,500,000	90,000,000
UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares	UMC common shares
5 shares	5 shares	5 shares	5 shares	5 shares	5 shares	5 shares	5 shares
Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder	Same as the common shareholder
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.	Citibank, N.A.
Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch	Citibank, N.A. Taipei Branch
-	-	-	-	-	-	-	-

Employee Stock Options Handling Status

The processing situation and impact on shareholders' rights from employee stock options that have not matured yet:

None.

Issuance of New Restricted Employee Shares

Type of New Restricted Employee Shares	1st Tranche													
Date of Effective Registration	2020.07.09													
Issue Date	2020.09.01	2021.06.09												
Number of New Restricted Employee Shares Issued	200,030,000 shares	1,268,000 shares												
Issued Price (NT\$)	The current issue is gratuitous													
New Restricted Employee Shares as a Percentage of Shares Issued	1.64%	0.01%												
Vesting Conditions of New Restricted Employee Shares	<p>1. If an employee, after having been granted a restricted stock award, remains on the job on the vesting date, is determined by the Company as having not violated the employment contract, employee code of conduct, trust agreement, corporate governance best practice principles, ethical corporate management best practice principles, work handbook or non-compete and non-disclosure agreement of the Company or any agreement with the Company, and has fulfilled the personal performance indicators and operational goals set by the Company, the proportions of the vesting shares to be granted for such employee on the vesting date each year is as follows:</p> <p>1-1. On the job for 2 years after granting: 33%</p> <p>1-2. On the job for 3 years after granting: 33%</p> <p>1-3. On the job for 4 years after granting: 34%</p> <p>2. Personal performance indicator(s): A performance rating of A or higher for the most recent fiscal year prior to the end of each vesting period.</p> <p>3. The operational goals of the Company use the return on equity (ROE%) % and operating margin % (OM%) as performance indicators. Listed below are the performance target for the two indicators, 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 most recent fiscal year prior to the end of each vesting period.</p> <table border="1"> <thead> <tr> <th>Indicator</th> <th>Return on equity (ROE%)</th> <th>Operating margin (OM%)</th> </tr> </thead> <tbody> <tr> <td>2 years after granting</td> <td>6% or above</td> <td>6% or above</td> </tr> <tr> <td>3 years after granting</td> <td>8% or above</td> <td>8% or above</td> </tr> <tr> <td>4 years after granting</td> <td>10% or above</td> <td>10% or above</td> </tr> </tbody> </table>		Indicator	Return on equity (ROE%)	Operating margin (OM%)	2 years after granting	6% or above	6% or above	3 years after granting	8% or above	8% or above	4 years after granting	10% or above	10% or above
Indicator	Return on equity (ROE%)	Operating margin (OM%)												
2 years after granting	6% or above	6% or above												
3 years after granting	8% or above	8% or above												
4 years after granting	10% or above	10% or above												
Restricted Rights of New Restricted Employee Shares	<p>1. Before any employee who has been granted restricted stock award shares fulfills the vesting conditions, except for the case of inheritance, the restricted stock award shares may not be sold, pledged, transferred, gifted to others, created any encumbrance, or otherwise disposed of.</p> <p>2. Before any employee who has been granted restricted stock award shares fulfills the vesting conditions, his/her rights to attendance, proposal, statement, voting and election at the Shareholders' Meeting shall be the same as those of the outstanding common shares of the Company, and shall be exercised according to a custodial trust agreement.</p> <p>3. Where any employee has been granted restricted stock award shares pursuant to these Regulations, his/her other rights prior to fulfillment of the vesting conditions include, but are not limited to: the right to distribution of cash dividends, stock dividends, legal reserves and capital reserves, and employee stock option at cash capital increase. Such rights shall be the same as those of the outstanding common shares of the Company, and shall be exercised according to a custodial trust agreement.</p> <p>4. During the period from the book closure date for stock dividends granted by the Company, the book closure date for cash dividends, the book closure date for shares purchased from a cash capital increase, the book closure period of the Shareholders' Meeting as specified by Article 165, Paragraph 3 of the Company Act or any other statutory book closure date occurring based on the fact of the record date for distribution of rights, the time and process for lifting restrictions on the vested shares of any employee who has fulfilled the vesting conditions shall be subject to a custodial trust agreement or the applicable laws and regulations.</p>													

Issuance of New Restricted Employee Shares

Type of New Restricted Employee Shares	1st Tranche	
Custody Status of New Restricted Employee Shares	Placed under custodial trust	
Measures to be Taken When Vesting Conditions are not Meet	1. Where an employee who has been granted restricted stock award shares is not on the job on the vesting date, has committed an act of gross negligence by violating any of the agreements under Article III, Paragraph (III), Sub-paragraph 1 of "2020 Regulations Governing the Issuance of Restricted Stock Awards for Employees", or has failed to fulfill the personal performance indicators and operational goals set by the Company, the shares granted to him/her but unfulfilled vesting conditions will be recovered and canceled by the Company without compensation. 2. During the vesting period, if an employee has voluntarily resigned or been dismissed or laid off, his/her unvested shares will be recovered and canceled by the Company without compensation.	
Number of New Restricted Employee Shares that have been Redeemed or Bought Back	1,529,768 shares (Note)	0 shares
Number of Released New Restricted Employee Shares	0 shares	0 shares
Number of Unreleased New Restricted Shares	198,500,232 shares	1,268,000 shares
Ratio of Unreleased New Restricted Shares to Total Issued Shares (%)	1.62%	0.01%
Impact on Possible Dilution of Shareholdings	The dilution of the Company's EPS is limited, so there is no significant impact on the interest of shareholders.	

Note: 1,124,082 cancelled restricted shares approved by the Board of Directors on February 24, 2022 are not included.

Status of New Shares Issuance in Connection with Mergers and Acquisitions

In the latest year or as of the date of the annual report, the following matters related to issuance of new shares in connection with mergers or acquisitions or with acquisitions of shares of other companies shall be disclosed:

The proposal submitted in 2021 for United Microelectronics Corporation ("UMC") to issue new shares to exchange for shares in Chipbond Technology Corporation ("Chipbond"), case number 1101805580, was approved by TWSE and became effective on October 20, 2021. The share exchange record date was November 5, 2021. The proposal was approved by the Hsinchu Science Park Bureau and the exchange of new shares was registered on November 15, 2021. In accordance with Article 9, paragraph 1 subparagraph 8 of "Regulations Governing the Offering and Issuance of Securities by Securities Issuers", UMC appointed Horizon Securities to submit the assessment opinion as of the first quarter of 2022.

1. The financial impact of receiving other company's shares:

UMC issued new shares to exchange for 53,163,821 shares of Chipbond. The consideration was not paid in cash and did not affect company's capital allocation and financial operation. The main businesses of UMC and Chipbond are foundry service and panel

driver IC assembly and testing service; after the exchange of shares, the two parties will cooperate fully in market segments such as panel driver ICs, compound semiconductor power components, and radio frequency components. Combining both parties' advantages, UMC and Chipbond will integrate upstream and downstream supply chain resources to provide customers with comprehensive services. In addition, Chipbond's operation and profitability have been stable in recent years. By obtaining equity through share exchange, UMC will also be able to participate in Chipbond's operating results and increase financial dividend income.

2. The business impact of receiving other company's shares:

UMC provides high quality IC fabrication services, focusing on logic and various specialty technologies to serve all major sectors of the electronics industry. Chipbond supplies full turnkey services for backend assembly processing of LCD driver ICs from wafer bumping to packaging. Two parties have started cooperation in the field of driver ICs, integrating front-end and back-end process technologies, moving towards higher frequency and lower power consumption, and jointly providing a unified solution for the panel industry. In addition,

Status of New Shares Issuance in Connection with Mergers and Acquisitions (Continue)

UMC actively invests in GaN power component development and RF components process development. It intends to capitalize on Chipbond's leading position in the packaging and testing market for power and RF components and advanced packaging technology to accelerate its development of market opportunities for high-efficiency power components and 5G RF components, which will help improve overall business competitiveness.

3. The impact on the shareholder's equity by receiving other company's share:

UMC issued 61,107,841 new shares in exchange for 53,163,821 shares of Chipbond. It represented 0.49% of paid-in capital, but share exchange enabled the Company to increase investment in Chipbond, directly obtaining approximately 7.2% of Chipbond's equity as well as deepening the cooperation between two companies. In addition, Chipbond's operation and profitability have been stable in recent years. By obtaining equity through share exchange, UMC will also be able to participate in Chipbond's operating results and increase financial dividend income.

4. The benefit of receiving other company's share:

UMC issued new shares in exchange for 53,163,821 shares of Chipbond, and the proposal was approved by Hsinchu Science Park Bureau and was registered on November 15, 2021. After completion of the share exchange, two parties have started to implement the cooperation plan. By combining the technical advantages of both parties, it should have positive benefits for UMC's finances, business and shareholders' interests. The benefits of this project will become increasingly clear as it progresses.

During the latest year or as of the date of the annual report, the Board of Directors has adopted a resolution approving any issuance of shares in connection with a merger or acquisition or with acquisition of shares of any other company. The following status and information shall be disclosed:

1. The status:

The proposal was adopted by the Board of Directors on September 3, 2021 to issue new shares of UMC to exchange for shares of Chipbond. On September 3, 2021, the Board of Directors confirmed that UMC issued 61,107,841 new shares in exchange for 53,163,821 shares of Chipbond, and the par value of the share is NT\$10, and the total amount was NT\$611,078,410. The proposal, case no. 1101805580, was approved by TWSE and became effective on October 20, 2021. The share exchange record date was November 5, 2021. The proposal was approved by Hsinchu Science Park Bureau and the share exchange was registered on November 15, 2021.

Status of New Shares Issuance in Connection with Mergers and Acquisitions (Continue)

2. Basic information of the other Company:

Unit: in Thousand NT\$, except EPS is in dollar

Company Name	Chipbond Technology Corporation	
Company Address	No.3, Li Hsin 5th Rd., Hsinchu Science Park, Hsinchu, 300	
Chairman	Fei-Jain Wu	
Paid-in Capital	7,386,755	
Main Business Items	Gold Bump、Solder Bump、TCP、COF、Flip Chip、COG and Tape	
Main Products	Packaging and testing	
The latest year of financial data	Assets	53,800,574
	Liabilities	12,124,543
	Equity	41,676,031
	Revenue	27,082,040
	Gross Margin	8,751,775
	Operating Gain	6,894,025
	Net Income	6,137,294
	Earnings Per Share	9.00

Note: The data shown above is 2021 Financial Statements of Chipbond.

Financing Plans and Execution Status

As of the end of the fourth quarter of 2021, the implementation of uncompleted funding plans was as follow:

Projects	Unsecured Straight Corporate Bond (110-1)	Unsecured Straight Corporate Bond (110-2)
Issue Date	April 22th, 2021	December 17th, 2021
Use of Proceeds	Purchase of equipment and environmental protection related expenditures	Purchase of equipment
Chang of Plan	No change	No change
Gross Proceeds	NT\$9,600 million	NT\$5,000 million
Implementation Status	The actual implementation was NT\$6,924.411 million. The acceptance and payment schedule was postponed due to COVID-19, and the overall of fund utilization is behind the original estimated progress. The rest will continue to be implemented according to the demand progress.	The plan is to be implemented in 2022.

List of Executives Receiving New Restricted Employee Shares and the Top Ten Employees with New Restricted Employee Shares

	Title	Name	No. of New Restricted Shares	New Restricted Shares as a Percentage of Shares Issued (%)	New Restricted Shares			Released
					No. of Shares	Issued Price (NT\$)	Amount	Released Restricted Shares as a Percentage of Shares Issued (%)
Manager	Chairman & Chief Strategic Officer	Stan Hung						
	President	SC Chien						
	President	Jason Wang						
	Executive Vice President	Ming Hsu						
	Senior Vice President	Oliver Chang						
	Senior Vice President & Chief Financial Officer	Chitung Liu						
	Senior Vice President & General Counsel	Lucas S Chang						
	Vice President	TS Wu						
	Vice President	C C Hsu						
	Vice President	M C Lai						
	Vice President	S F Tzou						
	Vice President	Osbert Cheng						
	Vice President	G C Hung						
	Vice President	Steven Hsu						
	Vice President	Wenchi Ting						
	Vice President	Jerry CJ Hu						
	Vice President	Y S Shen						
	Vice President	Steven S Liu						
	Vice President	SR Sheu	121,750	0.980	0	0	0	0.00
	Vice President	M L Liao						
	Vice President	S S Hong						
	Vice President	Francia Hsu						
	Vice President	Mindy Lin						
	Vice President & Chief Human Resources Officer	Eric Chen						
	Associate Vice President	Johnson Liu						
	Associate Vice President	Victor Chuang						
	Associate Vice President	Chuck Chen						
	Associate Vice President	JT Lin						
	Associate Vice President	Yau Kae Sheu						
	Associate Vice President	J Y Wu						
	Associate Vice President	Purakh Raj Verma						
	Associate Vice President	Yanan Mou						
	Associate Vice President	Remi Yu						
Associate Vice President	Cedric Lee							
Associate Vice President	Michael CY Wang							
Associate Vice President	C P Yen							
Associate Vice President	Pang Min Wang							
Associate Vice President	Ray Yang							
Associate Vice President	Bellona Chen							

As of February 24, 2022/Unit: Thousand Shares/In Thousand NT\$

				Unreleased
No. of Shares	Issued Price (NT\$)	Amount	Unreleased Restricted Shares as a Percentage of Shares Issued (%)	
121,750	0	0	0.980	

List of Executives Receiving New Restricted Employee Shares and the Top Ten Employees with New Restricted Employee Shares (Continue)

	Title	Name	No. of New Restricted Shares	New Restricted Shares as a Percentage of Shares Issued (%)	Released			Released Restricted Shares as a Percentage of Shares Issued (%)
					No. of Shares	Issued Price (NT\$)	Amount	
	Associate Vice President	Louis Hsieh						
	Former Associate Vice President	Ji Fu Kung						
	Former Associate Vice President	Le Tien Jung						
	Senior Division Director	M H Wang						
	Senior Fab Director	William Lu						
	Senior Fab Director	J H Lin						
	Senior Division Director	Jeffrey Lin						
	Senior Division Director	Benjamin TM Lin						
	Senior Division Director	Seanchy Chiu						
Employee	Senior Fab Director	Y C Kuo						
	Senior Division Director	David Chen						
	Senior Division Director	Stan Chen	15,780	0.127	0	0	0	0.00
	Senior Division Director	Jeffrey Huang						
	Senior Division Director	Wunnshien Liao						
	Senior Division Director	Ming Hsing Liu						
	Senior Division Director	Wood Tsai						
	Senior Division Director	Yao Chin Cheng						
	Senior Technical Director	Alex Chien						
	Senior Division Director	Michael Tai						
	Senior Division Director	K C Su						

As of February 24, 2022/Unit: Thousand Shares/In Thousand NT\$

				Unreleased
No. of Shares	Issued Price (NT\$)	Amount	Unreleased Restricted Shares as a Percentage of Shares Issued (%)	
15,780	0	0	0.127	

Operations Overview

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Business Activities

Business Scope

UMC provides wafer fabrication services through state-of-the-art manufacturing processes for a broad range of applications within the IC industry. The Company offers comprehensive solutions to meet customers' chip design requirements, and provides logic and specialty process technologies from 0.6-micron to 14-nanometer. From UMC's robust technology portfolio, customers can select the processes suited for their product applications, including embedded non-volatile memory, high

voltage, bipolar-CMOS-DMOS, MEMS sensor, mixed-signal/RFCMOS, RFSOI, 2.5D/3D advanced packaging, and compound semiconductors (GaAs, GaN...etc.) to complete design tape-outs.

Industry Overview

Current Status and Development of the Semiconductor and Foundry Industry

The development of electronic products has been trending towards enhanced functionality, light weight, energy saving, and artificial intelligence (AI) technology. The growth in applications for 5G smartphones, automotive electronics and electric vehicles, Internet of Things (IoT), and AI in recent years, as well as the commercial introduction of advanced packaging, have also affected the direction and increased the complexity of chip design. Combined with the constant miniaturization of semiconductor fabrication processes, it resulted higher technology barrier and the investment required has also increased many folds.

The requirements of enhanced chip performance coupled with the continual miniaturization of semiconductor fabrication processes are raising the barriers of entry across semiconductor sectors, from design to testing, and increasing the amount of investment required significantly. The development costs of advanced process technologies and the capital expenditure for new tools and equipment have also risen considerably. As a result, the industry's vertical specialization is becoming increasingly distinct. Many integrated device manufacturers (IDMs) have announced that they will no longer actively invest in the development of advanced processes nor increase their capacity due to cost considerations, and are instead increasing the proportion of wafer manufacturing outsourced to foundries. System providers are also increasingly designing ICs in-house and directly outsourcing fabrication. These industry trends are positive for the development of foundry business.

In 2021, the semiconductor industry benefited from the work-from-home and learn-from-home trends prompted by the COVID-19 pandemic, which led to higher demand for personal computers and servers. Higher 5G smartphone penetration and rapid infrastructure deployment, the recovery of the automotive market, and growth in applications such as high performance computing (HPC), Artificial Internet of Things (AIoT), WiFi6, and true wireless stereo (TWS) are all positive for demand. At the same time, increasing silicon content in end system products also contributed to robust demand and led to a shortage of semiconductors during the year. As a result, global semiconductor sales rose 25.6% in 2021.

Going into 2022, the outlook for the semiconductor market remains positive. Growth will continue to be driven by 5G smartphone, AIoT, automotive electronics and electric vehicles, HPC, and AI applications. According to forecasts from key market research firms, it is expected that demand for personal computers will remain at a relatively high level, while 5G smartphone demand will keep increasing. For 2022, the global semiconductor market is expected to expand 8.8%, according to the SIA.

Capacity utilization in the global foundry industry remained high and the supply is very tight in 2021 as the supply-demand imbalance persisted. Strong IC demand supported by the acceleration in digital transformation, development of 5G and other new applications, and safety stock building in the supply chain led strong foundry industry growth in 2021. Revenue of the global foundry industry increased approximately 27% in 2021

Industry Overview (Continue)

according to Gartner, and foundry players have expanded their capital investments in response to strong customer demand.

Looking forward to 2022, the global chip shortage is unlikely to be resolved amid the ongoing impact of the pandemic, the US-China tech war, and geopolitical factors. Although there may be adjustments to customers' inventories, the demand outlook for the foundry stable remains stable. Yet, expansion projects by various foundry players, which will gradually come online, will need to be taken into account. According to Gartner, the overall foundry industry will grow by 13% in 2022.

There are still a number of uncertainties which may affect global economic development and the semiconductor market. That includes the economic impact of COVID-19, the implications of the US-China trade war, subsequent developments of the restrictions the US placed on Chinese technology companies, the impact of the chip shortage, production expansion and the impact on the supply-demand dynamics, and inventory adjustments in the supply chain. Moreover, global inflation, the Federal Reserve decisions, and international energy prices are also factors affecting the global economy and semiconductor industry.

Overview of Semiconductor Industry Value Chain

The division of labor in the semiconductor value chain is fairly mature and can be generally divided into IC design, photo mask, wafer fabrication, and testing and packaging. IC designers produce designs of chips according to the specifications and applications of end products. As different ICs have unique requirements, wafer foundries must provide comprehensive process technologies and intellectual property, as well as continuous

process optimization, to enable customers to successfully develop chip designs and eventually move to volume production. Finally, the testing and packaging sector will package and test customers' chips to ensure they meet their design specifications.

Development and Trends in the Electronics Industry

The electronics industry is generally divided into several categories: Computer, communication, consumer, industrial and automotive. The development of end devices continues to move towards smaller size, lower power consumption, greater connectivity, and intelligence. Emerging technologies such as 5G, smartphones, AIoT, wearables, autonomous driving/electric vehicles, artificial intelligence/deep learning, augmented reality/virtual reality (AR/VR) will continue to grow. The foundry sector works with upstream and downstream partners in the semiconductor value chain to enable the development of various applications and to capture new opportunities presented by trends in the electronics industry.

Overview of Technology and R&D

R&D Expenses for the Past 5 Years

In Thousand NT\$

	2021	2020	2019	2018	2017
Operating Revenues	213,011,018	176,820,914	148,201,641	151,252,571	149,284,706
Research and Development Expenses	12,934,836	12,895,501	11,860,244	13,025,139	13,669,589
Research and Development Expenses as a Percentage of Operating Revenues	6.07%	7.29%	8.00%	8.61%	9.16%

Note: The R&D expense for 2022 was calculated up until the publication date of February 24, 2022, which amounted to NT\$1,590,834 thousand.

Technologies or Products Successfully Developed Within the Past 5 Years

Year	R&D Achievements
2017	<ul style="list-style-type: none"> Successful development of a customized 14nm FinFET process technology, which entered mass production for customer ICs. UMC's 14nm wafer yields reached industry competitive levels, with products delivered to the Company's primary customer. Successful pilot production of 28HPC^{U+} process technology for customers to meet the demand for faster chips with better power saving features. Introduced a 40nm non-volatile memory technology platform, which incorporated Silicon Storage Technology's (SST's) embedded SuperFlash[®] non-volatile memory that features low power consumption, high reliability, outstanding data retention, and high durability, which can be used for automobile, industry, consumer products, and IoT applications.
2018	<ul style="list-style-type: none"> Successful development of 22nm ultra-low power (ULP)/ultra-low leakage (ULL) HK/MG process to provide customers chips with faster speed, better cost efficiency and improved power saving to meet future demands from IoT, automotive electronics, industrial electronics, and various wearable product applications. 14nm FinFET customized process has entered mass production. In addition, UMC developed a new 14nm FinFET platform process (14FFC), with yield for the 128Mb SRAM on this process having reached industry competitive levels. 14FFC also passed process and product reliability verification to officially enter the pilot production stage for customer chips. UMC partnered with the leader in next generation STT-MRAM, USA-based Avalanche, to jointly develop and produce eMRAM.
2019	<ul style="list-style-type: none"> 14nm FinFET-Plus customized process has entered mass production. In addition, UMC developed a new 14nm FinFET platform compact process (14FFC), with yield for the 128Mb SRAM on this process having reached industry competitive levels. 14FFC also passed process and product reliability verification to officially enter the pilot production stage for customer chips. 40nm ReRAM was co-developed with Panasonic and already at risk production stage. This ReRAM is fully logic process compatible and high performance.
2020	<ul style="list-style-type: none"> 14nm FinFET compact process platform (14FFC) customer product yield reached 90%, passed customer product HTOL qualification, and entered the mass production stage. 22nm process reached the milestone of mass production for customers' digital TV (DTV) chips. Product used in image signal processor (ISP), adopting high-performance computing process (28HPC^{U+}), has been mass-produced. UMC, cooperating with eMemory and its subsidiary PUFsecurity, announced the successful joint development of the world's first PUF (physical unclonable function)-based security embedded flash (PUFflash) solution. The second generation of CMOS-MEMS gas sensors, 90nm and 55nm RFSOI process technologies all entered the mass production stage.
2021	<ul style="list-style-type: none"> Being introduced into 5G and netcom applications, the 14nm FinFET platform compact process (14FFC) successfully entered mass production and has cooperated with many customers to expand the application of 14FFC products The successful mass production of various 22nm products has attracted more than 10 customers to adopt the 22nm technology platform for product verification and mass production planning. 22nm process technology image signal processor (ISP) has established component models and design specifications. The 28HPC+ customized process technology was applied to the image signal processor (ISP), and successfully introduced into higher-end 108Mp products and entered mass production. Low temperature polycrystalline oxide panel (LTPO OLED) drive chip products using 28nm high voltage 27V process technology have entered mass production. The 40nm non-volatile memory process platform has completed vehicle verification and entered mass production. 40nm resistive random access memory enters mass production. The 55nm RFSOI process has entered mass production and meets the 5G sub-6 GHz market demand. The power management chip (PMIC) of the 0.11 micron BCD power integrated circuit technology platform has completed product verification and successfully entered mass production.

Overview of Technology and R&D (Continue)

UMC's R&D team has always been dedicated to promoting the development of logic process technology. With the adherence to the belief of "Customer's Demand Comes First," the Company has been providing pure-play wafer foundry solutions to meet market trends and customer needs, which include world-class technology, customer support services, and state-of-the-art manufacturing. With the expansion of UMC's Southern Taiwan Science Park site, the Company continues to recruit and train a large number of R&D talent. In 2021, UMC continued to significantly invest in R&D resources with total annual R&D expense reaching NT\$12.9 billion, which has led to fruitful R&D achievements in logic and specialty technologies.

14nm Process Technology

UMC reached the mass production milestone for its customized 14nm FinFET (14FF+) process in early 2017, and the competitiveness of device performance and yield has reached leading industry standards. In 2018, UMC's another 14nm project, 14FFC FinFET process platform, exhibited 55% performance improvement and twice the gate density compared to 28nm. Currently UMC's 14FFC platform, designed in products by several customers with product yield reaching 90% and performance meeting design targets, has been introduced into 5G and netcom applications and already entered mass production. More customers are engaging in new product development with UMC's 14FFC design-in and planning on tape-out of new products.

22nm Ultra-Low Power/Ultra-Low Leakage Process Technology

UMC has developed 22nm process technology and its 28nm high performance compact low power process technology platform (HPC^U +). With the same number of mask layers and compatible design criteria as 28nm, the performance of 22nm process technology has been enhanced by 10%, power consumption has been reduced by 20%, and area has been reduced by 10%. Therefore, the cost competitiveness of 22nm technology has been greatly improved to provide customers with more process options. In 2020 Q4, UMC's 22nm ULP/ULL technologies reached the mass production milestone for customer digital TV (DTV) chips. UMC R&D teams continue to optimize the process and expand the scope of product applications in electronic products such as analog, mixed-signal, RF technology, Internet of Things, mobile devices, etc.; relevant specifications for automotive electronic products are also under development. Due to the successful mass production of various products, more than ten customers have been attracted to adopt the 22nm technology platform for product verification and mass production planning, hence created a large number of business opportunities. 22nm ULP/ULL process technology for customized application on image signal processor (ISP) has also started to establish component models and design specifications for customers to use.

28nm High-Performance Process Technology

UMC's 28nm high-performance process utilizes high-k/metal gate stack technology. The 28nm high-performance computing process (28HPC^U +) entered mass production in 2020 for image signal processor (ISP) products. The higher-end 108Mp products have been successfully introduced and run for mass production in 2021. Furthermore, the 200Mp products will be introduced for trial production in 2022. The 28HPC+ millimeter wave (mmWave) process covers high-performance and low-power technology platforms; verification of the mmWave chip design process has already been completed. Customers can leverage UMC's mmWave foundry design kit (FDK) to design a transceiver IC, or integrate the foundry's well-established digital and analog IP to accelerate their mmWave SoC design. With the mmWave SPICE model coverage extending to 110GHz, the application ranges are perfect to cover mobile devices, automotive electronics (AUTO) and Internet of Things (IoT) products.

Display Driver IC and Power Management Process Technologies

UMC's 28nm high-voltage process, supporting the high-end active matrix organic light-emitting diode (AMOLED) display driver IC market, is the wafer foundry industry first to be successfully developed and enter mass production. Low temperature polycrystalline oxide panel (LTPO OLED) drive chip products using 28nm high voltage 27V process technology have entered mass production. The 22nm embedded high-voltage process technology has been continuously developed and the progress is on schedule, and trial production is expected in 2022.

Power management IC (PMIC) with higher voltage applied during voltage conversion benefits to reduce the energy consumption so energy can be conserved. To serve the demands for various power management (PMIC) applications, UMC provides Super High Voltage (5V and 30V in coordination with 300V, 500V or 700V) processes. UMC also provides a process technology platform, compatible with standard logic and a complete silicon intellectual property, and combining with world-class third-generation Low Conduction Resistance and High Sustain Voltage components, to serve for mobile phones, tablet appliances, Automotive industrial grade and other applications. The 0.11 micron Bipolar-Complementary Metal Oxide Semiconductor-Double Diffusion Metal Oxide Semiconductor (BCD, Bipolar-CMOS-DMOS) power management chip of the power integrated circuit technology platform has completed product verification and successfully entered mass production. The development progress of the next-generation customized mobile phone power IC is in good conditions and expected to enter trial production in 2023.

Overview of Technology and R&D (Continue)

Non-Volatile Memory Process Technologies

The 40nm eFlash memory developed in cooperation with major automotive electronics manufacturers has completed the verification of automotive electronics reliability and entered mass production. It is believed that the demand for this type of chip will increase in the market. In the meanwhile, self-developed 40nm non-volatile memory process platform has been adopted by customers and entered mass production. The development progress of 28nm embedded SuperFlash® non-volatile memory platform (ESF4) is also in line with expectations; it has achieved a stable yield rate and is ready for reliability verification. The product is expected to meet the demand for the Internet of Things (IoT).

Resistive Random Access Memory (ReRAM) is a novel NVM with simple structure, low operation voltage, low read current, fast program/erase speed and very good reliability. Moreover, it is fully logic compatible with less add-on masks and low extra cost. UMC's 40nm ReRAM has entered mass production, while 22nm ReRAM technology platform have been developed in progress as scheduled, and is expected to be applied in intelligent Internet of Things (AIoT) related products.

The new generation of embedded Magnetoresistive Random Access Memory (eMRAM) has the same size as the traditional charge-trapping memory, but has simpler process conditions and faster operation speed, and exhibits excellent thermal stability, read/write endurance, and data retention. In the progress of 22nm eMRAM process platform, the 22nm high-density 1G HDMRAM product has been successfully verified, and is expected to enter mass production in 2022. It can be applied in the intelligent Internet of Things (AIoT) and aerospace/telecommunications (LEO) related products in the future.

RFSOI Process Technologies

UMC's RFSOI technology, with its unique substrate characteristics to prevent high-frequency signal harmonic frequency distortion and to reduce power loss, satisfies the strict requirements of all 4G/5G mobile phones for RF switches. Following 90nm RFSOI process mass production, the 55nm RFSOI process has also entered mass production in 2021, and meets the needs of the 5G sub-6 GHz market, while UMC continues to develop the 40nm RFSOI technology platform to catch subsequent 5G/mmWave growth trends. 22nm RFSOI has also entered the pre-evaluation stage, with a view to deploy in the market above 40GHz in the future. UMC's RF Foundry Design Kit (FDK) allows users to design optimized inductors/capacitors in minutes with simple steps through convenient software. These powerful solutions make UMC's RF technology one of the most competitive technologies in the semiconductor industry.

CMOS Image Sensor (CIS) and MEMS Process Technologies

For CMOS image sensor technology development, UMC's 65nm process has been verified to enter the mass production stage. The new processes, such as back-illuminated sensor (BIS) and 55nm CIS process technologies, have entered the verification stage. This technology is expected to provide higher sensing resolution to meet product upgrade requirements.

By developing advanced sensors with second-generation micro-electromechanical (CMOS-MEMS) technology and cooperating with customers, UMC manufactures flow sensor chips widely used in life-sustaining medical respirators for critically ill patients to combat the COVID-19 epidemic in recent years. The vaccine temperature control chips produced with the temperature and humidity sensor are used to monitor the temperature during the cold chain transportation of the vaccine to ensure that the vaccine efficacy is not reduced and to prevent the spread of the epidemic. In response to greenhouse gas emission control, the carbon dioxide sensing element can regularly monitor the concentration and trend of carbon dioxide in the air. Precise management of the carbon dioxide emission source and amount information can help the responsible unit take timely and appropriate control measures. UMC makes every effort to develop environmentally-friendly technologies to contribute to the sustainable future of our planet.

Compound Semiconductors

In terms of the overall layout of compound semiconductors, UMC has continued to add SAW filter integration solutions for existing HBT power amplifiers, and combined UMC's existing RFCMOS Switch and LNA technologies to provide mobile phone RF front-end module integration solution. The Gallium Arsenide pHEMT part will continue to develop key chip technologies suitable for 5G mobile communication mmWave band base station/low-orbit satellite receiver. In addition, as to wide-bandgap component technology, UMC actively invests in the development of gallium nitride power components (Power GaN) and microwave components (RF GaN) technology platforms, in order to deploy in the market of high-efficiency power components and 5G/low-orbit satellite communication components.

Overview of Technology and R&D (Continue)

3D WoW Hybrid-bonding Technology

UMC has been providing 2.5D interposer technology for mass production to high-end CPU/GPU customers for many years. On top of that, 3D wafer-on-wafer (WoW) hybrid-bonding technology, combining with open supply chain cooperation model, has provided customers with reliable and flexible solutions. In the meantime, as to the application of radio frequency components, 3D stacking technology for downsizing by 40% has completed product verification.

Silicon IP Support

Along with the design trends toward more precise deep sub-micron generation processes and increasing design complexity, foundry can no longer only focus on process yield improvement, but must also help customers shorten their design flow and reduce design cost. In terms of library design kits, UMC strengthens its design support capability by constantly providing optimized library design kits closely integrated with the Company's process technology in order to help designers accelerate the completion of their chip design. From mature to advanced process technologies to specialty processes, UMC can provide complete Standard Cell, I/O and customized libraries to meet customers' chip design needs. In terms of logic process, UMC's standard cell library for advanced processes can provide devices of various operating and threshold voltages (Vt). Along with low power library kits, they can meet various customer needs for design flexibility and high performance/low power applications. UMC's I/O library has an extremely small area, and it is qualified through a stringent Electrostatic Discharge (ESD) test to help customers design competitive products that can pass the ESD test with voltage as high as 4kV. So far, numerous customers have taped-out successfully and mass produced products using UMC's I/O library on 110nm, 90nm, 65nm, 55nm, 40nm, and 28nm processes. UMC also provides customized embedded flash memory (eFlash) IP on various process generations according to customer needs and has successfully helped customers with quick market entry for their products. In addition to UMC made IPs, the Company has also established partnerships with

industry-leading IP vendors in order to provide physical library, non-volatile memory IPs, and diversified analog/mixed signal IPs that support industrial standard interfaces (such as USB, DDR, and HDMI). This year UMC has extended its long-term IP cooperation with all leading IP vendors to 22nm and 14nm processes in order to provide customers with a competitive design support environment.

Intellectual Property

Facing increasing technological competition, UMC has significantly strengthened patent filings to protect intellectual property in addition to greatly enhancing technological capabilities in critical fields. Following the Company's operation and development planning, the Company's 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. The Company was granted a total of 432 domestic and foreign patents in 2021, 206 of which are US patents, 60 ROC patents, and 166 China patents. The total accumulated number of UMC's patents is 14,423, which can provide a thorough and strong IP foundation for UMC's technologies. To keep this competitive edge, UMC has greatly increased the quality and quantity of critical technology patents in order to further strengthen customer service and competitiveness while helping them to create profits. Additionally, in 2021, UMC has been awarded Taiwan Intellectual Property Management System (TIPS) certification, highlighting the Company's continuous commitment to strengthening its IP management system and corporate governance. TIPS is the official benchmark for Taiwan enterprises and obtaining this certification is an evidence that we have a robust system in place that is recognized by state-level authorities.

Long-Term and Short-Term Business Plans

UMC is committed to delivering comprehensive wafer fabrication solutions to its customers through close cooperation with supply chain partners providing equipment, automated electronic design tools, IC design service, silicon IP service, mask manufacturing, and packaging/testing services etc., which enables the Company to provide customers with verified reference flows, broad silicon IP, design cell library databases, and diversified options for packaging and testing. Combined with the Company's advanced process technologies and state-of-the-art wafer fabrication technology, UMC can ensure customers' IC products fast time-to-market.

Short-Term Objectives

UMC's short-term objectives are to expand the production capacity of 8-inch and 12-inch specialty technologies and advanced processes based on market and customer needs, enhance capacity utilization rate, and strengthen profitability. UMC's rich technology platforms at various process nodes and diversified specialty technologies can meet all requirements of primary market applications. At the same time, the Company continues to focus on structural productivity enhancements and manufacturing capacity optimization of 8-inch and 12-inch fabs to seize market opportunities and increase revenue. The Company is also actively expanding capacity for 28nm processes, which is recently in high demand.

Medium-to-Long-Term Objectives

Process technology R&D, stable operations, and profit have always been a core focus of UMC. The Company strives to make prudent investments, maintain or gain market share, and decrease costs through efficiency improvements. To meet customers' needs, UMC aims to implement all critical R&D projects according to plan and provide customized process technology platforms. In recent years, the Company has actively invested in the development of compound semiconductor gallium nitride (GaN) power components and RF components, targeting high-growth opportunities such as high-efficiency power components and RF components markets.

UMC's capital expenditure for 2022 is expected to be approximately US\$3.6 billion, which will mainly be spent on new 28nm and 22nm capacity. The Company's expansion plans are in cooperation with a number of customers who are paying deposits to secure capacity. To further expand, UMC will consider acquiring existing fabs that can quickly increase the Company's scale, boost competitiveness, and are cost-effective.

Facing market requirements for continuously advancing semiconductor technology, in addition to UMC's own technology R&D, the Company will work with strategic partners and supply chain vendors to jointly develop technologies. UMC will also continue raising environmental protection awareness. In addition to establishing a low carbon and green chemical supply chain, UMC is dedicated to the support of various environmental protection activities and the promotion of environmental protection education.

Overview of Market, Production, and Sales

Market Analysis

Sales by Geographic Region

UMC's customer base includes leading companies in diverse geographic regions. Asia Pacific and North America are the key sales regions for the Company, accounting for 65% and 22% of 2021 operating revenues, respectively. Europe and Japan combined account for 13% of our operating revenues. UMC will continue to strengthen its cooperation with established customers as well as partner with emerging companies in order to achieve stable growth in the medium- and long-term.

Market Position

UMC is a leader in the global pure-play wafer foundry market, which had total revenue of approximately US\$97.0 billion in 2021. According to estimates by market survey institution Gartner, UMC remains the largest wafer foundry in the world after TSMC with a 7.8% market share. Its main competitors are TSMC, Samsung Foundry (note: revenue of Samsung Foundry doesn't include income from Samsung LSI in-house ASIC business), GlobalFoundries, and SMIC.

Foundry Industry Outlook

- According to the market survey of Semiconductor Industry Association (SIA), the total revenue of the semiconductor industry in 2021 was close to US\$553.0 billion, an increase of 25.6% from 2020. The semiconductor industry's revenue is expected to rise 8.8% in 2022 to US\$601.5 billion.
- Fabless companies tend to outperform the semiconductor industry, while integrated device manufacturers (IDMs) are increasingly outsourcing production to foundries to reduce costs and market risks. Both of these factors are beneficial for the foundry industry, which is expected to continue to outperform the overall semiconductor industry.

Differentiation and Competitive Advantage

- UMC is optimistic about the demand for chips in the 5G, AIoT, and computing markets. To capture growth from these markets, the Company has invested appropriately in R&D and capacity expansions. The Company is also actively enhancing and developing its specialty technology solutions, such as high voltage, embedded flash memory, advanced packaging, RFSOI, and compound semiconductor GaN in order to secure more product collaborations with customers. In addition, UMC is establishing an open technical platform with its packaging and testing partners to provide complete solutions for customers.

- The overall structure of Taiwan's semiconductor industry is complete, and it is highly competitive in terms of both operational efficiency and cost. Taiwan's position in the semiconductor industry adds to UMC's competitiveness when combined with the Company's technology advantages.

Favorable Factors for the Company's Development

Considering the continuous growth of the IC industry, the position of the foundry sector within the industry, and the company's competitiveness, the favorable factors of the Company's long-term development are summarized as follows:

- Global demand for pure-play wafer foundry services will continue to grow as the division between IC design and IC fabrication become increasingly distinct.
- IDMs are adopting the strategy of outsourcing production to foundries, which contributes to the growth of the foundry market.
- Forming strategic alliances with major international companies and system companies to secure long-term stable orders.
- A strong management team, advanced process R&D, and superior business development capability can result in outstanding operational performance.
- UMC is one of the most active foundries in the development of 12-inch wafer manufacturing capabilities. The Company has 12-inch operations in the Southern Taiwan Science Park, Taiwan; Singapore; Xiamen, China; and Mie, Japan. Future investment in 12-inch fabs will depend on customer needs and market trends.
- In response to the development trends of electronic products, UMC has developed specialty technologies including embedded memory, mixed signal, RF, MEMS sensor, and high voltage to meet customer demand for process technologies and to establish a leading position for UMC in technology development.
- UMC has built an industry-leading, dedicated IoT platform, providing an ultra-low-power (ULP) process with extremely low leakage suitable for all kinds of hybrid process technologies. IoT chip designers can integrate various process schematics to the customized platform based on UMC's low power consumption technology in order to meet the specific requirements to enter the IoT and wearable electronic device markets.

Overview of Market, Production, and Sales (Continue)

- UMC's 28nm embedded high-voltage technology has entered volume production for AMOLED display driver chips for customers to improve the power efficiency of mobile phones. The next-generation 22nm embedded high-voltage process technology is currently under development, which will enhance competitiveness of UMC and its customers in this field.
- In addition to the original polysilicon oxynitride (Poly-Si ON) process, UMC's 28nm high-K/metal gate process has also successfully entered volume production. The process has also obtained automotive-grade verification and required IP are now available on the platform.
- UMC's 22nm platform can further reduce cost and improve device performance.
- UMC's 14nm FinFET process technology is 55% faster than its 28nm technology, and the power consumption is also reduced by about 50% compared to the 28nm process.
- UMC's 28nm millimeter wave (mmWave) process technology provides advanced solutions for automotive radar, 5G mobile communication, medical, and industrial products.
- UMC's RF Silicon-on-Insulator (RFSOI) technology meets the stringent requirements of the mobile phone applications including for front-end RF switches, low-noise amplifiers, and provides first-class performance.
- UMC's 40nm embedded flash memory process platform combined with SST (Silicon Storage Technology) embedded SuperFlash® non-volatile memory process technology platform reduces unit size by more than 20% compared with the 55nm embedded flash memory process platform. Applications include products such as SIM cards, financial transactions, automobiles, Internet of Things, and MCUs.
- UMC is developing a 28nm embedded flash memory process platform, as well as 22nm magneto-resistive random access memory (MRAM) and 22nm resistive random access memory (RRAM) to provide customers with more suitable 28nm and below process options.
- The MEMS gas sensor jointly developed by UMC and customers has been successfully mass-produced and applied in smart home appliances and IoT products.
- UMC provides advanced wafer process technologies such as 2.5D (interposer)/3D (TSV)/Hybrid Bond. Combined with an open supply chain cooperation model, the Company can offer customers a

complementary and complete advanced packaging platform on top of reliable 2.5D/3D IC solutions.

- UMC has also developed a new semiconductor material process for high voltage and high frequent applications in the 5G era, including gallium arsenide (GaAs) and gallium nitride (GaN). These developments will secure UMC's position in third-generation semiconductor materials and contribute to the Company's future growth.

Unfavorable Factors for the Company's Development

- COVID-19 has had a negative impact on the foundry industry, including potential disruption to the global semiconductor supply chain. UMC is strengthening measures against the pandemic to minimize adverse impact on the Company's operations.
- Given the optimistic outlook for semiconductor demand, major foundries around the world have increased capital expenditures to expand capacity. This may cause volatility in market supply and demand dynamics in the future.
- Major powers are imposing sanctions to constrain competing countries, which has led to restructuring of the supply chain. UMC will continue to monitor the impact.
- In order to ensure semiconductor supply, many countries are planning to build domestic wafer fabrication capabilities by means of subsidies and policy incentives. UMC will continue to monitor the impact on the Company's operations and form a response strategy.
- The foundry industry is facing pressure of higher capital expenditures as investments become increasingly expensive. Industry leaders may use this as a competitive differentiation, and certain countries may also use subsidies to create unfair competition. New fab equipment is also expected to require longer lead times. Therefore, it is necessary to be more cautious about any expansion plans going forward.

Overview of Market, Production, and Sales (Continue)

Countermeasures

- Strengthen the Company's competitive advantages by increasing the proportion of high-end processes and optimizing overall product mix.
- Actively seek new opportunities to expand in 5G, IoT, and AI applications.
- Provide optimized solutions to assist customers to achieve low costs, high performance, and low power targets according to the characteristics of each IC product.
- Continue to provide customers with the best choice and differentiate the Company from competitors by strengthening process development, maintain stable high yields, and offer comprehensive solutions.
- Diversify sales regions and product mix to minimize geopolitical impact. In addition to strong business from China and the U.S., UMC plans to expand business from other regions including Europe, Japan, and Korea.
- Strengthen marketing effectiveness and customer service to improve customer satisfaction.
- Develop long-term partnerships with customers, help customers expand their market share by providing competitive advanced processes and production capacity, and seek growth opportunities that enable growth for both the Company and its customers.
- Take action to respond to changes in the market in order to minimize possible impact on the Company, such as expanding customer base and increase flexibility of capacity allocation.
- Strengthen the Company's competitiveness through continuous cost saving and efficiency enhancements.
- Expand capacity through prudent investments, carefully considering the dynamics of UMC's addressable markets and customer needs.
- Seek to expand through flexible means including mergers and acquisitions of existing fabs or strategic alliances, which can help the Company gain market share and better serve regional markets.

Overview of Market, Production, and Sales (Continue)

Main Purposes and Production Processes of Key Products

Main Process Technologies and Corresponding Products

- CMOS Logic: for fabricating chips that execute logic computing functions, such as programmable gate array, multimedia processor, and application processor chips.
- Mixed-Signal: for fabricating chips which can simultaneously process analog/digital mixed signal, such as ICs for broadband access communication and optical storage.
- RF CMOS: for fabricating high frequency wireless communication chips, such as ICs for cellphone RF transceiver, Wireless Local Area Network (WLAN) and Bluetooth.
- Embedded Memory: for fabricating integrated logic and memory chips with high performance and low power consumption features, such as chips for general purpose micro-controller, touch controller, smart card and micro-controller for automotive or IoT etc.
- High Voltage: for fabricating driver ICs for LCD TV, cellphone, tablet, AR/VR, e-paper screen driver IC, and power management IC.
- CMOS Image Sensor: for fabricating CMOS image sensors used in digital camera, cellphone, notebook, optical mouse, and webcam.
- MEMS: for making application products such as microphone, inertia sensor, and pressure sensor.
- 3D FinFET: for fabricating high performance chips and chips for executing fast logic computation, such as mobile phone baseband processor, application processor, and memory controller.
- RFSOI process: for fabricating wireless front-end chips, such as wireless switch, tuner used by mobile phones, WLAN, and wireless base station.
- GaAs process: for power amplifier IC of handset and base station.
- GaN process: for RF IC of power amplifier IC; low-noise amplifier (LNA) in 5G base station; DC-DC converter in high-power portable battery charger in handset, tablet, and notebook; power supply of workstation and server; and DC-DC converter in electric vehicle applications.
- 3D IC package: for many applications in CIS image sensor, HPC, 5G, datacenter, and automotive applications.

Production and Fabrication Process

A complete IC fabrication process can be divided into five stages, including IC design, mask fabrication, wafer fabrication, packaging, and testing. UMC is dedicated to the R&D of advanced IC processes and specialty technologies in order to enable the IC designs of customers.

Status of Supply of Primary Raw Material

Type of Primary Raw Material	Primary Suppliers	Market Status of Suppliers	Procurement Strategy
Silicon Wafer	<ul style="list-style-type: none"> S.E.H. Taiwan (Manufacturing sites: US, Japan, Taiwan and Malaysia) SILTRONIC Singapore (Manufacturing sites: Germany, US and Singapore) GlobalWafers (Manufacturing sites: US, Taiwan, Italy and Japan) SUMCO Group (Manufacturing sites: Japan and Taiwan) Soitec Group (Manufacturing site: France) 	These five makers are the world's primary silicon wafer suppliers with production sites in the US, Japan, Germany, Italy, Korea, Taiwan and Southeast Asia, who can offer steady and high quality silicon wafers.	<ol style="list-style-type: none"> The Company has been in long-term procurement relationships with the world's primary suppliers in order to ensure the steady access to production material. In recent years the ratio of procurement from local makers has increased maturely, which can reduce the risk of international transportation and procurement cost. The Company convenes quarterly supplier management committee meetings to evaluate suppliers' performance in order to adjust the ratio of procurement from these suppliers. The Company established a sourcing committee to implement source integration and development more effectively and to gain the most benefit of cost reduction.

Major Suppliers

In Thousand NT\$

Name	2021			2020		
	Amount	Percentage of Net Purchase	Relation to UMC	Amount	Percentage of Net Purchase	Relation to UMC
Supplier "A"	4,888,380	11	None	5,329,822	11	None
Others	41,595,697	89		41,767,109	89	
Net Purchase	46,484,077	100		47,096,931	100	

Note: As of the Annual Report printing date, if there is any financial data of the publicly listed company (or company with stock transaction in securities firm's premises) certified or approved by CPA audit, it should be disclosed: None.

Reasons for changes in procurement amount: No major changes.

Major Customers

In Thousand NT\$

Name	2021			2020		
	Amount	Percentage of Operating Revenues	Relation to UMC	Amount	Percentage of Operating Revenues	Relation to UMC
Customer "A"	21,935,208	10	None	20,380,814	12	None
Others	191,075,810	90		156,440,100	88	
Operating Revenues	213,011,018	100		176,820,914	100	

Note: As of the Annual Report printing date, if there is any financial data of the publicly listed company (or company with stock transactions in securities firm's premises) certified or approved by CPA audit, it should be disclosed: None.

Reasons: The sales amount of customer "A" increased due to the increased demand of consumer product, and the change of sales percentages reflected the more diversified customer portfolio.

Production Figures

Segments	Unit	2021			2020		
		Capacity	Production Quantity	Production Value (In Thousand NT\$)	Capacity	Production Quantity	Production Value (In Thousand NT\$)
Wafer Fabrication	In Thousands of 8-inch Wafer Equivalents	9,453	9,880	136,522,911	9,188	8,893	133,991,069

Sales Figures

Segments	Unit	2021			2020	
		Shipments	Amount (In Thousand NT\$)	Shipments	Amount (In Thousand NT\$)	
Wafer Fabrication	In Thousands of 8-inch Wafer Equivalents	Domestic	3,842	79,092,769	3,705	63,829,608
		Export	6,021	125,501,630	5,208	106,055,593
Others		Domestic		-		468
		Export		-		3,226
Total		Domestic		79,092,769		63,830,076
		Export		125,501,630		106,058,819

Note: Net Sales.

Employees

Number of Workers

	2022	2021	2020
Engineers	11,679	11,606	11,377
Administrators	809	813	795
Clerks	4	4	3
Technicians	7,260	7,318	7,211
Total	19,752	19,741	19,386

Average Age

	2022	2021	2020
Average Age	38.2	38.0	37.7

Average Service Years

	2022	2021	2020
Average Service Years	11.4	11.4	11.2

Educational Distribution Ratio (%)

	2022	2021	2020
Ph.D	1.4	1.4	1.5
Master	27.3	27.3	27.2
Bachelor/Associate/Diploma	49.7	49.6	49.0
High School and Below	21.6	21.7	22.3

Note: The data represented for 2022 was gathered until February 24, 2022.

Environmental Expenditure Information

By the publication date of the 2021 annual report, all audits on UMC by environmental protection agencies showed results in compliance with regulatory requirements with no environmental protection violations or any penalty or loss resulting from environmental pollution.

UMC has identified environmental risks during the operational process according to the spirit of international environmental management system (ISO 14001) standards, based on which corrective and preventive measures can be continuously conducted, including equipment hardware improvement, enhancement of personal educational training, and strengthening of operating system management.

In 2021, the total environmental protection related expenditures for all UMC fabs have exceeded NT\$3.55 billion. The environmental related expenditures include investment in highly efficient pollution prevention technology and preventive equipment, totaling NT\$1.84 billion. The monthly pollution prevention expenses and O&M of pollution prevention equipment exceeded NT\$106 million, while the monthly waste disposal cost exceeded NT\$22.9 million. Meanwhile, NT\$15 million has been spent on

annual environment monitoring to track the overall emission of pollutants. In addition, in response to RoHS (Restriction of Hazardous Substances), around NT\$680,000 has been spent on continuous certification of the QC-080000 IECQ HSPM system, product inspection, and educational training. In the future, the Company's primary environmental protection expenditures and items will include: 1. Costs of replacement, renewal, and upgrade of existing pollution prevention equipment; 2. Operational costs of pollution prevention equipment; 3. Waste disposal costs, and 4. Environmental monitoring costs.

Labor Relations

UMC has consistently valued employee benefits and welfare, and has actively cultivated talent, implemented labor laws and regulations, protected employee rights and interests, and created a bright and pleasant working environment. UMC complies with various local laws and regulations, and strengthens employee awareness to prevent labor disputes. Through channels such as labor-management meetings, divisional meetings, forums, suggestion boxes, grievance hotlines staffed by complaint specialists, and communication management units, the Company has achieved competent communication and effective problem-solving.

In addition to effectively maintaining harmonious labor relations, UMC respects and promotes international human rights by providing employees with a quality employment environment. Moreover, in UMC and all its subsidiaries, the management and implementation of labor relations such as employee welfare measures, in-service education, training and retirement systems are planned and conducted in accordance with or above and beyond the requirements of law. UMC has also set up in-house physicians to provide medical services and quality counseling services for the physical and mental health needs of employees, thereby promoting harmonious labor relations.

UMC is committed to providing employees with a safe and friendly working environment. Through continuous efforts, UMC has received numerous awards from the Science Park Bureau for promoting workplace safety and health, labor relations, and the national excellence award for friendly workplace. Among these awards, the Special Distinction Award was given by the Hsinchu Science Park Bureau for Advanced Workplace Equality and Southern Taiwan Science Park Bureau for Advanced Workplace Equality.

At the same time, UMC also won various corporate sustainability awards in 2021. For corporate sustainability, UMC ranked in the top 5% for corporate self-governance, and has won the Taiwan Corporate Sustainability Platinum Award, Taiwan Corporate Sustainability Awards (TCSA) "Sustainable Model Enterprise Top10", and Excellence in Corporate Social Responsibility Award. In addition, UMC has been selected again for the Dow Jones Sustainability Indices (DJSI)'s World Index, marking the company's 14th consecutive year of inclusion. Moreover, UMC earned the highest scores in the semiconductor industry in terms of total score, environment, and society, demonstrating UMC's long-term investment in sustainable operations.

Education and Training

High-quality talent is the cornerstone of UMC's competitiveness, and comprehensive talent development and cultivation are the keys to improving human resource quality.

UMC's human resource cultivation policies are tailored according to the career development needs of employees in their particular job type and rank. The policies provide systematic training for all employees, such as new employee, technical, management, quality control and language courses. In addition, a wide range of learning resources such as online learning courses, on the job training (OJT) and in-service training are also offered to provide all employees with a working environment that is conducive for continuing development. In 2021, UMC conducted a total of 8,254 training sessions, totaling 15,154 hours of training, with 161,238 participants and total training expenses of NT\$ 56,390,542.

The following is a summary of training courses provided by UMC:

- **New Employee Orientation:** To help new employees quickly adapt to the work environment, orientation training is provided for new employees to give them a basic understanding of semiconductor processes and establish a common language. In addition to basic courses on company organization, remuneration and benefits, basic daily necessities and industrial safety, U-Camp courses on workplace stress management and adopting a positive attitude also help new employees understand the spirit and values of UMC. To help new employees quickly develop professionalism and an appropriate job attitude, they are paired with a mentor to help them quickly integrate into the corporate culture.
- **Technical Training:** To help engineers quickly master the overall technologies and continue to advance technologically, UMC has a comprehensive training blueprint for engineers that is specific to divisional attributes. The curriculum includes basic courses (General to Level 2 courses) and advanced, technology-specific themed seminars (Level 3 - 4 courses) to enhance the technical capability of the engineers and develop a system of internal experts. In addition, to equip employees with multiple skills and promote cross-divisional cooperation, UMC continues to promote inter-divisional training courses in 2008 to increase the depth and breadth of professional and technical training for employees. Furthermore, curriculum content is continuously improved to meet the rapid changes and progress of technology.
- **Management Skills Training:** Management skills development is an important task for supervisors at all levels. To this end, UMC provides a series of courses targeting competencies relevant to supervisors, such as management behavior, skills, knowledge and corporate culture integration. To assist supervisors with achieving cooperation in their work and management, learning resources such as foreman/sectional chief, grassroots supervisor, middle-level supervisor and senior executive training courses are conducted.
- **Quality Training:** Training courses relevant to UMC quality policies and quality requirements are conducted, such as knowledge management,

proposal improvement, project management, problem analysis techniques, statistical process control and experimental design.

- **Language Training:** Employee language proficiency is determined through language testing. Training programs targeting specific learning needs are then provided accordingly to strengthen employee language skills and workplace competitiveness.
- **E-Learning:** UMC has established a learning webpage for employees that integrates all course information, training systems and data enquiries. The online platform enables employees to easily access needed information for planning and learning without schedule constraints.
- **On the Job Training:** Each fab has an Education Committee to provide training for employees in the various divisions. The training is based on skills required by specific jobs and professional skills assessment to ensure that employees have the required job competencies. Additional training based on individual differences is also provided to improve the quality of work. The Human Resource Division conducts an annual review of training outcome to determine and direct the operations of the Education Committee in each fab, and convenes a training outcome meeting so that the fabs can share their experience.
- **In-service Training:** UMC provides information on in-service courses offered by outside colleges and universities, promotes educational resources and offers subsidies for in-service training to encourage employees to develop the professional competencies or management skills required at each stage of their career.
- **Business Ethics Training:** To enhance the behavioral literacy, professional ethics and professional competence of UMC and all its employees, courses on employee ethics, insider trading prevention and conflict of interest are conducted within the Company and promoted in the Planning Section of the UMC intranet site. To gain public trust, all employees (including high-level executives and other managers in the operation team) are expected to abide by the ethical spirit of the Company in their daily tasks and businesses, thereby ensuring the sustainable growth and development of the Company.

To ensure effective training direction and implementation, the Human Resource Division develops education and training projects in the fourth quarter of each year according to annual company-wide policies, the General Manager's directives for training focus and direction, and company-wide survey of training needs. The projects include company-wide, cross-divisional and divisional training programs. Program implementation is reviewed each quarter, and corrective and improvement measures are proposed for unachieved goals to ensure the effectiveness of specific employee training.

UMC believes that creating a high-quality work and learning environment can increase employee performance output and retention, and that high-quality employees who continue to develop are the key foundation to the sustainable development of UMC.

Employee Benefits

Employee Welfare System

UMC believes that employees are the most important assets of the Company, and that a company can continue to develop and progress only with appropriate and sufficient talent. To this end, UMC is committed to creating a healthy workplace environment. In addition to providing competitive salaries and dividends, a comprehensive education and training system, diverse benefits and a safe and healthy working environment, UMC has also developed a comprehensive employee welfare system in accordance with local laws and regulations and regional needs.

UMC provides a variety of welfare measures as follow:

- Nutritionally balanced and delicious meals: Each fab has its independently operated cafeteria and a variety of meal options. By combining the cafeteria, cafe and convenience store into an integrated dining area, employees can enjoy healthy and balanced meals.
- Fitness Sports Center: UMC operates its own recreation center in the Hsinchu science park, and Tainan Fab 12A has the UMC Park Activity Center, a multi-purpose sports center gym and the LM Dormitory gym. In addition, other facilities such as gyms and aerobics classrooms are located in appropriate areas of UMC fabs to reflect the concept of a healthy workplace.
- Welfare Events: The Welfare Committee routinely organizes events (such as Family Day, art activities, movies, trips), and in coordination with company celebrations, organizes inter-fab competitions to cultivate team unity. At the same time, other inter-divisional and inter-fab activities are held during holidays to enhance employee work-life balance.
- Club Recreation: UMC has five major categories of clubs, such as sports, arts and community service. Whether active or more sedentary, employees can choose from a variety of content. In 2021, UMC had a total of 30 clubs and about 2,347 participants.

Employee Health

UMC has a longstanding commitment to creating a workplace environment that is physically, mentally and spiritually healthy. UMC is convinced that only employees who are physical and mentally healthy can be highly efficient and produce excellent work performance. In addition to assisting employees in all aspects of health management and health promotion, UMC also reaches out to employees' families in the hope of boosting employee work morale and improving the quality of their work.

While valuing the employees' health, UMC also spares no effort in their mental health management. Through a confidential agreement mechanism with partner units, UMC provides benefits that are superior to laws and regulations, allowing employees to have free and professional psychological counseling services six times a year. From time to time, UMC will use various methods such as online platforms, e-posters,

- Accommodation and transportation assistance: UMC provides safe and comfortable accommodations for both direct labor and indirect labor. Free scheduled transportation and shuttle services are also provided for convenient and quick connections.

UMC also holds employee health in high regard, and plans and implements benefits in accordance with or above and beyond the requirements of the law. For example, UMC complies with the Act of Gender Equality in Employment, the Regulations for Establishing Measures of Prevention, Correction, Complaint and Punishment of Sexual Harassment at Workplace, and regulations for leave such as personal, sick, maternity, paternity, menstrual, family care, marital, bereavement, on official, occupational sickness, annual, parental, for public welfare activities, nursing and nursing leave without pay.

In particular, UMC is the first private enterprise in the country to promote a 12-hour rotating shift for its direct labor. Further worth mentioning is the Company's comprehensive insurance system where from the day of their employment, employees are provided with numerous insurance services. In addition to labor, health and free group insurance (NT\$2 million group insurance, medical insurance and cancer insurance), the spouse and children of employees can enjoy life insurance, accident insurance, medical insurance and cancer insurance, and their parents can enjoy accident and accidental medical insurance, thereby freeing them of worry and enabling them to work their best for the Company and society.

lectures, conference promotion, and dissemination of promotional materials, so that employees can make appropriate pressure adjustments under the pressure of work and family, and maintain a good physical and mental state, returning to the normal track and performance of work as soon as possible.

In 2021, UMC adopted health promotion activities for each quarter, and integrated occupational safety and health laws such as maternal protection, overwork prevention, human factors engineering and other health related issues. At the same time, medical checks for employees and hospital check-ups for their families are provided annually. A variety of health promoting activities and education are then organized for employees accordingly to give them further knowledge and skills for self-managing their health and the health of their families. Furthermore, through occupational safety and health project management, UMC's Health Center has installed an internal reporting system for potential

Employee Benefits (Continue)

occupational chronic injury and disease, with regular hearing inspections and vision care programs that are superior to occupational safety laws to achieve the goal of preventing occupational injuries. Moreover, as of 2020, UMC's IT divisions have integrated their existing systems to construct a customized personal Health Care System for employees. In addition to checking their own health check reports over the years, colleagues can also receive system notifications on the day of consultation with medical staff, and immediately read and confirm consultation related information, which improves the timeliness and care rate of the medical team's care. In addition to regulatory annual checkups, UMC also offers a variety of preventive screening and health promoting activities such as other cancer screening, flu vaccination, abdominal ultrasound and other out-of-pocket items so that employees can choose appropriate health checks according to their needs.

The above-mentioned health management methods and health promotion activities are intended to ensure that employees sufficiently understand and actively participate in improving their own health condition, so that the

Information Security Management

Information Security Risk Management

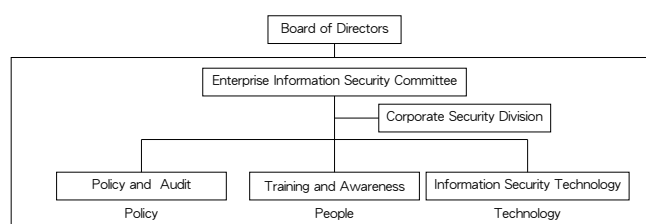
Established in 2003, the Enterprise Information Security Committee (EISC) is responsible for implementing the Company's information security management plan, establishing and maintaining the information security management system, and coordinating the formulation and compliance of related policies. The EISC is chaired by the President, and the Vice President S S Hong of the Digital organizational function serves as the supervisor/Chief Information Security Officer (CISO). The heads of all departments (including legal, human resources, research and development, engineering, fab operations) are members of the committee. The Corporate Security Division was also formed to be responsible for information security and physical security planning, related audit matters, and leading the operation of this committee.

The EISC holds semiannual meetings to review information security risks and measures and strategies adopted by UMC, ensuring the adequacy, suitability and effectiveness of the Company's information security management system. The committee reports to the board of directors on the effectiveness of the information security strategy annually. Independent Board Director Jyuo-Min Shyu, who has relevant experience in information security, oversees and regularly reviews the Company's information security and cyber security strategy. Mr. Shyu was the Minister of the Ministry of Science and Technology and the President of Cloud Computing & IoT Association in Taiwan, and led multiple information security projects such as the National Information & Communication Security Taskforce as Vice Chairperson and the IoT Information Security SIG (Special Interest Group) initiative.

purpose of early diagnosis and treatment can be achieved. It is hoped that every employee can support each other and grow together with UMC in a healthy physical and mental state, and work together for UMC.

Labor Pension System

In terms of labor pension system, UMC allocates the worker's retirement reserve funds to the Labor Pension Reserve Supervisory Committees in compliance with regulations, and processes the employee labor pension payment in accordance with the Labor Standards Law. Since July 1, 2005, for employees who opt for the retirement system under the Labor Pension Act, 6% of their monthly salary is paid into their individual labor pension account to secure their rights and interests.



Information Security Policy

UMC's information security policy, which is deployed in the Company and its subsidiaries, is based on the following principles: 1) To establish Information Security Management rules in accordance to customer requirements, 2) to reach a consensus that information security is everyone's responsibility through full awareness, 3) to protect information confidentiality, integrity, availability for the Company and customers, and 4) to provide a safe production environment to ensure sustainable operation of the Company's business. The major information security 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 the Company's ability to defend against external attacks and to protect internal confidential information.

UMC has established a complete Information Security Management System (ISMS), from systems to procedures, to reduce information security threats to ensure compliance with customers' requirements. UMC also conducts continuous improvement through the Plan-Do-Check-Act (PDCA) cycle.

In the "Plan" phase, the Company focuses on information security risk management. The Company introduced ISO 27001 information security management system certification in 2007, so that information systems can be operated under standard management procedures to reduce

security risk and production anomalies that may be caused by human error. Continuous improvement is then carried out through annual recertification. In 2014, the Company decided to introduce ISO 15408 Common Criteria certification. The certification is specifically designed for secure production procedures not only in data receiving, processing and destroying, but also higher physical access control request for securing entire production line purposes. Please refer to the Company website for related certification information. https://www.umc.com/en/Download/awards_and_certificates

In the “Do” phase, the Company builds the multi-layer information security protection mechanism, continuously introduces new information security risk control technology, uses smart/automated mechanisms to improve the efficiency of various information security incident detection and response processing, and strengthens information security and cyber security protection procedures to protect of the Company’s assets. In the “Check” phase, the Company regularly monitors the effectiveness of information security management indicators. A third party reviews and audits the above-mentioned management system annually. Well-known information security vendors conduct penetration tests. All the aforesaid matters are made to ensure continuous improvement of information security management and defense capabilities.

In the “Act” phase, the Company focuses on review and continuous improvement. When employees and contractors violate information security related regulations and procedures, they will receive penalties accordingly. Information security education and training is implemented to enhance information security awareness.

Information Security Management Plan

In order to achieve comprehensive information security protection, the Company is implementing the following items:

- Strengthen information security defense: To conduct regular vulnerability scans and penetration tests, as well as reinforcements and repairs to reduce information security risks; to establish a network security incident contingency plan to assess the impact and loss according to the severity of the incident, and to take necessary actions to escalate the situation and recover from the incident.
- Improve information security management procedures: To establish a corporate information security framework according to the National Institute of Standards and Technology standards and create corresponding metrics; to require employees to abide by information security regulations (such as strict control of mobile storage devices), follow the standard operating procedures, and implement the Plan-Do-Check-Act (PDCA) cycle for continuous improvement.
- Enhance network, endpoint and application security: To improve the detection of irregularities and incident prevention, including protocols such as application whitelisting and endpoint detection and response (EDR); to optimize the security of the overall information system network and to add the multi-factor authentication protection for host privileged account login.
- Legal compliance and introduce international information security

certification standards: UMC complies with information security-related certifications and regulations such as ISO 27001, ISO 15408, ISO 22301, and Sarbanes-Oxley Act (SOX 404), serving as the basis for risk management and review. An enterprise risk management committee has also been established to promote the standardization to reduce operational risks.

- Risk control: UMC engages an international information security firm to provide a third-party, objective assessment, which serves a basis for further improvement. The Company is insured against information security breaches as one of the methods to minimize potential losses in the event of an incident.
- Education and training: To provide company-wide information security education and training, and occasional phishing tests to increase awareness.
- Epidemic response: In response to the COVID-19 epidemic, the Company has strengthened the antivirus and information security protection measures for work-from-home (WFH), and urged employees to avoid using public computers and internet for work purposes.

Information Security Management Resource

Information security is important for the Company’s operations. To manage information security, the Company has the following measures and resources in place:

- Dedicated manpower: The Corporate Security Division is responsible for information security planning, technology deployment and related audit matters to maintain and further strengthen information security.
- Certification: UMC pass audits for ISO 27001 information security certification and ISO 15408 site certification with no major findings.
- Customer satisfaction: No major information security incidents; no complaints about customer data leakages.
- Education and training: All new employees completed information security training prior to onboarding; all employees have completed two online information security training and assessments; a total of four phishing tests were carried out during the year.
- Information security announcements: More than 10 announcements to promote important regulations and precautions for information security protection.
- Supply chain: All new contractors completed the education and training about UMC’s information security regulations.
- Information security insurance: UMC has purchased information security insurance since 2019, with an insured amount of US\$10 million, as one of the measures to manage information security risks.

Loss from Major Information Security Incidents, Potential Impact, and Corresponding Response Measures

UMC had no major information security incidents in 2021. UMC had a major WannaCry ransomware incident in 2016, causing 42 Servers/PCs/NBs used in the OA area to be infected. Fortunately, due to early

detection and proper handling, it did not spread to computers used for production lines. The Company immediately upgraded its antivirus software to a version with behavior-based detection capabilities, and strictly enforced information device management. It also required critical patch updates for computers used in production lines to defend against such worm-type viruses that may attack system vulnerabilities. Another countermeasure is to set the Access Control List (ACL) in production line networks to grant necessary access between equipment tools, which can block viruses from spreading and limit their impact. In 2018, UMC joined a SEMICON TAIWAN task force to develop equipment information security standards, contributing to a more secure operating environment for enterprises.

In short, the current security risks disclosed by UMC in this annual report should be supplemented with a well-known saying in the information security industry: "There is no such thing as 100% security." Cyber attack techniques are constantly evolving, and lags in defense systems expose the Company to risks. Successful defenses do not necessarily mean or guarantee that anomalies will not happen in the future. Enterprises must keep pace with the times to face the ever-changing and growing information security threat. Information security has a long way to go and requires continuous improvement. UMC will do its best to manage information security in order to provide customers with a secure manufacturing environment and to maximize value for our shareholders.

Major Contracts

Supply and Marketing

The Company has signed sales and service contracts with the following companies to grasp the current situation of the global market. In addition,

UMC maintains long-term business relationships with major wafer material suppliers. The main supply and sales contracts are as follows:

Contract Type	Contracted Party	Contract Period	Key Content	Restrictive Clause
Sales	UMC Group (USA)	Jan. 1, 2019~Dec. 31, 2024	Sales and related service for semiconductor products	None
Service	United Microelectronics (Europe) B.V.	Jan. 1, 2018~Dec. 31, 2022	Marketing support service for semiconductor products	None
Service	UMC Korea Co., Ltd.	Jan. 1, 2021~Dec. 31, 2025	Marketing support service for semiconductor products	None
Service	HeJian Technology (Suzhou) Co., Ltd.	Jan. 1, 2020~Dec. 31, 2024	Marketing support service for semiconductor products	None
Service	United Semiconductor Japan Co., Ltd.	Jan. 1, 2020~Dec. 31, 2024	Marketing support service for semiconductor products	None
Purchase	Shin-Etsu Handotai Taiwan Co., Ltd.	Indefinite	Wafer material supply	None

Patent and Technology Licenses

UMC values and protects intellectual property rights. With over 40 years dedication in earning semiconductor patents, UMC has achieved a predominant position in the semiconductor industry. UMC also enters into patent or technology license contracts with major semiconductor

or technology patent holders to ensure that UMC's customers are not subject to the risk of wafer process infringement. The following are patent licensing contracts received and given by UMC:

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

Major Contracts (Continue)

Contract Type	Contracted Party	Contract Period	Key Content	Restrictive Clause
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 Investment Commission, Ministry of Economic Affairs.
Technology License	Mie Fujitsu Semiconductor Limited	From Aug. 29, 2014	UMC licensed its 40nm process technology to Mie Fujitsu Semiconductor Limited.	None
Patent Cross-license	Avago Technologies International Sales Pte. Limited	Sep. 29, 2018~Dec. 31, 2023	Patent cross-license for semiconductor device related patents.	None
Patent Cross-license	Katana Silicon Technologies, LLC	From Nov. 5, 2019	License for specific patents.	None
Technology License	United Semiconductor (Xiamen) Co., Ltd.	Apr. 01, 2017~Mar. 31, 2022	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 Investment Commission, 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 Investment Commission, 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	Wholetech System Hitech Limited, Organo Technology Co., Ltd., ECO Technical Services Co., Ltd., Asia IC Mic-process Inc., Nova Technology Corp., Allis Electric Co. Ltd., L&K Engineering Co. Ltd. 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\$12.6 billion.	None
Construction	Xiamen Dobest Trading Co., Ltd., L&K Engineering (Suzhou) Co., Ltd., Hengyuan Allis Electric Co., Ltd., Top Chemical (Shenzhen) Co., Ltd., and others.	Jan. 1, 2021~ Dec. 31, 2022	United Semiconductor (Xiamen) Co., Ltd entered into construction contracts with the vendors including but not limited to those major vendors listed in the second column for building fab facilities. The total contracted amount exceeded US\$6.3 million.	None
Construction	Suzhou Topco Construction Ltd.	August 1, 2021~ Jun. 30, 2022	HeJian Technology (Suzhou) Co., Ltd. entered into construction contracts with the vendors listed in the second column for HeJian New Phosphorus Wastewater Treatment System. The total contracted amount exceeded RMB 12.87 million (excluding tax).	None
Construction	L&K Engineering (Suzhou) Co., Ltd.	May 01, 2021~ March 31, 2022	HeJian Technology (Suzhou) Co., Ltd. entered into construction contracts with the vendors listed in the second column for expanding HeJian's 85K manufacture capacity. The total contracted amount exceeded RMB 108.8 million (excluding tax).	None
Construction	China Construction First Building (Group) Corporation Limited	Feb. 01, 2021 ~Dec. 31, 2021	HeJian Technology (Suzhou) Co., Ltd. entered into construction contracts with the vendors listed in the second column for HeJian new ammonia nitrogen & nitrogen total wastewater treatment room construction. The total contracted amount exceeded RMB 13.87 million (excluding tax).	None

Review of Financial Position, Operating Results, Risk Management

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Financial Position

In Thousand NT\$

	2021	2020	Differences	Differences(%)
Current assets	233,273,433	164,305,911	68,967,522	42
Property, plant and equipment	129,941,703	132,774,663	(2,832,960)	(2)
Intangible assets	3,644,933	4,877,913	(1,232,980)	(25)
Other assets	97,566,702	75,557,888	22,008,814	29
Total assets	464,426,771	377,516,375	86,910,396	23
Current liabilities	105,453,729	78,243,526	27,210,203	35
Non-current liabilities	77,770,158	63,499,747	14,270,411	22
Total liabilities	183,223,887	141,743,273	41,480,614	29
Capital	124,832,476	124,224,015	608,461	0
Additional paid-in capital	47,898,093	43,211,214	4,686,879	11
Retained earnings	115,375,789	80,176,360	35,199,429	44
Total equity	281,202,884	235,773,102	45,429,782	19

Analysis of deviation of over 20% between 2021 and 2020:

- Current assets:
Due to the increase in cash and cash equivalents and time deposits over three months to a year.
- Intangible assets:
Due to the amortization of patents and technology license fees, software and other intangible assets.
- Other assets:
Due to the increase in financial assets at fair value through profit or loss and other comprehensive income caused by stock market volatility and increase in investments accounted for under the equity method caused by recognized in share of profit.
- Current liabilities:
Due to the reclassification of long-term investment payable to current liabilities and the issuance of unsecured exchangeable bonds payable for the period.
- Non-current liabilities:
Due to the increase in guarantee deposits, bonds payable and long-term loans, which are partially offset by the reclassification of long-term investment payable to current liabilities.
- Retained earnings:
Due to the increase in net income.

Financial Performance

In Thousand NT\$

Items	Years	2021	2020	Differences	Differences (%)
Operating revenues		213,011,018	176,820,914	36,190,104	20
Operating costs		(140,961,389)	(137,823,813)	(3,137,576)	2
Gross profit		72,049,629	38,997,101	33,052,528	85
Operating expenses		(25,590,174)	(23,243,584)	(2,346,590)	10
Net other operating income and expenses		5,226,831	6,253,890	(1,027,059)	(16)
Operating income		51,686,286	22,007,407	29,678,879	135
Non-operating income and expenses		10,117,118	5,918,772	4,198,346	71
Income from continuing operations before income tax		61,803,404	27,926,179	33,877,225	121
Income tax expense		(6,691,394)	(745,767)	(5,945,627)	797
Net income		55,112,010	27,180,412	27,931,598	103

Analysis of deviation of over 20% between 2021 and 2020:

1. Operating revenues:

Due to strong demand and price increase, while partially offset by the impact of the appreciation of the Taiwan dollar against the US dollar.

2. Gross profit:

Due to strong demand, price increase as well as capacity utilization rate increase, while partially offset by the impact of the appreciation of the Taiwan dollar against the US dollar.

3. Non-operating income and expenses:

Due to the increase in share of profit of associates and joint ventures.

4. Income tax expense:

Due to the increase in operating income.

Cash Flow

Analysis of Cash Flow for the Year Ended December 31, 2021

In Thousand NT\$

Cash at Beginning of Year	Net Cash Flow from Operating Activities	Net Cash Flow from Investing and Financing Activities	Cash at End of Year	Remedial Measures for Cash Flow Shortfalls	
				Investment Plans	Financing Plans
94,048,036	90,351,891	(51,777,796)	132,622,131	-	-

Note: Net cash flow from investing and financing activities includes the effect of exchange rate changes of (2,104,503).

Analysis of Cash Flow

1. Operating activities:

Net cash flow from operating activities is mainly from adding back depreciation expense to net income.

2. Investing activities:

Net cash flow from investing activities is mainly from acquisition of property, plant and equipment, acquisition of intangible assets and increase in other financial assets.

3. Financing activities:

Net cash flow from financing activities is mainly from proceeding from bonds issued and increase in guarantee deposits, which are partially offset by distribution of cash dividends.

4. Remedial measures for cash flow shortfalls:

Not applicable.

Analysis of Cash Flow in the Coming Year

In Thousand NT\$

Cash at Beginning of Year	Estimated Net Cash Flow from Operating Activities	Estimated Net Cash Flow from Investing and Financing Activities	Estimated Cash at End of Year	Estimated Remedial Measures for Cash Flow Shortfalls	
				Investment Plans	Financing Plans
132,622,131	106,457,390	(130,248,890)	108,830,631	-	-

Major Capital Expenditures from Recent Years and Impact on Company's Finance and Business

Execution Status of Major Capital Expenditures and Sources of Funding

In Thousand NT\$

Project	Actual and Expected Sources of Funding	Completion Status (Up To 2021)	Total Amount (Up To 2021)	Capital Expenditures Plan	
				2021	2020
Production Equipment	Cash flows generated from operations, bank loans and issuance of bonds	Completed	73,434,154	47,575,148	25,859,006
R&D Equipment	Cash flows generated from operations, bank loans and issuance of bonds	Completed	4,789,831	2,544,369	2,245,462

Expected Benefit from Capital Expenditures

Based on aforementioned capital expenditures, in 2021 the ratio of production capacity from high-end processes of 40nm or below is above 31%, of which the production capacity for high-end 28nm or below has grown by 23% from the previous year.

Main Reasons and Improvement Plans for Recent Annual Reinvestment Policies and Profit or Loss, and Investment Plans for the Coming Year

China's domestic market demand for semiconductors now ranks No. 1 in the world, and the Chinese government has recently adopted a multi-pronged approach to support its semiconductor industry. To be more aligned with the market and better meet the needs of IC design companies in China, as of December 31, 2021, UMC and its subsidiaries have invested about US\$1.51 billion into United Semiconductor (Xiamen)

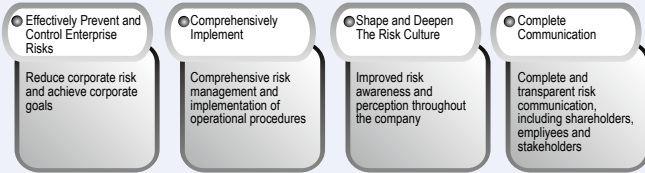
Co., Ltd.'s 12-inch fab for 28-90nm wafer service to pursue further growth for the Company.

UMC's investment policies are based on long-term strategic investments that match the Company's operations and development.

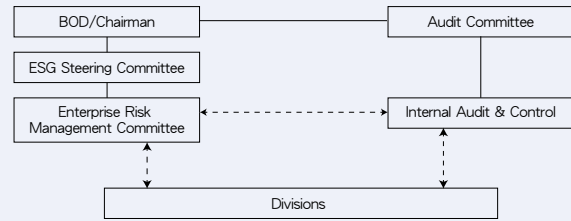
Risk Management and Evaluation

Enterprise Risk Management Policies

Through risk management methods and organizations, UMC effectively prevents and controls enterprise risks, identifies opportunities; comprehensively implements them in daily operations; shapes and deepens risk culture; and establishes complete and transparent risk communication with all stakeholders to maintain steady operations.



Enterprise Risk Management Structure and Operation



Under the guidance of the enterprise risk management policy, the Enterprise Risk Management Committee is responsible for coordinating relevant divisions to identify internal and external risks for the Company. The Committee reviews the risk items related to but not limited to strategy, operations, finance, hazards, assesses the likelihood of occurrence and severity, defines the priority and risk level of risk items, and initiates response plans for major risk items. Periodic review of risk items are conducted to identify changes in risk level and to ensure the effectiveness of risk management plans and related control operations, and to grasp the business opportunities associated with risks to formulate company development strategies.

The Enterprise Risk Management Committee reports to the ESG Steering Committee on a quarterly basis to ensure alignment with the company's sustainability strategy and reports to the Board of Directors at least once a year to ensure alignment with the risk management policies, and implementation and effectiveness of risk management measures. UMC also incorporates internal audit and internal control functions to ensure that the risks associated with operations are effectively controlled.

Risk event impacts and measures include important risks related to environmental, social or corporate governance issues of the company's operations.

Future R&D Projects and the Estimated R&D Expenses

In 2022, the share of R&D expenses to operating revenue is expected to be 5% to 8%, which will be subject to global market and the Company's actual operation conditions.

Major R&D Projects in the Future

Latest Annual Project	Current Progress	Time of Mass Production	Key Success Factors for Future R&D
14nm process technology	The 14nm FinFET platform compact process (14FFC) successfully entered mass production and introduced into 5G and netcom applications.	2020	<ul style="list-style-type: none"> Customer product design verification and yield reached mass production levels and performance meets product design targets.
22nm process technology	For 22nm ultra-low power/ultra-low leakage technology development, the mass production milestone of customer DTV chips has been reached in 2020. The successful mass production of various 22nm products has attracted more than 10 customers to adopt the 22nm technology platform for product verification and mass production planning.	2021	<ul style="list-style-type: none"> Customer circuit design verification and product yield qualification to meet mass production standards.
22&28nm Image Signal Processor technology	The 28HPC+ customized process technology was applied to the image signal processor (ISP) and successfully introduced into higher-end 108Mp products and entered mass production. The 200Mp products will be introduced for trial production in 2022. 22nm ISP process technology is in development and its component models and design specifications have been established.	2021	<ul style="list-style-type: none"> Customer circuit design verification and product yield qualification for mass production.

Risk Management and Evaluation (Continue)

Latest Annual Project	Current Progress	Time of Mass Production	Key Success Factors for Future R&D
Display Driver IC and Power Management Process Technologies	Low temperature polycrystalline oxide panel (LTPO OLED) drive chip products using 28nm high voltage 27V process technology have entered mass production. The power management chip (PMIC) of the 0.11 micron BCD power integrated circuit technology platform has completed product verification and successfully entered mass production.	2022	<ul style="list-style-type: none"> Cooperating with customers to create a win-win situation. Completing IP verification on time. Quality verification is in compliance with customer requirements.
Non-Volatile Memory Process Technologies	The 40nm non-volatile memory eFlash process platform has completed vehicle verification and entered mass production. 40nm resistive random access memory (ReRAM) enters mass production. 22nm ReRAM and eMRAM are developed on schedule. High density 1G HDMRAM has been successfully verified and expected to enter mass production in 2022.	2022	<ul style="list-style-type: none"> Cooperating with customers to create a win-win situation. Completing IP verification on time. Quality verification is in compliance with customer requirements.
RFSOI Process Technologies	UMC's RFSOI technologies satisfy the strict requirements of all 4G/5G mobile phones for RF switches and the 90nm RFSOI process technology has been mass-produced. The 55nm RFSOI process, meeting the 5G/sub-6GHz market demand, has also entered mass production. UMC continues to develop the 40nm RFSOI technology platform to catch subsequent 5G/mmWave growth trends.	2021	<ul style="list-style-type: none"> Cooperating with customers to create a win-win situation. Completing IP verification on time. Quality verification is in compliance with customer requirements.
CMOS Image Sensor (CIS) and MEMS Process Technologies	UMC's 65nm process CIS has been verified to enter the mass production stage. The new processes, such as back-illuminated sensor (BIS) and 55nm CIS process technologies, have entered the verification stage.	2021	<ul style="list-style-type: none"> Customer circuit design verification and product yield qualification to meet mass production standards.
Compound Semiconductors	UMC continues to develop the Gallium Arsenide pHEMT technologies for applications on the 5G mobile communication mmWave band base station/low-orbit satellite receiver, and also actively invests in the development of Power GaN and RF GaN technology platforms.	2023	<ul style="list-style-type: none"> Cooperating with customers to create a win-win situation. Customer circuit design verification.
Wafer-on-wafer hybrid bonding	3DIC wafer-on-wafer (WoW) hybrid-bonding technology has been combined with an open supply chain cooperation model to provide customers with reliable and flexible 3D package solutions.	2023	<ul style="list-style-type: none"> Cooperating with customers to create a win-win situation. Customer circuit design verification.

Note: The projects above account for around 60% to 75% of the total annual R&D expenses in the year.

UMC has been constantly strengthening its independent R&D capabilities and fabrication; in the future, UMC will continue to be dedicated to the R&D of logic and specialty processes. The Company will adhere to its 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. UMC will also work with suppliers of photomask, packaging, equipment, material, and EDA to speed up the market launch schedule in order to fulfill the Company's promise to provide customers with R&D of key processes. In terms of independent R&D capabilities, UMC's focus is on recruitment and cultivation of R&D talent in order to build an outstanding R&D team. The 12-inch R&D production line will continue to be expanded in the R&D Center located in Southern Taiwan Science Park with sufficient funds for enriching the overall R&D resources. In terms of 14nm process technology, UMC finished 14nm FFC platform development. Product yield reached 90% and performance met the product design target. Meanwhile, the 14FFC platform process also passed customer product HTOL (High Temperature Operating Life) reliability qualification and

entered mass production stage. With the successful rollout of 5G and netcom applications, UMC 14FFC has also attracted customers to engage new product design-ins, with tape-out schedule for production. UMC's R&D team will continue to optimize 14nm to take full advantage of the performance, power consumption, and gate density of 14nm FinFET in order to drive next generation Internet, AI, and consumer product applications. The development of a 22nm ultra-low power/ultra-low leakage (22ULP/22ULL) shrink process technology can be provided as a planar process technology solution with lower cost and better cost efficiency for customers. UMC 22ULP and 22ULL technology platforms have reached the milestone of mass production, suitable to be applied on Internet of Things (IoT), industrial applications, consumer electronics, and wearable (Mobile) products, and also are developed for the relevant specifications on automotive applications. UMC's 28nm high-performance computing process (28HPC+) customized for image signal processor (ISP) for higher-end 108Mp products have been succeed for mass production, and the 200Mp products will be soon introduced for trial production.

Risk Management and Evaluation (Continue)

22nm ISP technology is in development and on schedule. Besides, UMC is ready to provide 28nm and 22nm millimeter wave (mmWave) solutions for the applications including mobile devices, automotive electronics (AUTO), and Internet of Things products. UMC's 28nm high-voltage process has a market share of 85%, and is widely used in high-end active matrix organic light-emitting diode (AMOLED) display driver ICs. UMC continues to develop 22nm embedded high-voltage process. The power management chip (PMIC) of the 0.11 micron power integrated circuit BCD (Bipolar-CMOS-DMOS) technology platform has completed product verification and successfully entered mass production.

The 40nm eflash developed in cooperation with a major automotive electronics manufacturer has completed the reliability verification of automotive electronics and has been introduced into mass production. The self-developed 40nm non-volatile memory process platform has also entered mass production. The 28nm embedded super flash memory (ESF4) has achieved a stable yield rate and is in reliability verification, which will meet the needs of the Internet of Things (IoT). 40nm Resistive Random Access Memory (ReRAM) has entered mass production, while 22nm ReRAM and 22nm eMRAM (Embedded Magnetoresistive Random Access Memory) process platforms have been developed on schedule to provide the Intelligent Internet of Things (AIoT) applications. The 22nm high-density 1G HDMRAM product has been successfully verified and the product can be applied to aerospace/LEO related products. The 55nm RFSOI (Radio Frequency Silicon on Insulator) process has entered mass production, and met the 5G sub-6 GHz market requirements. At the same time, the 40nm RFSOI technology platform is being continuously developed to catch the subsequent 5G/mmWave growth trends.

Compound semiconductor gallium arsenide (GaAs) components, combined with the SAW filter integration solutions for existing HBT power amplifiers and existing RFCMOS Switch and LNA technologies, provide mobile phone radio frequency front-end module (RF-FEM) integration solutions. Gallium arsenide pHEMT will continue to develop key chip technology suitable for the 5G mobile communications mmWave frequency base station/low-orbit satellite receiver. Moreover, in terms of the wide band gap component technology, UMC also actively invests to develop gallium nitride power components (Power GaN) and microwave components (RF GaN) technology platforms to deploy high-efficiency power components and 5G/low-orbit satellite communications components markets. UMC's 3D (WoW hybrid-bonding) packaging technology, combined with an open cooperation model of supply chain, provides customers with reliable and flexible solutions. In the meanwhile, as to the application of radio frequency components, 3D stacking technology for downsizing by 40% has completed product verification.

In order to control the technology and development schedule to fulfill the promise of customer market launch, UMC will continue with its independent R&D strategy, adhere to a customer-first philosophy and integrate external R&D resources. The Company will also accelerate R&D, expand production capacity and enhance its revenue mix of key processes so that higher profits can be created in order to respond to the challenges resulting from constant technology evolution.

The Impacts of Interest Rates, Foreign Exchange Rates and Inflation on Corporate Profitability and Future Countermeasures

Interest Rate Fluctuation

The bank loans of the Company are floating rate debts. Therefore, changes in market interest rates will result in fluctuations in future cash flows. Based on bank loans as of December 31, 2021, if the interest rate increases/decreases by 10 basis points, the Company's net profit for 2021 will decrease/increase by NT\$38,549 thousand. In order to reduce interest rate risk, the Company continues to monitor changes in market interest rates. Besides bank loans, the Company also utilizes various financing instruments. To support operating needs, the Company will take advantage of long-term debts with favorable fixed rates depending on market conditions.

Foreign Exchange Rate Fluctuation

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. Based on a risk analysis of the assets and liabilities denominated in foreign currencies as of December 31, 2021, when the NT dollar strengthens/weakens by 10 percent against the US dollar, the Company's net profit for 2021 will decrease/increase by NT\$1,103,812 thousand. On the other hand, when the Chinese Yuan strengthens/weakens by 10 percent against the US dollar, the Company's net profit for 2021 will increase/decrease by NT\$375,248 thousand. When the Japanese Yuan strengthens/weakens by 10 percent against the US dollar, the Company's net profit for 2020 will increase/decrease by NT\$434,305 thousand.

The Company applies natural hedges on the foreign currency risk arising from purchases or sales denominated in foreign currencies, which means balancing the assets and liabilities denominated in foreign currencies to reduce the impact from fluctuation in foreign exchange rates. The Company may use derivatives, such as currency forward contracts, to partially hedge foreign currency risks associated with certain highly probable transactions. These hedges will offset only a portion of, but do not eliminate, the financial impact from changes in foreign exchange rates. Furthermore, as net investments in foreign subsidiaries are for strategic purposes, they are not hedged by the Company. The Company continues to monitor the changes in foreign exchange rates in order to respond promptly to any significant fluctuation.

Inflation

The inflation status in 2021: Due to the impacts of the COVID-19 in 2021, the global supply chain delay, rising oil prices, and monetary policies around the world, the annual growth rate of Taiwan's consumer price index (CPI) in 2021 (2.62%) was higher than the previous year, but Taiwan consumer price index (CPI) stays around 105.4%. It will have no impact on the Company's revenue results.

Risk Management and Evaluation (Continue)

Policies for High-Risk and Highly Leveraged Investments, Lending, Endorsements, Guarantees for Other Parties, and Financial Derivatives Transactions, Main Reasons for Profit and Loss, and Future Countermeasures

The Company has not engaged in any transaction of high-risk or highly leveraged investments. Any financial derivatives transaction is to enhance the Company's operating performance, and to reduce operating and financial risks.

The Company has established "Loan Procedure," "Endorsements and Guarantees Procedure," and "Financial Derivatives Transaction Procedure" in compliance with the relevant rules and regulations issued by the Financial Supervisory Commission. These internal procedures serve as the basis for the Company to enter into transactions mentioned above. The Company has announced and reported these transactions, and has also established a registration book in order to review these transactions regularly. If necessary, measures will be taken to control financial risks.

Impact and Corresponding Measures of Major Domestic and International Policy and Legal Changes on UMC's Finances and Business

UMC complies with national policies and laws. The Company's relevant divisions keep abreast of major policy and legal changes at all times. UMC adjusts its internal systems and business activities accordingly to ensure the smooth operation of the Company.

Impact of Changes in Technology and the Industry on the Company's Financial Results and Corresponding Contingency Plans

The Company places significant importance on the dynamics of the semiconductor industry and continues to invest and develop semiconductor manufacturing process technology and know-how. In order to accelerate the development of logic and specialty technologies, optimize transistor performance, reduce power consumption, and continuously enhance our technical advantages, UMC invested a total of NT\$12.9 billion in research and development in 2021. At the same time, the Company is also actively working with external academic and government institutions to develop new process technologies for next generation product applications to diversify the company's process technology offerings. The Company invested approximately US\$1.8 billion in capital expenditure during 2021. Looking into 2022, UMC will continue to appropriately invest in 28nm capacity to fulfill growing wafer demand, optimize product mix, and penetrate emerging applications. The Company believes that these efforts will lead to higher customer

adoption of our process technologies and grow UMC's market share to drive business expansion. UMC will strive to enhance its operations and preserve the best interests of its shareholders.

Financial Impact of Information Security Risks and Corresponding Response Measures

According to the Global Risks Report 2021 issued by the World Economic Forum, cybersecurity failure is among the top risks. Insufficient defense against cyber-attacks 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. Many international and well-known companies have encountered serious losses due to the ransomware attacks. Facing the ever-changing and diverse external threats, it is critical for the Company to strengthen corporate information security with available resources.

In 2018, UMC established the Enterprise Risk Management Committee to coordinate collaborate with key organizations in the Company's risk management and control to manage internal and external risks. According to the Enterprise Risk Management Committee management procedure, the Company assesses the risk level of information security items, takes response actions, and regularly reviews effectiveness of those actions.

UMC has a complete, multi-layer defense mechanism including firewall, intrusion detection, antivirus system, vulnerability scanning, patch management procedure and penetration testing. In 2019, UMC engaged an international professional security company to assess overall security and used the inspection results as a basis for further improvement. The summary of the information security assessment is as follows: "UMC has an information security management system in place. According to this system and control measures, conventional malicious programs such as attacks by viruses, Trojans, worms, and external hackers will not be able to easily damage UMC's information system."

Informational security threats are intensifying and have caused business interruptions for companies in Taiwan and around the world. Even if an enterprise has adequate defense in place, there is no guarantee that it will not become the target of an attack. UMC has purchased information security insurance since 2019 as one of the measures to mitigate information security risks. This insurance has been in effect since January 2019 with a retroactive option that can trace back stealth threats existing in the enterprise before the effective implementation date. The insurance amount is US\$10 million and covers all UMC fabs in Taiwan, Singapore and Japan.

Risk Management and Evaluation (Continue)

The Impact of Corporate Image Change on Corporate Crisis Management and Response Measures

The Company's business philosophy is based on the Company's sustainable operation and long-term partnership with customers and social groups. The Company regularly holds shareholders' meetings and legal person briefings to increase financial transparency. The Company also actively participates in community and public welfare activities, and effectively fulfills its responsibility as a member of society. For a variety of different emergencies, there are special personnel responsible for planning and responding to minimize the uncertainty of business operations.

Expected Benefits, Possible Risks and Response Measures for Mergers and Acquisitions

With a global customer base and given the Company's business philosophy of continuously improving the service quality to its customers, UMC understands the importance of satisfying customer needs and providing local services. At the same time, UMC also recognizes that the Company can take advantage of the increased economies of scale and operational efficiency through mergers and acquisitions (M&A). Based on this concept, UMC's Board of Directors approved the acquisition of the entire share capital of Mie Fujitsu Semiconductor Limited in June 2018. The transaction was completed on October 1, 2019, and the acquired company was renamed United Semiconductor Japan Co., Ltd.. The acquired company is UMC's production base in Japan for 12-inch wafer services. In addition, UMC will also continue to invest in United Semiconductor (Xiamen) Co., Ltd. to provide 12-inch wafer services in China. Through these expansions, UMC can strengthen its global operational capabilities and offer customers more competitive foundry solutions. Moreover, UMC's overall value can be increased and shareholder interests can be enhanced.

The main possible risk of cross-border M&A involves integration and compliance with the local regulations, and whether production synergy following mergers and acquisitions can meet expectations. If, for some reason, the M&A cannot be successfully completed or is unable to achieve the operational synergy target, it may affect the company's overall operating performance and even the company's long-term growth strategy.

UMC established a dedicated organization to execute M&A related activities, with a view of successfully completing equity purchases and taking advantage of operational synergies. At the same time, the company considers corporate sustainability in its business strategies and seeks to act in the best interests of all shareholders. Therefore, UMC strives to meet the requirements of regulators when executing equity purchases or M&A plans. In addition to careful planning and consultation in advance, the company also consults professionals from the respective countries about the local merger mechanism. To facilitate operational efficiency, the company recognizes cultural differences and quickly establishes a communication channel to build trust with

the employees and customers of the acquisition target; reconciles the operation process and calibrates the quality management system to smoothly port new processes and new products; plans an expert team to promote benchmarking; and introduces best practices to maximize overall operating efficiency.

Risk of Excess Capacity from Fluctuating Economic Conditions

The Company increases its production capabilities through fab expansion in order to accommodate more customer orders, thus providing the means to increase revenue, profits and market share. When production capacity reaches economies of scale, manufacturing costs can be dramatically reduced. However, the significant potential for fluctuations in the semiconductor industry economic cycle creates financial risk, as any excess capacity due to softening demand still must be accounted for under depreciation of plants and equipment. This risk would be considered a burden to the Company.

The Company's capacity expansion is the result of deliberate capital expenditure plans, which focus on satisfying customer needs while optimizing capital utilization. Disciplined capital expenditure can help to develop a healthy industry environment.

The Company has set forth the Capital Budget Committee from 2013, comprising of members from the Company's independent directors and non-executive directors. The Committee's goals includes review of the Company's capital expenditure budget, with the intent to strengthen long-term corporate strategy, financial planning, and business performance.

Risk and Response Measures of Procurement Concentration

Risk of material shortage: for example, insufficient production capacity, accident in the factory, or natural disaster could result in material shortage. Risk avoidance approach: currently UMC adopts a supplier self-management mode, in that these materials are stored in the Company's and suppliers' warehouses near UMC fabs. The safety inventory level is increased to meet emergency demand and to shorten the emergency response time in order to effectively reduce material shortage risk, and the Company's operation regulations are formulated according to the four subjects of "Risk Assessment Operation," "Operational Impact Analysis Operation," "Accident Response and Operation Sustainability Plan," and "Emergency Material Procurement Operation."

In addition, UMC has established alternative suppliers and regularly implements evaluations of supplier capabilities, flexibilities and natural disaster risk mechanisms that correspond to the production site. Currently, there are no high risk incidents. In case of emergency, the emergency response mechanism will be activated, and it will be managed according to the "Accident Response and Operation Sustainability Plan" and "Emergency Material Procurement Operation."

Risk Management and Evaluation (Continue)**Risks of Sales Concentration and Response Measures**

UMC has developed steady partnerships with many leading customers, and the Company ensure long-term growth by combining the strengths of UMC and of these customers. In 2021, UMC's top ten customers accounted for approximately 55% of UMC's total operating revenues. The Company will continue to develop both advanced and specialty technologies, and provide customized solutions for specific products and applications to meet customers' requirements and expand customer base. Through continuous product mix optimization and enhancing the flexibility of capacity allocation, the Company can lessen the impact of fluctuations in the global economy and mitigate risks.

Risk of Change of Control and Stock Price Fluctuation from Large Scale Transfer of Shares

If the Company's directors or major shareholders holding more than 10% of issued and outstanding shares transfer a significant portion of their shareholding in the Company, then a change of control may occur. Furthermore, such transfer may give rise to investors' concerns on the operation of the Company and may cause the market price of the Company's shares to fluctuate.

The share withholding status of the Company's directors and managers have been reported based on official regulations and laws. Meanwhile, there has been no significant share transfer activity.

Risk of the Company Losing One or More Key Personnel without Adequate Replacement Due to any Change of Company Control

UMC's future success depends to a large extent on the continued service of the Company's chairman and key executive officers. If the chairman or key executive officers leave their positions as a result of a change in Company control, and qualified replacement personnel cannot be found and integrated in a short period of time, operations may be adversely affected.

The Company's management focuses its operations with the intent to maximize value for its shareholders, thus gaining their trust and recognition. If there were a replacement of management, the succeeding personnel would have to recognize the Company's corporate culture, be qualified to assume professional duties, and be able to execute the Company's policy.

Litigation and Non-Litigation Incidents

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"). 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 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 also 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 motion is currently pending.

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.

On March 14, 2019, a putative class action complaint was filed in the United States District Court for the Southern District of New York against the Company and certain of its officers and/or directors, alleging violations of Section 10(b) of the Securities Exchange Act and Rule 10b-5 thereunder, arising out of an alleged scheme to misappropriate trade secrets. On May 3, 2021, the court approved the settlement reached between the plaintiffs and the defendants and UMC paid a settlement amount of US\$3 million to be allocated to the class plaintiffs and reimbursement of legal fees of class plaintiffs. The settlement has been recorded in non-operating other losses and has no material financial and operational effect on UMC's business.

Risk Management and Evaluation (Continue)

Risks Relevant to Intellectual Property

UMC values technology development and respects intellectual property rights, hence UMC develops independently to acquire intellectual property rights actively and devotes itself to protecting its and its business partners' intellectual property rights. Although UMC dedicates itself to enforcing and protecting intellectual property rights, it cannot completely prevent its intellectual property rights which strongly related to UMC's business, such as process, technology, software, trade secrets, or know-how from being infringed or misused by third parties. In addition, responsibilities for some of the infringements of intellectual property rights are strict liability and require no finding of mens rea or intent, so when UMC independently develops the process, technology, software, trade secrets or know-how required to engage in business, it may infringe on third parties' intellectual property rights unknowingly. Therefore, UMC may need to obtain technology or patent licenses from third parties on reasonable terms. However, if UMC cannot obtain the technology or licenses on reasonable terms, it may be accused of intellectual property infringement by third parties or even receive an injunction granted by the court on third parties' motion for injunctive relief, thereby jeopardizing UMC's abilities to perform business contracts and eventually leading to breach of contracts.

UMC's ability to compete also depends on its ability to operate without infringing on third parties' intellectual proprietary rights. As is the case for many companies in the semiconductor industry, UMC from time to time receives letters from third parties asserting and alleging infringement of some intellectual property rights of their technology. Due to the rising of active Non-Practicing Entity (NPE), UMC expects to receive similar letters in the future. Irrespective of the validity or the successful assertion of such claims, UMC could incur significant costs and management resources for defending these claims, which in turn could seriously impair UMC's business and operation.

In order to minimize the liabilities arising from third parties' claims alleging UMC's manufacturing of semiconductor devices or designs of UMC's customers' end products infringe on third parties' intellectual property rights, generally, UMC accepts orders only from companies with satisfactory reputation and for products without potential infringement risks. Furthermore, UMC also obtains indemnification rights from customers and equipment vendors to hold UMC harmless from any damages resulting from any suits or proceedings brought against UMC alleging UMC infringes third parties' intellectual property rights by manufacturing products for customers or using equipment supplied by vendors.

Risk of Climate Change

The Risk of Climate Change may Negatively Affect UMC's Business Operation

UMC actively focuses on the new business operational concern of climate change. UMC has developed the UMC Climate Change Risk Assessment methodology based on the Fifth Assessment Report (AR5), which is published by the Intergovernmental Panel on Climate Change (IPCC), and the government's downscaling scenario projection for identifying potential physical hazards under climate change situation, and the ISO 14090: Adaptation to Climate Change and the assessment procedure in the UK Climate Impact Programme (UKCIP). The Climate Change Risk and Opportunity Assessment Team conducts assessments every year, which is based on the aspects such as policies, regulations, transition of market and technology, reputation and physical risk, and the results are submitted to the Corporate Sustainability Committee for approval. The details of assessment results and responding measures are disclosed in Sustainability Report. The global carbon risk will not only bring rising manufacturing and transportation costs due to increased prices for petroleum and electricity, but will also directly impact the economy and the operation of enterprises from the perspectives of energy tax, carbon tax, carbon border tax, and stringent environmental laws and regulations, and lead to additional investment costs. UMC has actively implemented measures in response to mitigate the impact caused by climate change. For example, to reduce the emissions from fluorinated greenhouse gases used in wafer foundries, UMC was the first in the industry to complete a two-phase fluorinated greenhouse gases replacement plan for all its fabs (by replacing C_2F_6 with C_3F_8 and C_3F_8 with C_4F_8) in order to greatly reduce greenhouse gas emission and the impact of global warming. In the meantime, UMC supported the EPA early reduction project and acquired a carbon reduction allowance, thus successfully turning risk into competitiveness. Facing the issues of global climate change and the management of energy and greenhouse gases, UMC has been actively drafting environmental protection objectives through various stages and aspects and developed specific implementation plans for gradual promotion.

Risk Management and Evaluation (Continue)

Energy Consumption Policies Affect the Enterprises' Development and Bring Unstable Power Supply Risk

In order to reduce the carbon emission, governments around the world have taken various proactive actions to constraint or strengthen energy conservation and carbon reduction effort of enterprise. In 2021, Taiwan government has required major consumers (with a contracted capacity more than 5,000 kw) to reach 10% of their obligatory amount of renewable energy for self-use before 2025. In response to the operational risk, UMC has planned various actions to meet the requirement, including setting up renewable energy power generation facilities, installing energy storage system, purchasing renewable energy voucher, etc. It is estimated that the annual amortization will not exceed NT\$200 million in the next 20 years. Besides, Singapore government has imposed carbon tax since 2020, and announced the carbon price per ton will be raised gradually. (The price in Singapore is SGD 5 currently, and it will be gradually raised up to SGD 50~80 in 2030.) This will increase UMC's investment cost and bring financial impact. China government also implemented a dual energy consumption control and power rational policy in 2021. Although UMC's mainland plants have not been directly affected, we will continue to pay attention to internal and external demand, regulation development, and policy changes, and improve communication with local governments to monitor risks and take early response.

In addition, UMC has considered the risk of failure on government's antique power generators during the peak power consumption period; it might lead to insufficient capacity of backup power, resulting in voltage drops and power outages. In order to ensure uninterrupted operation and production, UMC has installed diesel generators in the plants and increased the proportion of UPS configuration in important facilities and equipment. In the meantime, UMC plans to replace existing UPS lead-acid batteries with lithium batteries year by year to improve supply stability. Moreover, UMC has also established a diesel safety inventory monitor mechanism to ensure availability. For details, please refer to the contents of UMC 2021 Sustainability Report.

Disaster Risk Management

As a leader in the semiconductor fabrication industry, UMC is fully aware of the impacts of natural disasters and man-made accidents on production and operation. Therefore, UMC has always faced disaster risk management with an active attitude of prevention management, and pursues the highest safety standards within the semiconductor industry through stringent risk engineering control and implementation management of safety regulations and standards.

Fire Safety

UMC has applied international standards, such as Factory Mutual (FM) Insurance Company, Underwriters Laboratories Inc. (UL), National Fire Protection Association (NFPA), and Semiconductor Equipment and Materials International (SEMI) to building structure, equipment, and risk engineering control and assessment, and the company regulations have been formulated to serve as definite requirements. UMC is also the only company in the semiconductor industry with its own fire brigade. In

addition to being equipped with professional fire engines and fire rescue equipment, the fire brigade normally conducts professional training to teach emergency response capabilities to employees, while having the ability to respond onsite in case of disaster.

Protection Against Natural Disaster

UMC has actively planned and established a complete and sound disaster risk management response procedure. It has worked with world-renowned structure consultation companies specialized in responding to earthquake disaster, including EQE (EQE International Inc.) and EQVEC (EQV ENGINEERING CONSULTANTS, LLC) to include seismic safety of buildings, factory facilities, pipelines, and production machines into the design criteria at the preliminary stage of fab construction. There are plans for continuous improvement of older fabs built prior to 1999. In February 2016, an earthquake of Richter scale magnitude 6.6 took place in southern Taiwan, registering close to 6 at UMC's Fab 12A in Tainan Science Park. However, hardware loss was rather moderate compared to other companies in the industry, which was an indication of the effectiveness of UMC's seismic design. In addition, UMC has continued to introduce new seismic protection technologies, including anti-earthquake damper for buildings and seismic isolation platforms for reticle stocker and furnace and the establishment of an onsite earthquake early warning system for further enhancement of personal safety and reduction of risks associated with losses of machine and equipment due to earthquake.

Responses to Drought and Flood Caused by Climate Change

UMC has always cared about the possible impacts from extreme weather. The Company has completed flood potential simulations for Fab 12A in Taiwan since 2014, and added flood gates at low-lying entrances and exits, planned alternative transportation routes, etc. to strengthen the ability to withstand flooding. UMC was also the first in this industry to develop an early warning system to detect water shortage that is integrated with quarterly long-term weather forecast data to provide the prediction of water conditions in the coming three months so that water saving measures can be conducted, and water truck contract and rehearsals can be prepared in advance to reduce any risk to operations. In the future, UMC continues to evaluate various solutions such as reclaimed water and recycled water to reduce water risks and strengthen operational resilience.

Risk Management and Evaluation (Continue)

Safety Protection of Process Equipment

Safety, Health, and Environmental Protection Standards of Semiconductor Manufacturing Equipment (SEMI S2) is the primary international standard for UMC to establish the mechanism for review of new machines and company regulations. The “UMC Process Equipment ESH Procurement Specifications” has been introduced at the procurement stage. The safety of machines can be under effective control with the machine specifications compliance review before machines are moved in and machine installation inspection after machines are moved in.

International Risk Rating (Triple-Star Rating System)

UMC introduced the Triple-Star Rating System since 1998, and the Company has since invited international insurance company AIG (American International Group) to conduct risk audits so that UMC could continuously enhance fab protection level in order to be in compliance with international standards and to maintain the commitment level of Highly Protected Risk (HPR) for our customers and the insurance market. Aside from some items in older fabs, the ratings of 20 items of all other fabs are maintained at the highest level.

Business Continuity Management (BCM)

UMC recognizes that pursuing the sustainable operation of its organization actually means providing strategic customers and important stakeholders with continuous services. Each and every one of UMC fabs has developed its BCP workbook (Business Continuity Plan workbook) since 1999. Hsinchu headquarters, Fab12A, and Fab12i passed ISO 22301:2012 verification sequentially since 2013, and became a leader in the semiconductor industry to receive ISO 22301 Business Continuity Management system verification. The transition of ISO 22301:2019 new version verification was also completed in 2021, and it will be promoted to other production fabs continuously in the future to build organization resilience and protect the utmost rights and interest of stakeholders.

UMC Business Continuity Policy and Objectives:

Policy

- UMC aims to provide customers with more excellent and continuous service.
- UMC carries out business continuity system operation and resources integration to ensure the system's effectiveness.
- UMC reviews and improves continuously to strengthen resilience of responding to various disasters before/during/after the disruption from business impact to ensure the utmost rights and interests of customers and stakeholders.

Objectives

- Personnel safety is the top business continuity objective.
- UMC achieves its business continuity objective by reducing operational impact and shortening recovery time through thorough risk assessment and the establishment of preparedness as well as response capabilities to various disasters.
- UMC follows ISO 22301 management system standard and executes BCP drill on a regular basis to review the effectiveness of business continuity plan and make continuous improvements.

Impact of Geopolitical Developments on the Company's Investments and Operations and Countermeasures.

Rising political or economic tensions between China and the United States have led to sanction measures and triggered a trade war. U.S.-China antagonism has also affected cross-strait relations, and the recent rise in tensions has increased the uncertainty of future operations and investments. Measures taken by governments include tariff increases, embargoes, policy interventions, and government subsidies, which may impact the Company's investments and operations, and may also affect revenue, delivery time, goodwill, and investment plans. For example: a sharp increase in tariffs may drive up end-market prices, thereby reducing demand and UMC's customer orders; the United States Export Control Act regulates exports to certain countries if the content originating from the U.S. exceeds a certain ratio of the product, which may affect UMC's direct or indirect supply to specific customers; restrictions on the export of high-tech materials or equipment may affect UMC's production and capacity expansion plans, which may disrupt shipments and damage the Company's goodwill; political tensions across the Taiwan Strait may affect shipments from Chinese suppliers and Chinese customer orders, while investment restrictions and regulatory changes may affect the company's strategy, operations, and management.

UMC's countermeasures include:

1. Diversifying customer base and product portfolio. In addition to existing business in North America and Asia Pacific, UMC is planning to further expand its footprint in Europe, Japan, and other regions. The company is also actively seeking opportunities in 5G, IoT, and AI applications, on top of its established presence in the server, automotive, and industrial applications.
2. Accurately tracking changes in customer demand and in the external environment, including global regulations, politics, and economic conditions, evaluating their impact on the acquisition of production resources, and taking necessary risk response measures in a timely manner. Practical measures include establishing a raw material supply chain tracking mechanism to accurately grasp the geographic distribution of raw material origins; closely monitoring regulatory changes, and strengthening management adaptability, and legal compliance; increasing the flexibility of cross-region and cross-factory support, and adjusting production allocation and capacity expansion plans in a timely manner.

Risk Management and Evaluation (Continue)

The Impact of Infectious Diseases on the Company's Operations and Countermeasures

Any outbreak of infectious diseases, such as coronavirus (COVID-19), Ebola, bird flu, swine flu, or severe acute respiratory syndrome (SARS), can affect employee attendance, and even affect company operations. For example, the coronavirus pandemic that started in early 2020 is still spreading around the world, adversely affecting the global economy and disrupting supply chain. Emergency control measures taken by governments to curb COVID-19 are likely to continue as the pandemic is not expected to ease in the near term, which may expose UMC to certain risks, including: unstable sales activities and customer orders, reduced plant operations and manpower, international travel and communication difficulties, limitations for transnational cooperation projects, and disruption to supply of materials.

The Company monitors potential risks of various infectious diseases and tracks any developments. UMC established its coronavirus epidemic control and response center in January 2020 to coordinate relevant information and resources, including:

1. Regularly review and discuss issues including the impact on production, supply chain management, epidemic prevention strategies, and response measures.
2. Clearly define the various stages of infectious disease crisis management, develop response measures for each stage, and take action according to the epidemic situation. For example: Minimize employee infection and production impact (for detailed related measures, please refer to UMC's ESG report); increase buffer inventory, and find and expedite the verification of alternative suppliers to reduce material shortages; and lessen the operational impact of specific fabs by adjusting or transferring the allocation of orders to other facilities.
3. In order to respond to relevant risks and opportunities, closely monitor the medium- to long-term developments in the industry, such as inventory adjustments, structural changes in market demand, and restructuring of the global supply chain.

The Impact of Talent Retention and Training & Development on the Company's Operations and Corresponding Practices

At UMC, employees are considered the most important asset and the foundation of sustainable operations. Facing external labor market competition and the attractiveness of salary conditions have caused staff turnover, so the failure to effectively maintain and extend experience has potential risks to the Company's operations.

Regarding talent retention and training & development practices, UMC provides a comprehensive learning environment for employees to improve the skills and expertise to all employees. The Company focuses on "talent attraction, cultivation, and retention" as the key goals of training & development, while continuously improving the quality and effectiveness of training, cultivating talent to meet the needs of the organization, and ensuring the continuation of experience. Meanwhile, we also pay attention to external market salary information and provide competitive salary and welfare conditions to achieve the Company's sustainable operation goals.

Risk Management and Evaluation (Continue)**Countries Using Policies/Resources to Build Domestic Semiconductor Manufacturing Capabilities, the Risks Posed to the Company's Future Growth, and Countermeasures**

The trade dispute and technology war between certain countries, the COVID-19 epidemic, and a major shortage of automotive chips have led countries to view semiconductors as an essential component of technology products and an important strategic material, and recognize that a disrupted supply of chips can impact a country's economic growth or threaten its national security. Therefore, developing domestic semiconductor manufacturing capabilities has become an important issue for major powers. This may have an impact on UMC's revenue, investment plans, and competitiveness. For example: local government policies and regulations to compel customers to place orders with domestic manufacturers may reduce UMC's orders and affect the Company's revenue; policies or subsidies by major powers to expand semiconductor capacity may reduce UMC's production share in the industry and cost competitiveness; prohibiting the export of key equipment or materials to specific countries may affect UMC's global production strategy, or prompt urgent revisions to investment plans and result in lost business opportunities.

UMC's countermeasures include:

1. Monitoring the status of the domestic semiconductor capacities in all countries, analyzing the impact to the Company's addressable market, adjusting sales strategies in a timely manner, and listing it as a necessary evaluation item when considering capacity expansion.
2. Actively seeking alternative suppliers to diversify risks arising from government policies related to the export of equipment and materials.
3. Analyzing the relevant laws of various governments and the trends of industry policies, and initiating mergers and acquisitions, forming alliances to build new facilities, and collaborating on capacity/technology at the appropriate time in order to capitalize on opportunities for international cooperation.

Shortages of Resources Caused by Strong Demand for Semiconductors, the Potential Impact on UMC's Capacity Expansion and Countermeasures

The COVID-19 pandemic accelerated digital transformation, leading to a surge in global semiconductor demand. At the same time, the pandemic's impact on related industries resulted in reduced and unstable supply and insufficient shipping capacity, creating a severe undersupply situation. Furthermore, semiconductor companies fearing insufficient supplies are competing for production resources, which has exacerbated the shortage situation and prolonged delivery, and pushed up the prices of raw materials. This may impact UMC's revenue, delivery time, cost, goodwill, and investment plans. For example: suppliers may be unable to deliver on time due to their own material shortages, thereby resulting in production disruptions for UMC and delaying delivery to the company's customers; rising transportation and raw material costs may increase UMC's overall operating costs; the surge in business for equipment suppliers may lead to delivery delays, resulting in delays to UMC expansion plans and subsequently affecting delivery to customers and the Company's goodwill.

UMC's countermeasures include:

1. Increasing the frequency of surveys to monitor the production capacity of vendors and delivery date of key materials and equipment.
2. Signing supply agreements or obtaining capacity guarantees with suppliers to ensure the supply quantities and purchase price.
3. Actively introducing alternative materials, increasing inventory level, and adjusting the order method to diversify purchases and mitigate risks.
4. Reserving and confirming airline seats in advance, or charter flights.
5. Optimizing machine verification process to shorten machine lead-in time to mass production.

Risk Management and Evaluation (Continue)

Other Significant Risks

None.

Note: The analysis and valuation of Risk Items shown above include the data during 2021 and as of the Annual Report Printing Date.

Other Necessary Supplements

None.

Corporate Sustainable Development

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Description of Sustainable Management

To fulfill corporate social responsibility and facilitate economic, environmental and social progress for the purpose of achieving sustainable development, UMC has formulated and complies with its Sustainable Development Best Practice Principles.

Currently, through the Corporate Sustainability Committee, UMC keeps abreast of relevant domestic and international standards in corporate social responsibility and changes in the corporate environment. UMC regularly reviews and improves its sustainable development practices, systems and management policies to improve the effectiveness of its sustainable development implementations.

In 2021, UMC was awarded with multiple honors related to sustainability, including being listed as a FTSE4Good Emerging Index component and FTSE4Good TIP Taiwan ESG Index component, and earning the Taiwan Corporate Sustainability Report Award, 5th place of Top 10 Taiwanese Companies Sustainability Model Award, 7th place in large enterprise of Excellence in Corporate Social Responsibility, National Enterprise Environmental Protection Award, The Best Participation of Green Procurement for Enterprises, and Excellent Occupational Safety and Health Executive Organization. Meanwhile, UMC has been listed as one of the Dow Jones Sustainability World Index for 14 consecutive years and also named a constituent of Emerging Markets Index in 2021. DJSI is one of the most credible international corporate sustainability evaluation tools, so this is an indication that UMC's sustainability performance has been recognized by the international investor sector as a global leading enterprise.

Member of

Dow Jones Sustainability Indices

Powered by the S&P Global CSA



FTSE4Good
TIP Taiwan ESG Index



TIP
Taiwan Index Plus

In addition to continuous dedication to this industry, the self-expectation of UMC is to become a green giant within the semiconductor industry. Energy saving and carbon reduction is a long-term undertaking, in which UMC is an advocator of low carbon innovation and provider of low carbon solution as well as an implementer of low carbon actions. UMC established the Fluorinated Greenhouse Gases Reduction Work Group as early as 1999 in response to global warming, and it achieved its 2000 voluntary reduction goal outlined by Taiwan Semiconductor Industry Association ahead of schedule. On Earth Day (April 22) in 2010, UMC was the first in the industry to announce a "Climate Change Policy" and "UMC's Low Carbon Commitment" as the highest guidelines in response to climate change. In 2021, UMC is ardently responding to the Paris Climate Agreement goal and pursuing efforts to limit the global warming not exceeding 1.5°C, and announced its pledge to reach net zero carbon

emissions by 2050. In the meantime, UMC has obtained admission into RE100, becoming the second semiconductor wafer foundry in this initiative, and committed to use 100% renewable energy by 2050 by setting progressive goals of 15% by 2025 and 30% by 2030.

In 2013, UMC started an early reduction project for carbon reduction allowance approved by the EPA, which was based on the Company's carbon reduction achievements for more than a decade. UMC completed the first carbon trade recognized by Taiwan's EPA in 2014, which can be regarded as an important milestone for the domestic carbon trading market. The income from this carbon trade was used for the environmental protection fund. Meanwhile, the "UMC Eco-Echo Ecology Preservation Hope Project" was activated to work with The Society of Wilderness to promote the Sauter's frog habitat preservation action in Hsinchu, where UMC's HQ is located, as an effort for contributing to environmental sustainability. In 2016, UMC extended the spirit of this project and launched the UMC Eco Echo Award. It has collected outstanding projects and creative ideas for a friendly environment via the execution and selection of the Eco Echo Award in order to urge more people to join this environmental protection effort. By 2021, more and more enterprises were participating in the care for local Taiwan ecology; in terms of society, UMC also provides disadvantaged organizations with energy saving and carbon reduction services through its energy saving service team in the three aspects of energy conservation and safety counseling, technical information on energy and resources, and engineering improvement in order to fully utilize corporate resources in response to global warming.

UMC has also actively promoted clean production and green product management. In 2006, the Company was the first among all semiconductor makers in the world to complete the third party verification audit of Hazardous Substance Process Management (HSPM) system, and UMC became the first company in the world to acquire QC-080000 IECQ HSPM certification for all fabs. In 2009, it completed the first "product carbon footprint" verification of IC wafers according to the International Carbon Footprint Standard PAS2050. In 2010, UMC completed the "product water footprint" verification of IC wafers according to the Business Water Footprint Accounting criteria of the non-profit international organization "Water Footprint Network." As an important milestone for development of green production, these results can also provide complete, scientific, and reliable product information as the basis for self-review and continuous improvement. In 2017, UMC took the initiative to launch the Triple R Major League project. UMC expects to cooperate with suppliers to promote measures for energy and resource reuse, recycling and reducing to achieve green products with lower environmental impact. On the other hand, UMC has also established a supplier management strategy to strengthen the economic, social and environmental performance by implementing supplier sustainability assessments, on-site audits, and coaching improvements and tracking to create a positive influence and enhance sustainable competitiveness of the overall supply chain.

Furthermore, UMC referenced the nature of its businesses as well as the 5 key principles of AA1000 SES (Stakeholder Engagement Standard) to identify the major stakeholders and formulated a management system for the identification and communication with various stakeholders. In accordance with the materiality principle, UMC conducts impact assessments of environmental, social and corporate governance issues related to the company's operations every year, and formulates

Description of Sustainable Management (Continue)

corresponding improvement measures and plans. At the same time, the results were disclosed through the corporate social responsibility reports and company websites.

UMC's Corporate Social Responsibility Report issued in 2021 was composed by referring to the Global Reporting Initiative (GRI) Standards, the Semiconductors Sustainability Accounting Standard 2018 issued by the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD), and the content of this report was verified by SGS Taiwan Ltd. according to Account Ability 1000 Assurance Standard v3 Type 2, High level assurance. In the same year, the Corporate Social Responsibility Report published by UMC was awarded the Taiwan Corporate Sustainability Report Award for the 14th consecutive year. These honors and recognitions indicate that, after long-term dedication to corporate social responsibility, UMC's actions, transparency and completeness of information disclosure have all reached the international level, such that it has become a global benchmark enterprise.

Sustainable Governance Structure of UMC

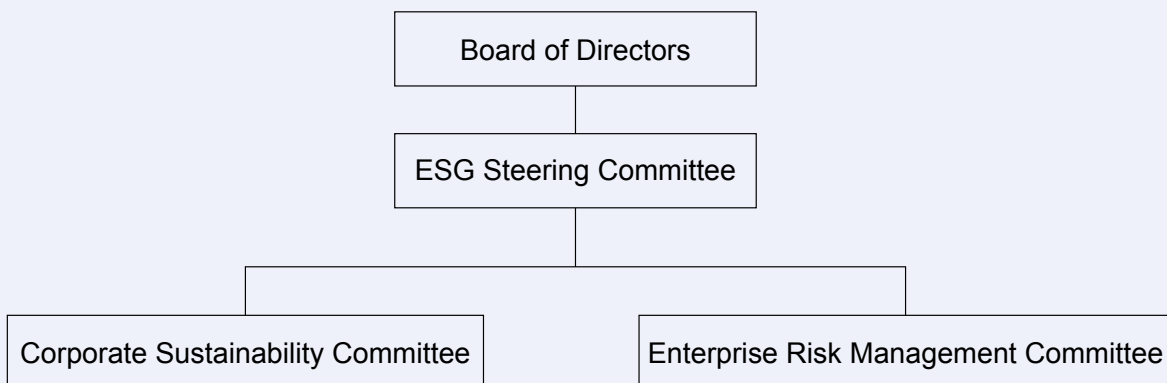
UMC's sustainable governance structure includes the Board of Directors (including the Nominating Committee), the ESG Steering Committee, the Corporate Sustainability Committee, and the Enterprise Risk Management Committee.

In 2020, UMC reorganized its sustainable governance structure and established ESG Steering Committee, consisting of core operating executives, and appointed the Co-Presidents as the Chairmen. The ESG Steering Committee meets every quarter to be in charge of determining UMC's sustainable governance strategy/blueprint/long-term goals, and reports to the Nomination Committee and the Board of Directors annually on the sustainable performance and plans, as well as key issues and countermeasures that stakeholders are concerned about. The Board of Directors also plays a supervisory and coaching role to determine the likelihood of success of the strategy, regularly review the progress of the strategy, and drive the management team to make adjustments as needed. The main points of the proposal reported to the Board of

Directors in 2021 include (1) ESG governance structure reorganization; (2) UMC Sustainability Strategy and Blueprint; (3) ESG achievements and stakeholder communication; and (4) future focus. The mechanism of employee's remuneration linked to ESG KPI was also approved by Board of Directors in this meeting.

The Corporate Sustainability Committee was established in 2008 and responsible for stipulating the direction and goals of corporate sustainability. The Committee reviews the performance and target achievements of 8 functional groups, including Corporate Governance, Customer Relationship Management, Responsible Supply Chain Management, Sustainable Innovation, Environmental Planning and Management, Green Operation, Human Rights and Employee Development/Welfare, and Social Participation. The representative of the Corporate Sustainability Committee reports CSR promotion results and plans to the ESG Steering Committee quarterly. The scope of the report includes the management and review of material issues in the area of economics/governance, environment and society.

The sustainable governance structure of UMC is shown in the following figure:



About Social Charity

•UMC Science and Culture Foundation

Established in 1996, the UMC Science and Culture Foundation has been promoting social charity for many years. Currently, the focus is long-term educational assistance, and encouraging colleagues to serve as volunteers to participate in various public welfare activities. Summary of key implementations in 2021:

•Spreading the Seeds of Hope and Cultivate Future Competitiveness

During its 25th anniversary celebration in 2005, UMC launched the Spreading the Seeds of Hope Project, an educational program that provides after-school tutoring for children from disadvantaged families. It is hoped that through the long-term sponsorship and adoption of enterprises and calling on scientific and technological people to show love, students from disadvantaged families can receive better education and cultivate their future competitiveness, so as to escape the cycle of poverty. This project is funded by the foundation. Cooperative units in Hsinchu and Tainan provide venues as supplementary classrooms, hire college students as part-time supplementary teachers, and provide free tutoring for students who are economically disadvantaged and need to strengthen their schoolwork. For more than ten years, this program has not only been a lesson plan, but a public welfare platform that connects social volunteers and college students to serve with actions.

•Supporting Diverse Education Programs

The Foundation cooperates with other public welfare units to support the diversified development and adaptive learning of young people. For example, the long-term sponsorship of high school students' drama creation contest "In the Mood for Love National Youth Drama Festival" sponsored by the Youth Performing Arts Alliance is a type of art education as well as a civic and life education. The Foundation also supports the popular science program of the Program the World Association, and the promotion of art education in Chengjheng High School for correction education. The Foundation also supports the TECO Technology Foundation's "Indigenous People's Sustainable Education Program" to assist in the transfer of indigenous people's culture and work together to deepen local art education.

In physical education, the foundation has long supported the Nantou Karate team led by coach Huang Taiji and Liao Delan. Through karate, these two coaches accompany many disadvantaged students to rebuild their confidence and discover new directions in life. In 2021, the Chiayi National Tung-Shih Senior High School baseball team sponsorship program was included to expand support for the cultivation of domestic sports talents.

In addition, the long-term exclusively sponsored program "Whatever Makes Sense for Voice of IC Teacher Hung Lan," discussions are based on brain science research and audience opinion on parent education, and the vast influence of media is used to jointly create smart living with the audience to exert the positive influence of the media. The Foundation has long sponsored the Mandarin Daily newspaper education project, providing students with broader reading resources.

In terms of family education, the foundation has chronically sponsored a total of 110 family-supported school children, providing disadvantaged families with stable financial supports so that children can grow up under the care of their families of origin. In addition, employees are also linked to serve as letter-care volunteers to give care and encouragement to adopted children. As one of the simplest concepts of companionship, the program connects love and hope.

- For more information on charity events, please refer to the UMC Science and Culture Foundation webpage.

•UMC LOHAS Education Foundation

"UMC LOHAS Education Foundation" was established in 2009, and has continued to promote national sports and social welfare over the years and has operated its own recreation center in the Hsinchu Science Park. At present, it focuses on providing a good sports environment for citizens and employees in the park, and assists in handling various activities in the park and the city government.

Summary of key implementation outcomes in 2021:

•Free Consultation for Health Promotion

Recreation center provides free exercise knowledge training on site or over the phone. Professionals in the gym teach how to use retraining equipment and help answer any questions about exercise. In addition, the recreation center provides body composition analysis. The machine can analyze body composition in a comprehensive manner, such as body fat rate, muscle mass, basal metabolic rate, etc. Professionals introduce the meaning of the measured data and exercise suggestions to users, and establish correct exercise information. Through the stable operation of the sports hall, a safe and modern sports environment is provided for citizens and park employees, and a healthy sports concept is introduced.

•Sponsoring the Activities of the Hsinchu City Education Office

The Education Department of Hsinchu City Government organizes International Parent-Child Day and Grandchildren's Day activities, and UMC LOHAS Education Foundation assists in the promotion of local educational activities. In 2021, UMC LOHAS Education Foundation sponsored 1,000 gifts and provided gifts for citizens after they passed the game. UMC supported the management of public welfare activities, providing resources and achieving social resource sharing and integrating resources to maximize their effectiveness.

•Promoting UMC Volunteer Culture

UMC is keen to participate in social welfare activities. In order to encourage employees to engage in social welfare work, UMC offers incentives and official leave hours for employees to participate in volunteer services.

UMC's commitment and participation in the social welfare work is a testament to the importance UMC places on building a volunteer culture and to the mobility, love and selflessness of UMC's volunteers. By adopting a comprehensive employee social club's evaluation system, UMC provides funding to top-performing clubs based on the annual evaluation results to encourage employees to participate in social club activities and call on different clubs to join in the social welfare work. In addition, when planning annual corporate events, UMC co-organizes the events with the related clubs according to the nature and purpose of the events, in order to intertwine the corporate event planning with clubs and social welfare activities, thereby creating all-inclusive synergy.

To enhance energy efficiency and expand the benefits of our core business functions, UMC has established the "UMC Energy Conservation Service Team" with "energy saving and safety" as the core. By stepping out the foundry fabs, the Team allows UMC employees to bring their experiences and expertise to bear on diagnosing and improving energy conservation and fire safety for underprivileged social welfare organizations, assisting in building renovation, and enhancing

About Social Charity (Continue)

safety and comfort in residential areas, so as to reduce unnecessary energy consumption of these organizations and help them to use their precious resources more effectively.

Charity services provided by clubs and the Energy Conservation Service Team in 2021:

Clubs	Services
Candlelight Club	St. Teresa Opportunity Center, Boyo Social Welfare Foundation, St. Joseph Social Welfare Foundation, Eden Social Welfare Foundation, PWSA Care Association
Ukelele Club	Teaching (Nan-he Elementary School, Fu-sing Elementary School and Xin-xing Elementary School in Hsinchu County) Free performances (Hsinchu Cathay General Hospital, Sanyi Wood Carving Festival)
UMC Drum Club	Charity performances (St. Joseph Social Welfare Foundation)
Music Fellow Club	Free performances (L'arc Hotel Second-hand Market Fair, STSP Bureau Art Season Activity)
Energy Conservation Service Team	Free repairs (Good Shepherd Social Welfare Foundation, Taiwan Fund for Children and Families- Hsinchu, Yanjhou Elementary School)
Nanke Tennis Club	Future Star Player Sponsorship Program
Swimming Club	Nanliao beach cleanup
UMC Fire Brigade	Fire safety, disaster prevention and firefighting training

•Semiconductor programs for cultivating Taiwan's high-tech talent

With the mission of cultivating Taiwan's high-tech talent, UMC not only invests in developing and improving the company's existing talent, but also in cultivating seed talent for Taiwan's semiconductor technology through early contact.

By cooperating with key universities, the semiconductor process practicum courses are taught by experts from UMC for early cultivation of semiconductor seed talent at the university stage so that young students can acquire deeper semiconductor knowledge and skills in their studies. Furthermore, they can better dovetail into their subsequent workplace development and actively integrate their knowledge into their career, thereby achieving talent cultivation for Taiwan's semiconductor industry.

Summary of key implementation outcomes in 2021:

	Key Items	Outcome
Industry-University Collaboration	Semiconductor Processing Practicum Courses and Nano Generation course	Offered semiconductor processing practicum courses and Nano Generation course with four key universities in 2021. About 575 students enrolled.

About Social Charity (Continue)

	Key Items	Outcome
Campus Cultivation	Domestic and Overseas Summer Internship	Provide a specific number of internship opportunities each summer vacation. In 2021, a total of 13 interns were recruited.
	Equipment Intern	Provide student internship opportunities at UMC. Cooperated with 7 key universities in 2021, and a total of 45 interns were accepted.
	Enterprise Visitations	Provide enterprise visitation opportunity for schools. In order to comply with the anti-epidemic policy in 2021, only key universities and specific programs were involved. About 241 students enrolled.
	Campus Ambassador for disabled students	Employed students who are disabled for work study. Strengthened campus talent recruitment and encouraged disadvantaged students to actively learn. Since the program began in 2013, a total of 172 students with physical disabilities were provided with work study opportunities, and in 2021, 20 students were still employed.
	Campus relationship development (including technical career lectures)	Helped arrange a series of brand image cultivation activities, including book discussion, career sharing, internship cooperation, and exhibits for semiconductor display. In 2021, 6 book discussion sessions were held, with a total of more than 645 participants.

	Key Items	Outcome
Career Advisor Program	Career Advisor Program	In its collaboration with key schools in recent years, UMC offers career seminars and career coaching programs to help students understand the future pulse from the perspective of industrial professionals. Moreover, based on student traits and learning, the career coaches provide career plan suggestions to help students find career paths that are appropriate for them. With National Cheng Kung University as an example, UMC has been providing career coaching for 10 years, with more than 310 students from the university participating each year, and the program is still being implemented. In addition, students are assisted with resume writing to help them discover their strengths, sell themselves in their resume and capture the attention of companies and executives.
	PTP Prospective Talent Program	The early contact and agreement with prospective talent on campus enhances connection and interaction with targeted talent. The broadening UMC PTP also expands the image and influence of UMC. Since UMC began recruiting outstanding talent in 2013, 5,081 students have been recruited and 387 prospects are still in school.

About Social Charity (Continue)**•UMC Social Participation**

Committed to the core philosophy of “people-orientation and co-prosperity with society,” UMC fulfills its corporate social responsibility according to the concept of LOHAS (Lifestyle of Health and Sustainability). UMC believes that the success of a company not only requires personal diligence, but also the support of a harmonious society for it to flourish and develop robustly. Therefore, since its establishment, UMC has declared itself a public instrument in its long-term management policy, and is committed to giving back to society. Therefore, in addition to their commitment to the Company’s business growth, the “Happy Employees” of UMC are also enthusiastic about social charity. To encourage employee participation in charity, UMC provides Charity Leave for employees to participate in volunteer services.

UMC has always been wholehearted in social charity, and continues to donate money to cultural, educational and academic units. Under the severe epidemic situation, UMC also donated medical supplies and protective equipment to hospitals to establish the strongest epidemic prevention line for the frontline medical staff and the public.

In the days to come, UMC will remain dedicated to its philosophy of receiving from and giving back to society by supporting social charity.

In 2021, the purpose of donation includes education promotion, academic sponsorship, social welfare, and epidemic prevention donations. The total donation amount is NT\$208,459,331.

Environmental Protection, Safety and Health Management Instructions

In terms of environmental protection, safety and health, UMC has set the objective of zero pollution and zero incidents to become an enterprise of sustainable development; in addition to being in compliance with and exceeding the requirements of environmental safety and health laws and regulations, the Company utilizes advanced environmental protection, safety and health, risk and disaster rescue technologies to actively enhance environmental protection and safety aspects based on a forward-looking vision. UMC has also continued with environmental safety and health education and advocacy for all its employees and encouraged active participation in related activities to strengthen the environmental safety and health belief and habits of all employees through subtle influence.

ESH Management System

UMC's ESH management system is established according to ISO 14001 and ISO 45001 standards. It is intended to integrate daily management with total quality management (TQM) activities such that the ESH management plan can be integrated with actual fab operation in order to achieve the effectiveness of implementation. As for various ESH risks of company operation, the possible impacts of various activities (from

the use of raw materials to the generation of waste) on the environment and all company employees will be evaluated via a systematic approach. As for the items which could result in major environmental impact, the management and reduction will be applied via the assessment/replacement/reduction approach for raw materials, control and reduction of process pollution source, effective treatment of end-of-the-pipe pollution, and residual by-product reclamation. In terms of safety and health, UMC will start with management of equipment, chemical, and operation safety in order to maintain the safety and health of all employees.

In order to achieve the objective of sustainable development, the Company has set clean production and zero incident as the promotion direction of environmental protection and safety and health. Every year UMC will set the objectives and targets of the ESH management system in coordination with the Company's operation direction, and each fab will launch various plans for reducing environmental impact and strengthening safety and health in order to continuously improve company performance of environmental protection, safety and health management.

Achievement Status of UMC's Important ESH Objectives/Targets in 2021:

Objective	Target	Achievement Status
Eliminating major accidents and continuously promoting "Safety First. No Compromise on Safety. Safety Is Above Production"	1. Zero Serious occupational safety incidents	Zero occupational safety incidents throughout the year
	2. Fewer than 7 minor (or above) accidents	A total of 6 incidents throughout the year
Promoting green management "Green 2025" project to reduce the Company's impact on the environment	To reduce water, electricity, and waste compare to the base year by 2025. 1. Water Usage: 15% reduction (Intensity) 2. Electricity Usage: 15% reduction (Intensity) 3. Waste Generation: 25% reduction (Intensity)	The target of 2021 was achieved
Note: the base year is 2015		

Environmental Protection, Safety and Health Management Instructions (Continue)

Environmental Protection

Greenhouse Gas Reduction and Management

Facing the issues of climate change and worsening global warming, UMC has already prepared and implemented responsive strategies. It set up the "Fluorinated Greenhouse Gases Reduction Work Group" in 1999 to be dedicated to the research and promotion of reduction of fluorinated greenhouse gases. It formulated the "UMC Climate Change Policy" in 2010 as the highest guiding principle of the Company in response to climate change.

The major reduction plans with respect to fluorinated greenhouse gases to be promoted include:

- Measuring the utilization rates of process tools using fluorinated greenhouse gas and the destruction and removal efficiency of its emissions control technologies to be fully aware of the machine performance and to improve those with poor performance.
- Implementing survey and assessment of the consumption amount for fluorinated greenhouse gases in order to understand the greenhouse gas emission volume of each process tool.
- Carrying out a research project on alternative gas to reduce the consumption of process gasses that contribute to global warming potential (GWP) via source improvement.
- As for the new fluorinated greenhouse gas emissions control technologies, the selection, assessment, and investment have been applied for the installation of high performance fluorinated greenhouse gas abatement systems in order to reduce the emission of fluorinated greenhouse gases year by year.

In 2007 and 2011, UMC led the industry in completing the 2-Phase fluorinated greenhouse gases replacement plan (replacing C₂F₆ with C₃F₈ and replacing C₃F₈ with C₄F₈) for the entire company, thus greatly reducing greenhouse gas emissions and its impact on global warming. After years of effort, UMC has achieved the objectives of the "Carbon Reduction 333" project, the "369+ Energy and Resources Productivity Enhancement Project" and the "Green 2020" project in 2012, 2015 and 2020, respectively. The Company has also formulated the "Green 2025" project to commit to goals of 15% water saving, 15% power saving, and 25% waste reduction in the future based on more stringent self-requirement standards and more active spontaneous actions. Furthermore, as UMC's GHG Offset Project has passed the Taiwan EPA review in 2020, we can build ten years of carbon assets according to our GHG reduction efforts in Taiwan fabs through this project. In 2021, UMC is ardently responding to the Paris Climate Agreement goal and pursuing efforts to limit the global warming not exceeding 1.5°C, and announced its pledge to reach net zero carbon emissions by 2050. In the meantime, UMC has obtained admission into RE100, becoming the second semiconductor wafer foundry in this initiative, and committed to use 100% renewable energy by 2050 by setting progressive goals of 15% by 2025 and 30% by 2030.

UMC has constructed the UMC Climate Change Risk and Opportunity

Assessment tool based on multiple data points: TCFD (Task Force on Climate-related Financial Disclosures), ISO 14090 Adaptation to Climate Change, and the assessment procedure in the UK Climate Impact Programme (UKCIP). The Climate Change Risk and Opportunity Assessment Team conducts assessments every year. The assessment is based on the aspects such as policies, regulations, transition of market and technology, reputation and physical risk, and the results are submitted to the Corporate Sustainability Committee for approval. In May 2021, UMC led its global wafer foundry peers to pass the "TCFD Third-Party performance assessment," and was rated as the highest "pioneer level" by the inspection agency SGS Taiwan Ltd., endorsing that UMC's climate change risk assessment system and associated financial disclosure data are highly credible and transparent. For details of greenhouse gas emissions, potential risks and opportunities of climate change, and related management and responding measures, please refer to the Company's annual Sustainability Report.

Energy Saving Management

The use of energy will consume the Earth's resources, and it will also generate carbon dioxide resulting in the greenhouse effect. To reduce the environmental impact of the greenhouse effect, UMC has set annual goals and plans to reduce greenhouse gas emission. In addition to constant evaluation and introduction of various energy saving technologies, UMC will carry out energy saving plans for relevant facilities in order to directly and effectively reduce the Company's energy consumption. In addition, UMC has promoted the implementation of energy saving management plans for offices and public areas together with advocacy activities and educational training in order to enhance the concepts and habits of all employees with regard to energy saving and greenhouse gas reduction.

Water Resources Saving and Management

For more effective utilization of limited water resources, UMC formulated its "Water Management Policy and Commitment" in 2015. From the perspectives of introduction of water resources risk management system, development and application of diversified water resources, supply chain cooperation, and strengthening of water resources education, UMC will continue to promote various water saving measures, actively enhance water efficiency, and introduce new water saving technology in order to promote the emphasis and saving of water resources. According to the fab construction schedule, the fab water recycling rate and process water recycling rate of all fabs are superior to the standard set by the Science Park Bureau. The water saving measures for general water consumption include the adoption of water-efficient taps, rainwater interception for landscape watering, and water conservation of air conditioners and kitchens. In addition to internal water resource assessment and management and active promotion of water conservation, the Company also serves as a representative in industrial unions & associations. The Company cooperates with the government and industrial peers in water resources communication and exchange counseling.

Environmental Protection, Safety and Health Management Instructions (Continue)**Waste Management and Resource Recycling Management**

UMC's waste management is established on an economic and effective waste management mechanism to achieve the objectives of safe, healthy and harmless resource utilization. The strategies include total amount reduction, recycling and reuse of resources, and waste management. UMC has always adhered to the belief of green production while promoting waste and resource recycling management. On one hand it has reduced the generation of waste through process improvement, raw material reduction and source management; on the other hand it has actively promoted waste recycling and reuse to replace the existing end-of-the-pipe treatment mode and to convert garbage into useful resources. In addition to reducing the resources and cost of waste treatment, the Company hopes to help alleviate increasingly serious environmental problems. Finally, in terms of waste management, manpower will be dedicated to regular auditing of the Company's waste disposal service provider and tight control of waste destination while selecting the optimal waste disposal approach.

Pollution Emission and Control

End-of-the-pipe treatment has been regarded as the last resort in recent years. In terms of pollution control, in addition to development of required technologies in response to new environmental protection laws and regulations or standards, UMC has also considered the tolerance and interaction of the overall environment to apply self-control and constantly introduces high performance pollution prevention technologies and equipment. All pollution prevention equipment are operated and maintained by professional work teams, and the operation status of all pollution prevention equipment is monitored by a central system with shifts covering 24-hours to ensure emission quality.

Environment-related Data Disclosure

UMC is committed to the spirit of initiative, openness, transparency and quality, and publicly discloses its management of environment-related information. At present, UMC has set 2025 management targets for important indicators such as greenhouse gas emissions, electricity consumption, water consumption, waste generation and volatile organic compound emissions. At the same time, UMC also disclosed the data of the last 4 years in the corporate social responsibility report and through third-party verification to confirm the latest information and verify the reduction outcome every year. The annual information for 2021 will be verified by third party inspection and publicly disclosed before June 2022.

On the other hand, UMC was also invited to participate in the international CDP organization's climate change and water security disclosure project, and further disclosed the identification results of risks and opportunities and related management information. In 2021, UMC's

water security disclosure was awarded the Leadership band, and climate change disclosure was awarded the Management band. It shows that UMC has been recognized by international investment institutions for its sustainable information disclosure.

Other Environmental Management Plans

Over the years, UMC has continued with its effort in environmental protection by constantly introducing various environmental management tools such as environmental management system, product life cycle assessment, and environmental accounting. The hope is to achieve the substantial objectives of environmental improvement and reduction of environmental impact via the environmental management approach, and spontaneous and continuous improvement.

UMC was aware of the green wave coming from the international environmental protection trend and customer demand as early as 2003, and it began the promotion of the green supply chain management system and became a member of SONY Green Partner in the same year. To date, the Company has continuously passed re-verification, indicating UMC's hazardous substance management effectiveness has been recognized by customers. In 2006, UMC was the first among global semiconductor manufacturers to complete the hazardous substance process management (HSPM) system audit and to be granted the recommended registration. UMC has also become the first semiconductor manufacturer in the world to have all fabs granted with the QC-080000 IECQ HSPM certificate.

In addition, for laying the foundation of green product, process and design, UMC has actively implemented comprehensive carbon/water management plans. In September 2009, it completed the world's first "Product Carbon Footprint" and EPD (Environmental Product Declaration) verification of IC wafer, and obtained the independent verification statement issued by a third party to become the first semiconductor company in Taiwan to independently and completely calculate and verify the product carbon emission information. In 2000, it was the first in the industry to complete the water footprint verification of 8-inch and 12-inch fabs. With the important operational belief of symbiosis with a sustainable environment, UMC has provided its comprehensive green production system plans to help its customers produce environmental friendly, high quality products. The completion of carbon footprint, water footprint, and environmental product declaration indicates that UMC has tracked and monitored the information of various environmental impacts during the IC wafer manufacturing process through rigorous systems with international certification, and helped customers completely construct the environmental information of green product and supply chain. This also specifically demonstrates UMC's active undertaking of social responsibility.

In the future, UMC will more aggressively promote the green

Environmental Protection, Safety and Health Management Instructions (Continue)

supply chain project based on carbon footprint, water footprint, and Environmental Product Declaration to help customers produce green products with lower environmental impact and to enhance the sustainable competitiveness of the entire supply chain.

Safety and Health

Promoting the Culture of Individual Occupational Safety

The analysis of the causes of domestic and foreign accidents has revealed that 90% of them are due to "Human Factors," such that the safety of personal behavior has a more profound impact on the safety of the organization. Therefore, UMC is dedicated to promoting the safety and health culture of "Individual Occupational Safety." Starting from "Pay attention to your own safety and care about other's safety" and "Occupational safety is everyone's responsibility" and under the declaration and leadership of the chairman, UMC has introduced the safety thinking mode, and established complete communication and proposal channels so that employees can express their opinions and receive professional response and assistance, implement safety and health protection work, and continuously enhance the quality of the work environment. It is expected that UMC can become the global role model of safety and health.

Safety and Health Management

By law, all UMC fabs have formulated labor safety and health management plans every year, and the contents include:

• ESH Risk Assessment

Ever since the founding of the Company, UMC has been introducing various methods for risk assessment of the Company's processes, equipment, and chemicals. UMC has also tried to reduce the occurrence of accidents and environmental pollution caused by process and equipment through engineering improvement and process replacement. As for the safety and health risk, UMC has divided them into preliminary review, change review, and regular review. As for the execution of preliminary review, in addition to using a simple risk matrix for selecting operating activities with higher risks to carry out improvement and management, UMC has also conducted the review and risk reduction of hazardous workplace with respect to the items listed in the Hazardous Workplace Review and Inspection Rules.

As for the environmental and safety and health risks caused by change of equipment, and introduction of new chemicals and new machines, the assessment should be carried out according to the rules of change review. In addition to managing these according to domestic laws and regulations, the specification requirements of safety facilities and environmental protection of equipment and chemicals should be specified according to international standards, so that the ESH impacts can be minimized at the beginning of such change.

In addition to the aforementioned preliminary review and change review, the ESH risk assessment will be conducted again for all operations every year, and the operation items with increased risk levels must be examined to see if there is a need for improvement.

• Management of Machine, Equipment, or Appliance

In addition to being in compliance with domestic standards, such as CNS (Chinese National Standards) and machine equipment appliance safety standard, the machines used by UMC must come with the reports (provided by the equipment supplier) meeting the semiconductor manufacturing equipment safety, health, and environmental protection standard (SEMI S2) formulated by international semiconductor equipment and material organization. If there is any non-conforming item, it must be improved before entry into the fab. After fab entry, the water, electrical, gas, and chemical use safety inspection must be conducted according to different stages of machine installation before these machines can be used.

During machine operation and maintenance, employees should receive the educational training of the machine operation and be in compliance with the operation rule. Unless there is approved application and adoption of alternative safety measures, it is prohibited to disable the safety interlock device of the machine in order to avoid any significant occupational incident.

• Management of Hazardous Chemicals

UMC has a hazardous chemical management strategy. All chemicals entering UMC must comply with the strategy and strict safety review mechanisms before they can be used in UMC.

UMC's sound chemical management process meets regulatory requirements. In addition to labeling and training by law, the exposure risk assessment method should be introduced and the chemical risk level and classification management measures should be established in order to reduce the exposure hazard risks to workers.

The working environment monitoring should be conducted every six months according to the Rules for Implementation of Working Environment Monitoring. The effective sampling strategy should be formulated, and the monitoring results should be verified by statistical analysis tool to ensure the exposure situation of every similar exposure group and to protect the health of employees.

There are toxic gas detectors distributed in the working environment in the fab for early control of trace gas leaks with timely warning and automatic broadcasts to notify employees to evacuate to designated safe areas.

• Procurement Management and Contractor Management

UMC has specified the safety and health rule of procurement in the operation regulation of the Company's procurement department. The raw materials suppliers will be requested to conduct labeling, production, and transportation according to domestic laws and regulations, and there will be regular audits of suppliers to ensure that there will not be any safety or health or environmental protection accident that would cause abnormal supply.

As for the contractor management, the active and effective management approach should be adopted to prevent contractors from accidents. In addition to carrying out qualified contractor evaluation and formulating "Notices of ESH Contractor" to be signed by the person in charge of the

Environmental Protection, Safety and Health Management Instructions (Continue)

contractor, all workers entering the fab should receive UMC’s “Contractor ESH Educational Training.” In addition, the “Contractor Work Place Hazard Notification and Agreement Meeting” should be completed for all contractors entering the fab. A complete online application system should be established for effective control of construction application and the management before, during, and after the construction. In addition to requesting the contractor to assign onsite supervisory personnel, a safety agreement meeting should be convened every day before construction. During the construction period, occupational safety personnel should conduct frequent audits in addition to the onsite supervision by the responsible department in order to ensure that all operations are in compliance with safety regulations.

• Formulation of Safety and Health Operational Standard

UMC has formulated the safety and health protection standard which is applicable to the entire company, and each operational department should formulate operational standards for different operations according to company regulation. The content should include: operating procedure, operation inspection and regular inspection items, protective equipment to be used, and operation frequency.

In addition to being in compliance with the operational standard, all employees should pay attention to the unsafe behaviors of others and offer reminders at the work place according to the spirit of individual occupational safety in order to achieve the optimal effect of personal discipline control.

• Regular Inspection, Key Points Inspection, Operation Inspection, and Onsite Walkthrough

Regular and key points inspections should be arranged for various facilities and operations according to laws and regulations, and operation inspections should be conducted regularly by employees in charge of facilities and operations.

In addition to the matters specified by laws and regulations, supervisors at all levels and occupational safety personnel should arrange regular and irregular onsite walkthroughs and audits. The deficiencies of audits should be tracked by computer system, and these cases can only be closed after the improvement is completed.

• Safety and Health Educational Training

By nature, UMC’s ESH educational training can be divided into three categories:

- Company-wide general education and training in safety and health
- Fab-wide safety and health educational training arranged by each fab.
- ESH trainings formulated by each department according to the nature of each department

“Safety First. No Compromise on Safety. Safety Is Above Production” is UMC’s commitment to employees, and to undertake planning and implementation of necessary safety and health education and training for work and prevention of disasters. According to the level from top to bottom, it is divided into company-wide general education courses, factory-run courses and department-specific courses, so that employees can develop a safety culture, awareness and ability of safety, and reduce

accidents caused by unsafe behavior. Every year, in addition to the courses in the plan, for specific events or major cases, safety-related training courses is adopted. In 2021, 2,203 classes have been offered, attracting a total of 53,225 participants. The courses included e-learning courses so that employees can learn safety and health knowledge without being limited by the schedule of physical courses.

• Management of Personal Protective Equipment

UMC establishes management procedures based on the type of the hazards and provides adequate personal protective equipment (PPE) for workers to use. The condition of PPE is regularly checked, and the supervisors and occupational safety personnel also occasionally inspect the use of PPE.

• Health Examination, Health Management, and Health Promotion Matters

UMC treasures employees as the most important asset of an enterprise. Only employees that are healthy both physically and mentally can provide highly efficient and high quality work performance. Therefore, over the years UMC has been dedicated to creating a work place that can contribute to physical, mental, and spiritual health. In addition to helping employees with comprehensive health management and health promotion, care has been extended to employees’ families, hoping to achieve the goals of work moral and work quality enhancement.

• Collection, Sharing, and Utilization of Safety and Health Information

The collection and sharing of company safety and health information are conducted via diversified modes. Domestic and foreign safety and health regulations are collected and reviewed by the Division of Risk Management and Safety and Health, which will suggest to carry out the proposal within the Company to be approved by the ESH Committee. The external major accidents and safety and health news will be advocated to employees via CSR newsletter or BBS within the Company. The safety and health advocacy posters will be put on occupational safety bulletin boards in all fabs frequently. In addition, communication channels such as ESH mailbox and ESH proposal systems have been established on the Company’s intranet website for employees to reflect opinions or problems related to safety and health management.

• Emergency Response Measures

In order to allow employees to be equipped with the knowledge and skills of immediate disaster relief upon occurrence of any accident, all employees must take basic fire-fighting, safety and emergency response courses arranged by the Company every 5 years. These courses cover fire safety, disaster response, and actual operation of fire extinguishers, and all employees are expected to be equipped with such skills. In addition, an emergency response team (ERT) is formed in every fab, and the members of this team should receive various emergency response trainings and regular rehearsals with respect to various accidents in order to strength the disaster response skills of ERT members and to achieve the objective of protection and control at the initial stage of disaster.

Environmental Protection, Safety and Health Management Instructions (Continue)**• Statistical Analysis of Occupational Incidents**

As for occupational incidents that take place at the work place, in addition to regular summaries and reports, every accident must be registered in the accident report and investigation system to be tracked. In addition to the investigation of accident causes and improvement and prevention, accident prevention should be included as the Company's objective and target of safety and health management. Various activities must be promoted in order to achieve accident reduction and safety enhancement.

• Safety and Health Management Record, Performance Review, and Rewards

For facilitating management, in addition to written records, UMC has established multiple computer systems as an aid for safety and health management, such as an automatic inspection system, ISO14001 and ISO45001 management systems, accident report and investigation system, and walkthrough report system. In addition to facilitating data inquiry by employees, the tracking of preventive management measures should also be strengthened.

For the performance of safety and health management, in addition to management review meetings regularly convened in each fab and for the entire company to review the objectives and targets, occupational competitions will be arranged in each fab, and all active occupational management indicators should be included as the evaluation items for individuals and departments. The departments with outstanding performances should be rewarded, and the selection of outstanding occupational safety achievement will be arranged every year in the Company to encourage the active improvement of safety and health in the work environment and the exchange of safety and health improvement matters among different fabs. These will also contribute to the promotion of individual occupational safety and reduction of accidents.

Granted Awards of Safety and Health and Environmental Protection

UMC has been devoted to the promotion of environmental protection and labor safety and health. In addition to being dedicated to achieving the international level of risk control and environmental protection and safety and health management performance, UMC's various ESH management behaviors have also been well received by competent authorities and among peers.

The awards granted to UMC in 2021 are as shown below:

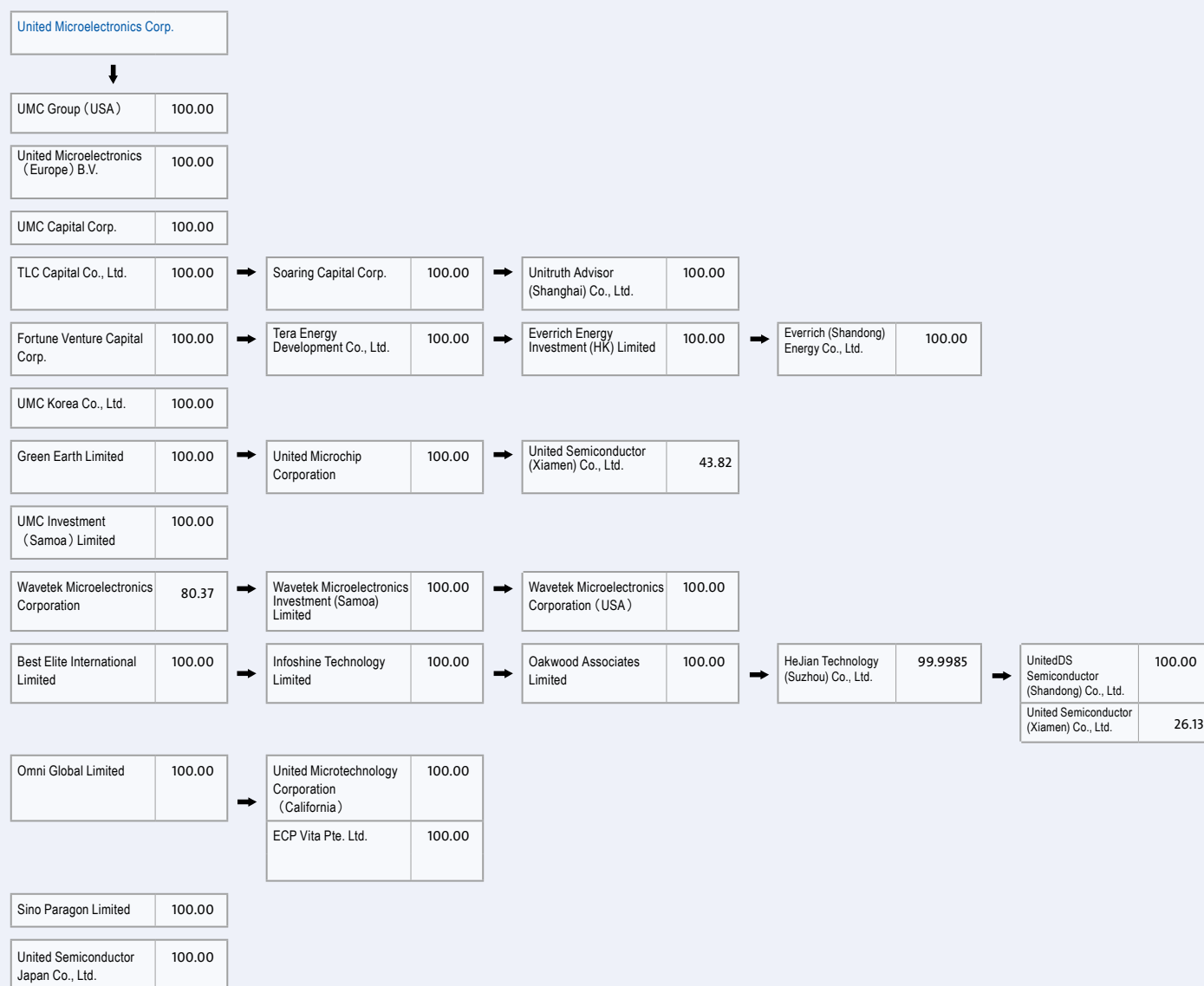
- "National Enterprise Environmental Protection Award" by the Environmental Protection Administration of Executive Yuan, R.O.C. (Fab 8F, Fab 8S)
- "The Best Participation of Green Procurement for Enterprises" by the Environmental Protection Administration of Executive Yuan, R.O.C.
- "Special Outstanding Occupational Safety and Health Unit" by the Hsinchu Science Park Bureau, Ministry of Science and Technology, R.O.C. (Fab 8E)
- "Outstanding Occupational Safety and Health Unit" by the Hsinchu Science Park Bureau, Ministry of Science and Technology, R.O.C. (Fab 8S)
- "Outstanding Occupational Safety and Health Unit" by the Southern Taiwan Science Park Bureau (Fab 12A)

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Summary of Affiliated Enterprises

Affiliated Organization Chart



Note: UMC holds 79.73% of Wavetek Microelectronics Corporation (Wavetek); Fortune Venture Capital Corp. holds 0.64% of Wavetek, and the comprehensive shareholding ratio is 80.37%.

Summary of Affiliated Enterprises (Continue)

Basic Data of Affiliated Enterprises

In NT\$

Name of Corporation	Date of Establishment	Address	Capital	Major Business / Production Items
UMC Group (USA)	1997.08.11	488 De Guigne Drive, Sunnyvale, CA 94085, USA	NT\$460,397,938	IC Sales
United Microelectronics (Europe) B.V.	1989.05.23	De Entree77, 1101BH, Amsterdam Zuidoost, The Netherlands	NT\$108,543,538	Marketing support activities
UMC Capital Corp.	2001.01.16	One Nexus Way, Camana Bay, Grand Cayman KY1-9005, Cayman Islands	NT\$2,007,208,323	Investment holding
UMC Korea Co., Ltd.	2013.04.12	1117, Hanshin Intervals 24, 322, Teheran-ro, Gangnam-gu, Seoul, Korea	NT\$13,530,000	Marketing support activities
TLC Capital Co., Ltd.	2005.10.14	5F, No.17, Lane 120, Neihu Road Section 1, Taipei, Taiwan 114, R.O.C.	NT\$4,219,830,360	Venture capital
Fortune Venture Capital Corp.	1993.09.21	5F, No.17, Lane 120, Neihu Road Section 1, Taipei, Taiwan 114, R.O.C.	NT\$4,447,520,690	Consulting and planning for venture capital
Green Earth Limited	2009.09.09	Maystar Chambers, P.O. Box 3269, Apia, Samoa	NT\$29,988,444,000	Investment holding
UMC Investment (Samoa) Limited	2011.03.30	Maystar Chambers, P.O. Box 3269, Apia, Samoa	NT\$43,519,120	Investment holding
ECP Vita Pte. Ltd.	2012.05.10	8 Marina View, #09-05 Asia Square Tower one, Singapore 018960	NT\$252,081,000	Insurance
Soaring Capital Corp.	2008.03.25	Unit 25, 2nd Floor, Nia Mall, Saleufi Street, Apia Samoa	NT\$27,351,000	Investment holding
Unitruth Advisor (Shanghai) Co., Ltd.	2008.10.16	No.1468, Nanjing Road West, Suite 2908 Shanghai, China	NT\$22,407,200	Investment holding and advisory
Tera Energy Development Co., Ltd.	2011.07.19	1F., No.1, Jinshan 8th St., Hsinchu, Taiwan 30080, R.O.C.	NT\$78,000,000	Energy technical services
Everrich Energy Investment (HK) Limited	2009.12.16	Room 2702-03, CC Wu Building, 302-8 Hennessy Road, Wanchai, Hong Kong	NT\$25,988,211	Investment holding
Everrich (Shandong) Energy Co., Ltd.	2009.11.02	Office Building, Guangyutang National Pharmaceutical Industrial Park, No. 369, Haichuan Road, Jiezhuang Street, High-tech Zone, Jining City, Shandong Province, China	NT\$21,006,750	Solar engineering integrated design services

Summary of Affiliated Enterprises (Continue)

In NT\$

Name of Corporation	Date of Establishment	Address	Capital	Major Business / Production Items
Wavetek Microelectronics Corporation	2010.10.18	3F.,No. 10, Innovation 1st Road, Hsinchu Science Park, Hsinchu County, Taiwan, R.O.C.	NT\$1,857,631,150	Sales and manufacturing of integrated circuits
Wavetek Microelectronics Investment (Samoa) Limited	2013.08.28	Le Sanalele Complex, Ground Floor, Vaea Street, Saleufi, Apia, Samoa	NT\$50,833,500	Investment holding
Wavetek Microelectronics Corporation (USA)	2013.09.26	488 De Guigne Drive, Sunnyvale, CA 94085, USA	NT\$1,680,540	Marketing service
Best Elite International Limited	2001.07.12	Commerce House, Wickhams Cay 1, P.O. Box 3140, Road Town, Tortola, B.V.I. VG1110	NT\$6,693,468,981	Investment holding
Infoshine Technology Limited	2002.02.12	Commerce House, Wickhams Cay 1, P.O. Box 3140, Road Town, Tortola, B.V.I. VG1110	NT\$9,915,186,000	Investment holding
Oakwood Associates Limited	2002.02.12	Commerce House, Wickhams Cay 1, P.O. Box 3140, Road Town, Tortola, B.V.I. VG1110	NT\$9,915,186,000	Investment holding
HeJian Technology (Suzhou) Co., Ltd.	2001.11.23	No. 333, Xinghua Street, Suzhou Industrial Park, Suzhou, Jiangsu Province 215025, China	NT\$13,660,009,736	Sales and manufacturing of integrated circuits
UnitedDS Semiconductor (Shandong) Co., Ltd.	2014.03.25	21th Floor, Artificial Intelligence Building, Hanyu Finance Valley, Jingshi Road, Jinan, Shandong Province, China	NT\$130,290,000	Design support of integrated circuits
Omni Global Limited	2013.07.02	Maystar Chambers, P.O. Box 3269, Apia, Samoa	NT\$130,160,000	Investment holding
United Microtechnology Corporation (California)	2014.12.10	488 Deguigne Drive, Sunnyvale, CA 94085, USA	NT\$28,009,000	Research & development
United Semiconductor (Xiamen) Co., Ltd.	2014.10.01	No. 899, Wan Jia Chun Road, Xiang An, Xiamen, Fujian Province, China	NT\$63,832,519,342	Sales and manufacturing of integrated circuits
United Microchip Corporation	2015.02.04	Suite 102, Cannon Place, P.O. Box 712 North Sound Rd., George Town, Grand Cayman, KY1-9006	NT\$29,874,878,250	Investment holding
Sino Paragon Limited	2016.06.06	Maystar Chambers, P.O. Box 3269, Apia, Samoa	NT\$83,204,400	Investment holding
United Semiconductor Japan Co., Ltd.	2014.09.18	2000, Mizono, Tado-cho, Kuwana-shi, Mie, Japan	NT\$2,548,000,000	Sales and manufacturing of integrated circuits

Note The data is dated December 31, 2021.

Summary of Affiliated Enterprises (Continue)

Data for Common Shareholders of Treated-as Controlled Companies and Affiliates

None.

Business of United Microelectronics Corporation (UMC) and Its Affiliated Enterprises

The business of UMC and its affiliated enterprises includes semiconductor wafer manufacturing, electronics, optronics, investment activities, insurance, and trade.

Summary of Affiliated Enterprises (Continue)

Directors, Supervisors and Presidents of Affiliated Enterprises

Name of Corporation	Title	Name or Representative	Shareholding	
			Shares	%
UMC Group (USA)	Director	Jason Wang	—	—
	Director	Chitung Liu	—	—
United Microelectronics (Europe) B.V.	Director	Stan Hung	—	—
	Director	Jason Wang	—	—
UMC Capital Corp.	Chairman	Stan Hung	—	—
	Director	SC Chien	—	—
	Director	Jason Wang	—	—
	Director	Chitung Liu	—	—
	Director	Chih Chiang Peng	—	—
UMC Korea Co., Ltd.	Director	Carissa Tseng	—	—
TLC Capital Co., Ltd.	Chairman	United Microelectronics Corporation	421,983,036	100.00
		Representative: Stan Hung	—	—
	Director	United Microelectronics Corporation	421,983,036	100.00
		Representative: SC Chien	—	—
	Director	United Microelectronics Corporation	421,983,036	100.00
		Representative: Jason Wang	—	—
	Director	United Microelectronics Corporation	421,983,036	100.00
		Representative: Chitung Liu	—	—
	Director	United Microelectronics Corporation	421,983,036	100.00
		Representative: Chih Chiang Peng	—	—
	Supervisor	United Microelectronics Corporation	421,983,036	100.00
		Representative: Jinhong Lin	—	—

Summary of Affiliated Enterprises (Continue)

Name of Corporation	Title	Name or Representative	Shareholding	
			Shares	%
Fortune Venture Capital Corp.	Chairman	United Microelectronics Corporation	444,752,069	100.00
		Representative: Stan Hung	—	—
	Director	United Microelectronics Corporation	444,752,069	100.00
		Representative: SC Chien	—	—
	Director	United Microelectronics Corporation	444,752,069	100.00
		Representative: Jason Wang	—	—
	Director	United Microelectronics Corporation	444,752,069	100.00
		Representative: Chitung Liu	—	—
	Director and President	United Microelectronics Corporation	444,752,069	100.00
		Representative: Chih Chiang Peng	—	—
	Supervisor	United Microelectronics Corporation	444,752,069	100.00
		Representative: Bellona Chen	—	—
Green Earth Limited	Director	Chitung Liu	—	—
UMC Investment (Samoa) Limited	Director	United Microelectronics Corporation	1,520,000	100.00
ECP Vita Pte. Ltd.	Director	Chitung Liu	—	—
	Director	Bellona Chen	—	—
	Director	Vic Yen	—	—
	Director	Sofia Wang	—	—

Summary of Affiliated Enterprises (Continue)

Name of Corporation	Title	Name or Representative	Shareholding	
			Shares	%
Soaring Capital Corp.	Director	TLC Capital Co., Ltd.	900,000	100.00
Unitruth Advisor (Shanghai) Co., Ltd.	Director	Chih Chiang Peng	—	—
Tera Energy Development Co., Ltd.	Chairman	Fortune Venture Capital Corp.	7,800,000	100.00
		Representative: Chih Chiang Peng	—	—
	Director	Fortune Venture Capital Corp.	7,800,000	100.00
		Representative: Su Ying Shih	—	—
	Director	Fortune Venture Capital Corp.	7,800,000	100.00
		Representative: Jinhong Lin	—	—
Everrich Energy Investment (HK) Limited	Supervisor	Fortune Venture Capital Corp.	7,800,000	100.00
		Representative: Tachih Lung	—	—
	Director	Tera Energy Development Co., Ltd.	750,000	100.00
	Director	Jinhong Lin	—	—
Everrich (Shandong) Energy Co., Ltd.	Executive Director	Chih Chiang Peng	—	—
	Supervisor	Su Ying Shih	—	—

Summary of Affiliated Enterprises (Continue)

Name of Corporation	Title	Name or Representative	Shareholding	
			Shares	%
Wavetek Microelectronics Corporation	Chairman	United Microelectronics Corporation	148,112,434	79.73
		Representative: M C Lai	—	—
	Director	United Microelectronics Corporation	148,112,434	79.73
		Representative: G C Hung	—	—
	Director	United Microelectronics Corporation	148,112,434	79.73
		Representative: James W Wang	—	—
	Supervisor	Chih Chiang Peng	15,001	0.00
Wavetek Microelectronics Investment (Samoa) Limited	Director	M C Lai	—	—
Wavetek Microelectronics Corporation (USA)	Director	Mao Jwo	—	—
Best Elite International Limited	Director	Victor Yu	—	—
	Director	Jeremy Wang	—	—
	Director	Eric Chen	—	—
	Director	Jinhong Lin	—	—
Infoshine Technology Limited	Director	Victor Yu	—	—
Oakwood Associates Limited	Director	Victor Yu	—	—

Summary of Affiliated Enterprises (Continue)

Name of Corporation	Title	Name or Representative	Shareholding	
			Shares	%
HeJian Technology (Suzhou) Co., Ltd.	Chairman	Chitung Liu	—	—
	Director and General Manager	M C Gao	—	—
	Director	M C Lai	—	—
	Director	Victor Yu	—	—
	Director	Jinhong Lin	—	—
	Supervisor	Angel Sun	—	—
	Supervisor	I Cheng Lu	—	—
	Supervisor	Yann Wei Chen	—	—
UnitedDS Semiconductor(Shandong) Co., Ltd.	Executive Director	Stan Hung	—	—
	Supervisor	Wesley Chu	—	—
Omni Global Limited	Director	Jinhong Lin	—	—
United Microtechnology Corporation (California)	Director	Jason Wang	—	—
	Director	Megan Su	—	—

Summary of Affiliated Enterprises (Continue)

Name of Corporation	Title	Name or Representative	Shareholding	
			Shares	%
United Semiconductor (Xiamen) Co., Ltd.	Chairman	Chitung Liu	—	—
	Vice Chairman	C C Hsu	—	—
	Director	Jinhong Lin	—	—
	Director	Wayne Tan	—	—
	Director	T C Chen	—	—
	Director	Victor Yu	—	—
	Director	Yi Yan Hong	—	—
	Director	Guo Dong Di	—	—
	Director	Yan Jie Hu	—	—
	Supervisor	Rong Fang Li	—	—
	Supervisor	Angel Sun	—	—
United Microchip Corporation	Director	Chitung Liu	—	—
Sino Paragon Limited	Director	Jinhong Lin	—	—
United Semiconductor Japan Co., Ltd.	Chairman	S S Hong	—	—
	Director	Ming Hsu	—	—
	Director	Chitung Liu	—	—
	Director	Yen Huang	—	—
	Director	Michiari Kawano	—	—
	Director	Koichi Onomura	—	—
	Director	Tatsuya Deguchi	—	—
	Supervisor	Angel Sun	—	—

Note: The data is dated December 31, 2021.

Summary of Affiliated Enterprises (Continue)

Summarized Operating Results of UMC Subsidiaries

In Thousand NT\$

Company	Capital	Assets	Liabilities	Net Worth	Operating Revenues	Operating Income (Loss)	Net Income (Loss)	Earnings (Loss) Per Share (NT\$)
UMC Group (USA)	460,398	9,765,521	7,979,947	1,785,574	54,178,820	73,277	64,742	3.94
United Microelectronics (Europe) B.V.	108,544	163,303	32,938	130,365	57,961	3,843	4,151	461.30
UMC Capital Corp.	2,007,208	5,402,348	744	5,401,604	1,884,371	1,360,816	1,362,690	19.02
UMC Korea Co., Ltd.	13,530	26,950	5,205	21,745	19,267	1,439	1,161	10.55
TLC Capital Co., Ltd.	4,219,830	4,801,792	153,408	4,648,384	954,944	124,214	132,881	0.32
Fortune Venture Capital Corp.	4,447,521	7,683,226	131,583	7,551,643	1,886,037	960,936	942,304	2.19
Green Earth Limited	29,988,444	10,277,015	-	10,277,015	-	-	(1,124,730)	(1.15)
UMC Investment (Samoa) Limited	43,519	38,865	-	38,865	-	-	(1,096)	(0.72)
ECP Vita Pte. Ltd.	252,081	635,251	51,897	583,354	65,111	50,011	50,180	5.58
Soaring Capital Corp.	27,351	7,190	8	7,182	0	(899)	(904)	(1.00)
Unitruth Advisor (Shanghai) Co., Ltd.	22,407	10,805	3,674	7,131	9,989	(756)	(865)	NA
Tera Energy Development Co., Ltd.	78,000	105,491	16,539	88,952	111,555	24,072	26,632	1.50
Everrich Energy Investment (HK) Limited	25,988	43,061	38	43,023	-	(39)	2,036	2.71
Everrich (Shandong) Energy Co., Ltd.	21,007	52,191	9,226	42,965	6,807	2,536	2,083	NA

Summary of Affiliated Enterprises (Continue)

In Thousand NT\$

Company	Capital	Assets	Liabilities	Net Worth	Operating Revenues	Operating Income (Loss)	Net Income (Loss)	Earnings (Loss) Per Share (NT\$)
Wavetek Microelectronics Corporation	1,857,631	3,680,396	2,545,095	1,135,301	3,082,401	513,691	504,288	2.73
Wavetek Microelectronics Investment (Samoa) Limited	50,834	2,690	-	2,690	-	(197)	(258)	(0.16)
Wavetek Microelectronics Corporation (USA)	1,681	2,695	-	2,695	259	15	(43)	(0.72)
Best Elite International Limited	6,693,469	25,274,477	1,605	25,272,872	-	(4,425)	4,633,937	6.97
Infoshine Technology Limited	9,915,186	25,218,528	-	25,218,528	-	-	4,640,155	NA
Oakwood Associates Limited	9,915,186	25,218,528	-	25,218,528	-	-	4,640,155	NA
HeJian Technology (Suzhou) Co., Ltd.	13,660,010	31,219,423	6,531,230	24,688,193	14,583,406	5,711,476	4,661,502	1.48
UnitedDS Semiconductor (Shandong) Co., Ltd.	130,290	833,643	414,754	418,889	683,117	136,288	127,083	NA
Omni Global Limited	130,160	626,457	-	626,457	-	-	56,705	13.19
United Microtechnology Corporation (California)	28,009	37,137	1,521	35,616	26,346	1,491	1,469	36,722.32
United Semiconductor (Xiamen) Co., Ltd.	63,832,519	67,766,340	44,330,084	23,436,256	18,992,091	(1,595,304)	(2,381,012)	NA
United Microchip Corporation	29,874,878	10,252,341	-	10,252,341	-	-	(1,124,020)	(1.15)
Sino Paragon Limited	83,204	138,220	-	138,220	-	-	(4,133)	(1.59)
United Semiconductor Japan Co., Ltd.	2,548,000	24,823,783	5,265,799	19,557,984	17,632,454	3,711,298	3,088,751	26.57

Note: US\$:NT\$=1:28.009, JPY:NT\$=1:0.2548, EUR:NT\$=1:33.167, RMB:NT\$=1:4.343, KRW:NT\$=1:0.0246

Issuance of Private Placement Securities

None.

Acquisition or Disposal of UMC Shares by Subsidiaries

In Thousand NT\$, Shares

Subsidiary	Paid-in Capital	Source of Capital	Holding % by the Company	Acquisition or Disposal Date	Shares Acquired and Amount	Disposal Shares and Amount	Profit/Loss	As of Annual Report Printing Date	
								Shares	Amount
Fortune Venture Capital Corp.	4,447,521	New shares	100.00	2022	None	None	None	None	None
		for cash		2021	None	Shares: 16,078,737 Amount: 920,443	815,329	None	None

Note: (1) As of February 24, 2022.

(2) None of the above companies pledged UMC shares as collateral.

(3) The Company did not provide endorsements or guarantees to these subsidiaries.

(4) The Company did not provide loans to these subsidiaries.

(5) The disposal of shares is due to the share exchange transaction with Chipbond approved by Fortune's Board of Directors' meeting on September 3, 2021.

Other Necessary Supplements

None.

Disclosure of Events Which May Have a Significant Influence on Stockholders' Equity or Share Price, in Compliance with Item 3, Paragraph 2 In Article 36 of the Securities and Exchange Law of the R.O.C. during 2021 and as of the Annual Report Printing Date

None.

Financial Review

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Condensed Balance Sheets

Condensed Balance Sheets-Consolidated

In Thousand NT\$

Item		2021	2020	2019	2018	2017
Current assets		233,273,433	164,305,911	153,757,141	141,193,432	139,160,486
Property, plant and equipment		129,941,703	132,774,663	150,374,096	172,846,595	205,741,681
Intangible assets		3,644,933	4,877,913	5,198,247	2,991,804	3,787,509
Other assets		97,566,702	75,557,888	60,857,881	47,573,075	45,409,486
Total assets		464,426,771	377,516,375	370,187,365	364,604,906	394,099,162
Current liabilities	Before distribution	105,453,729	78,243,526	72,714,322	49,899,337	88,061,070
	After distribution	*	98,119,368	82,479,477	56,815,442	96,618,093
Non-current liabilities		77,770,158	63,499,747	90,258,621	108,169,078	92,000,508
Total liabilities	Before distribution	183,223,887	141,743,273	162,972,943	158,068,415	180,061,578
	After distribution	*	161,619,115	172,738,098	164,984,520	188,618,601
Equity attributable to the parent company		280,979,703	235,659,746	206,804,357	206,069,723	213,080,776
Capital		124,832,476	124,224,015	117,575,798	124,243,187	126,243,187
Additional paid-in capital	Before distribution	47,898,093	43,211,214	39,550,394	40,399,363	40,858,350
	After distribution	*	43,211,214	39,550,394	40,399,363	40,858,350
Retained earnings	Before distribution	115,375,789	80,176,360	60,820,280	61,588,543	48,065,899
	After distribution	*	60,300,518	51,055,125	54,672,438	39,508,876
Other components of equity		(7,126,655)	(11,832,042)	(11,022,314)	(14,513,940)	2,632,377
Treasury stock		-	(119,801)	(119,801)	(5,647,430)	(4,719,037)
Non-controlling interests		223,181	113,356	410,065	466,768	956,808
Total equity	Before distribution	281,202,884	235,773,102	207,214,422	206,536,491	214,037,584
	After distribution	*	215,897,260	197,449,267	199,620,386	205,480,561

Note 1: *Subject to change based on resolutions of the 2022 shareholders' meeting.

Note 2: The company listed on the TWSE or traded on the TPEX shall include in its analysis the updated financial data which are audited or reviewed by a CPA for the most recent period up to the publication date of the annual report: None.

Condensed Balance Sheets-Parent Company

In Thousand NT\$

Item		2021	2020	2019	2018	2017
Current assets		173,934,887	122,967,977	107,866,299	101,335,770	106,676,034
Property, plant and equipment		76,105,085	66,640,272	79,486,445	101,115,727	127,101,974
Intangible assets		3,323,995	4,167,373	4,082,826	2,886,159	3,459,829
Other assets		150,987,914	125,122,444	111,315,394	93,849,564	84,756,630
Total assets		404,351,881	318,898,066	302,750,964	299,187,220	321,994,467
Current liabilities	Before distribution	68,328,684	29,622,014	43,764,772	26,797,263	58,655,702
	After distribution	*	49,497,856	53,529,927	33,713,368	67,212,725
Non-current liabilities		55,043,494	53,616,306	52,181,835	66,320,234	50,257,989
Total liabilities	Before distribution	123,372,178	83,238,320	95,946,607	93,117,497	108,913,691
	After distribution	*	103,114,162	105,711,762	100,033,602	117,470,714
Capital		124,832,476	124,224,015	117,575,798	124,243,187	126,243,187
Additional paid-in capital	Before distribution	47,898,093	43,211,214	39,550,394	40,399,363	40,858,350
	After distribution	*	43,211,214	39,550,394	40,399,363	40,858,350
Retained earnings	Before distribution	115,375,789	80,176,360	60,820,280	61,588,543	48,065,899
	After distribution	*	60,300,518	51,055,125	54,672,438	39,508,876
Other components of equity		(7,126,655)	(11,832,042)	(11,022,314)	(14,513,940)	2,632,377
Treasury stock		-	(119,801)	(119,801)	(5,647,430)	(4,719,037)
Total equity	Before distribution	280,979,703	235,659,746	206,804,357	206,069,723	213,080,776
	After distribution	*	215,783,904	197,039,202	199,153,618	204,523,753

Note 1: * Subject to change based on resolutions of the 2022 shareholders' meeting.

Note 2: The company listed on the TWSE or traded on the TPEX shall include in its analysis the updated financial data which are audited or reviewed by a CPA for the most recent period up to the publication date of the annual report: None.

Condensed Statements of Comprehensive Income

Condensed Statements of Comprehensive Income-Consolidated

In Thousand NT\$

Item	2021	2020	2019	2018	2017
Operating revenues	213,011,018	176,820,914	148,201,641	151,252,571	149,284,706
Gross profit	72,049,629	38,997,101	21,314,972	22,840,027	27,057,758
Operating income	51,686,286	22,007,407	4,689,850	5,797,232	6,568,321
Non-operating income and expenses	10,117,118	5,918,772	1,045,787	(3,612,833)	1,230,101
Income from continuing operations before income tax	61,803,404	27,926,179	5,735,637	2,184,399	7,798,422
Net income	55,112,010	27,180,412	6,128,767	2,643,052	6,631,265
Other comprehensive income (loss), net of tax	4,131,555	4,685,534	3,408,785	949,944	(4,034,355)
Total comprehensive income (loss)	59,243,565	31,865,946	9,537,552	3,592,996	2,596,910
Net income attributable to stockholders of the parent	55,780,255	29,189,489	9,707,614	7,072,990	9,628,734
Net income attributable to non-controlling interests	(668,245)	(2,009,077)	(3,578,847)	(4,429,938)	(2,997,469)
Comprehensive income attributable to stockholders of the parent	59,911,829	33,748,370	13,131,612	8,126,828	5,705,980
Comprehensive income attributable to non-controlling interests	(668,264)	(1,882,424)	(3,594,060)	(4,533,832)	(3,109,070)
Earnings per share (NT\$)	4.57	2.42	0.82	0.58	0.79

Note 1: EPS was calculated based on weighted average number of shares outstanding for the period.

Note 2: The company listed on the TWSE or traded on the TPEX shall include in its analysis the updated financial data which are audited or reviewed by a CPA for the most recent period up to the publication date of the annual report: None.

Condensed Statements of Comprehensive Income-Parent Company

In Thousand NT\$

Item	2021	2020	2019	2018	2017
Operating revenues	159,222,834	135,280,403	123,622,436	132,834,602	132,179,198
Gross profit	62,195,577	39,052,266	27,161,230	30,548,191	29,718,771
Operating income	43,396,863	23,459,030	10,281,974	12,790,237	11,538,896
Non-operating income and expenses	17,284,085	6,375,642	(1,148,875)	(6,581,581)	(1,114,125)
Income from continuing operations before income tax	60,680,948	29,834,672	9,133,099	6,208,656	10,424,771
Net income	55,780,255	29,189,489	9,707,614	7,072,990	9,628,734
Other comprehensive income (loss), net of tax	4,131,574	4,558,881	3,423,998	1,053,838	(3,922,754)
Total comprehensive income	59,911,829	33,748,370	13,131,612	8,126,828	5,705,980
Earnings per share (NT\$)	4.57	2.42	0.82	0.58	0.79

Note 1: EPS was calculated based on weighted average number of shares outstanding for the period.

Note 2: The company listed on the TWSE or traded on the TPEX shall include in its analysis the updated financial data which are audited or reviewed by a CPA for the most recent period up to the publication date of the annual report: None.

Auditors' Opinions from 2017 to 2021

Year	CPA	Audit Opinion
2017	Shao-Pin Kuo, Wan-Ju Chiu	Unqualified Opinion with Emphasis of Matter Paragraphs or Other Matter Paragraphs
2018	Wan-Ju Chiu, Hsin-Min Hsu	Unqualified Opinion with Emphasis of Matter Paragraphs or Other Matter Paragraphs
2019	Wan-Ju Chiu, Hsin-Min Hsu	Unqualified Opinion with Emphasis of Matter Paragraphs or Other Matter Paragraphs
2020	Wan-Ju Chiu, Hsin-Min Hsu	Unqualified Opinion with Emphasis of Matter Paragraphs or Other Matter Paragraphs
2021	Wan-Ju Chiu, Hsin-Min Hsu	Unqualified Opinion with Emphasis of Matter Paragraphs or Other Matter Paragraphs

Financial Analysis

Financial Analysis- Consolidated

Item	2021	2020	2019	2018	2017	
Capital structure	Debt ratio (%)	39.45	37.55	44.02	43.35	45.69
	Long-term funds to property, plant and equipment (%)	247.06	196.23	169.65	158.30	129.95
Liquidity	Current ratio (%)	221.21	209.99	211.45	282.96	158.03
	Quick ratio (%)	196.55	177.36	172.13	222.80	121.72
	Times interest earned (times)	34.08	14.93	2.96	1.79	4.24
Operating performance	Average receivables turnover (times)	6.82	6.67	5.98	6.75	6.78
	Days sales outstanding	54	55	61	54	54
	Average inventory turnover (times)	6.19	6.23	6.36	7.04	6.93
	Average payables turnover (times)	17.37	16.47	16.19	19.26	18.26
	Average inventory turnover days	59	59	57	52	53
	Property, plant and equipment turnover (times)	1.62	1.25	0.92	0.80	0.69
	Total assets turnover (times)	0.51	0.47	0.40	0.40	0.38
Profitability	Return on assets (%)	13.45	7.70	2.31	1.28	2.21
	Return on stockholders' equity attributable to the parent company (%)	21.59	13.19	4.70	3.37	4.48
	Pre-tax income to paid-in capital (%)	50.04	24.10	7.92	5.32	8.54
	Net profit margin (%)	25.87	15.37	4.14	1.75	4.44
	Earnings per share (NT\$)	4.57	2.42	0.82	0.58	0.79
Cash Flow	Cash flow ratio (%)	85.68	84.03	75.51	102.08	59.59
	Cash flow adequacy ratio (%)	145.64	111.10	96.56	86.78	81.49
	Cash flow reinvestment ratio (%)	5.93	5.12	4.54	4.03	4.68
Leverage	Operating leverage	3.22	5.98	23.16	19.11	16.86
	Financial leverage	1.04	1.10	2.67	1.91	1.58

Analysis of change over 20% from 2020 to 2021:

1. Long-term funds to property, plant and equipment: Due to increase in bonds payable and long-term loans.
2. Times interest earned: Due to increase in income before interest and tax.
3. Property, plant and equipment turnover: Due to increase in net sales.
4. Return on assets, Net profit margin: Due to increase in net income.
5. Return on stockholders' equity attributable to the parent company, Earnings per share: Due to increase in net income attributable to stockholders of the parent company.
6. Pre-tax income to paid-in capital: Due to increase in income before tax attributable to stockholders of the parent company.
7. Cash flow adequacy ratio: Due to increase in five-year sum of net cash provided by operating activities.
8. Operating leverage: Due to increase in operating income.

Financial Analysis (Continue)

Note 1: The calculation of EPS was based on weighted average number of shares outstanding for the year.

Note 2: The calculation formulas of financial analysis are listed as follows:

1. Capital structure

(1) Debt ratio = total liabilities / total assets

(2) Long-term funds to property, plant and equipment = (total equity + bonds payable + long-term loans) / property, plant and equipment

2. Liquidity

(1) Current ratio = current assets / current liabilities

(2) Quick ratio = (current assets – inventory – prepaid expenses – non-current assets held for sale – other current assets) / current liabilities

(3) Times interest earned = income before interest and tax / interest expenses

3. Operating performance

(1) Average receivables (including accounts receivable and notes receivable arising from business operations) turnover = net sales / average receivables (including accounts receivable and notes receivable arising from business operations) for each period

(2) Days sales outstanding = 365 / average receivables turnover

(3) Average inventory turnover = cost of sales / average inventory

(4) Average payables (including accounts payable and notes payable arising from business operations) turnover = cost of sales / average payables (including accounts payable and notes payable arising from business operations) for each period

(5) Average inventory turnover days = 365 / average inventory turnover

(6) Property, plant and equipment turnover = net sales / average property, plant and equipment

(7) Total assets turnover = net sales / average total assets

4. Profitability

(1) Return on assets = [net income + interest expenses x (1- tax rate)] / average total assets

(2) Return on stockholders' equity attributable to the parent company = net income attributable to stockholders of the parent / average total equity attributable to the parent company

(3) Pre-tax income to paid-in capital = income before tax attributable to stockholders of the parent / paid-in capital

(4) Net profit margin = net income / net sales

(5) Earnings per share = (net income attributable to stockholders of the parent – preferred shares dividends) / weighted average number of outstanding shares

5. Cash flow

(1) Cash flow ratio = net cash provided by operating activities / current liabilities

(2) Cash flow adequacy ratio = five-year sum of net cash provided by operating activities / five-year sum of capital expenditures, inventory increase and cash dividend

(3) Cash flow reinvestment ratio = (net cash provided by operating activities – cash dividend) / (gross property, plant and equipment + long-term investments + other non-current assets + working capital)

6. Leverage

(1) Operating leverage = (operating revenues – variable operating costs and expenses) / operating income

(2) Financial leverage = operating income / (operating income – interest expenses)

Note 3: The company listed on the TWSE or traded on the TPEX shall include in its analysis the updated financial data which are audited or reviewed by a CPA for the most recent period up to the publication date of the annual report: None.

Financial Analysis (Continue)

Financial Analysis- Parent Company

Item	2021	2020	2019	2018	2017	
Capital structure	Debt ratio (%)	30.51	26.10	31.69	31.12	33.82
	Long-term funds to property, plant and equipment (%)	403.84	389.93	288.59	242.91	186.51
Liquidity	Current ratio (%)	254.56	415.12	246.47	378.16	181.87
	Quick ratio (%)	228.16	352.97	204.33	313.86	150.22
	Times interest earned (times)	111.73	54.08	12.16	9.14	12.13
Operating performance	Average receivables turnover (times)	6.88	6.80	5.95	6.02	5.69
	Days sales outstanding	53	54	61	61	64
	Average inventory turnover (times)	5.95	5.81	6.12	6.73	6.90
	Average payables turnover (times)	17.47	16.70	16.41	18.60	18.47
	Average inventory turnover days	61	63	60	54	53
	Property, plant and equipment turnover (times)	2.23	1.85	1.37	1.16	0.93
	Total assets turnover (times)	0.44	0.44	0.41	0.43	0.41
Profitability	Return on assets (%)	15.55	9.54	3.44	2.47	3.21
	Return on equity (%)	21.59	13.19	4.70	3.37	4.48
	Pre-tax income to paid-in capital (%)	48.61	24.02	7.77	5.00	8.26
	Net profit margin (%)	35.03	21.58	7.85	5.32	7.28
	Earnings per share (NT\$)	4.57	2.42	0.82	0.58	0.79
Cash Flow	Cash flow ratio (%)	97.95	176.05	106.12	182.12	102.75
	Cash flow adequacy ratio (%)	182.32	189.18	155.16	135.24	121.08
	Cash flow reinvestment ratio (%)	4.36	4.18	4.09	4.20	5.95
Leverage	Operating leverage	2.86	4.29	8.88	7.82	8.70
	Financial leverage	1.01	1.02	1.09	1.06	1.09

Analysis of change over 20% from 2020 to 2021:

1. Times interest earned, Return on assets, Return on equity, Pre-tax income to paid-in capital, Net profit margin and Earnings per share: Due to increase in income before tax and net income.
2. Current ratio, Quick ratio and Cash flow ratio: Due to increase in current portion of long-term liabilities and other financial liabilities, current.
3. Property, plant and equipment turnover: Due to increase in net sales.
4. Operating leverage: Due to increase in operating income.

Financial Analysis (Continue)

Note 1: The calculation of EPS was based on weighted average shares outstanding for the year.

Note 2: The calculation formulas of financial analysis are listed as follows:

1. Capital structure

(1) Debt ratio = total liabilities / total assets

(2) Long-term funds to property, plant and equipment = (total equity + bonds payable + long-term loans) / property, plant and equipment

2. Liquidity

(1) Current ratio = current assets / current liabilities

(2) Quick ratio = (current assets – inventory – prepaid expenses – non-current assets held for sale – other current assets) / current liabilities

(3) Times interest earned = income before interest and tax / interest expenses

3. Operating performance

(1) Average receivables (including accounts receivable and notes receivable arising from business operations) turnover = net sales / average receivables (including accounts receivable and notes receivable arising from business operations) for each period

(2) Days sales outstanding = 365 / average receivables turnover

(3) Average inventory turnover = cost of sales / average inventory

(4) Average payables (including accounts payable and notes payable arising from business operations) turnover = cost of sales / average payables (including accounts payable and notes payable arising from business operations) for each period

(5) Average inventory turnover days = 365 / average inventory turnover

(6) Property, plant and equipment turnover = net sales / average property, plant and equipment

(7) Total assets turnover = net sales / average total assets

4. Profitability

(1) Return on assets = [net income + interest expenses x (1 - tax rate)] / average total assets

(2) Return on equity = net income / average total equity

(3) Pre-tax income to paid-in capital = income before tax / paid-in capital

(4) Net profit margin = net income / net sales

(5) Earnings per share = (net income – preferred shares dividends) / weighted average number of outstanding shares

5. Cash flow

(1) Cash flow ratio = net cash provided by operating activities / current liabilities

(2) Cash flow adequacy ratio = five-year sum of net cash provided by operating activities / five-year sum of capital expenditures, inventory increase and cash dividend

(3) Cash flow reinvestment ratio = (net cash provided by operating activities – cash dividend) / (gross property, plant and equipment + long-term investments + other non-current assets + working capital)

6. Leverage

(1) Operating leverage = (operating revenues – variable operating costs and expenses) / operating income

(2) Financial leverage = operating income / (operating income – interest expenses)

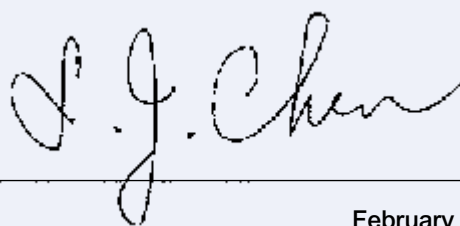
Note 3: The company listed on the TWSE or traded on the TPEX shall include in its analysis the updated financial data which are audited or reviewed by a CPA for the most recent period up to the publication date of the annual report: None.

Audit Committee's Review Report

The Board of Directors has prepared and submitted to us the Company's 2021 Business Report, Financial Statements, and proposal for earnings distribution. Financial Statements were audited by Ernst & Young and they issued an audited report accordingly. We, as the Audit Committee of the Company, have reviewed the Business Report, Financial Statements, and proposal for earnings distribution and do not find any discrepancies. According to Article 14-4 of the Securities and Exchange Act and Article 219 of the Company Act, we hereby submit this report.

To United Microelectronics Corporation 2022 Annual General Shareholders' Meeting

Chairman of the Audit Committee: Lih J. Chen

A handwritten signature in black ink, reading "L. J. Chen", is written above a horizontal line.

February 24, 2022

Independent Auditors' Report

To United Microelectronics Corporation

**UNITED MICROELECTRONICS CORPORATION
AND SUBSIDIARIES
CONSOLIDATED FINANCIAL STATEMENTS
WITH REPORT OF INDEPENDENT AUDITORS
FOR THE YEARS ENDED
DECEMBER 31, 2021 AND 2020**

Opinion

We have audited the accompanying consolidated balance sheets of United Microelectronics Corporation and its subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the years ended December 31, 2021 and 2020, and notes to the consolidated financial statements, including the summary of significant accounting policies (together "the consolidated financial statements").

In our opinion, based on our audits and the reports of other auditors (please refer to the *Other Matter – Making Reference to the Audits of Component Auditors* section of our report), the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2021 and 2020, and their consolidated financial performance and cash flows for the years ended December 31, 2021 and 2020, in conformity with the requirements of the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards, International Accounting Standards, Interpretations developed by the International Financial Reporting Interpretations Committee or the former Standing Interpretations Committee as endorsed and became effective by Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Company in accordance with the Norm of Professional Ethics for Certified Public Accountant of the Republic of China (the "Norm"), and we have fulfilled our other ethical responsibilities in accordance with the Norm. Based on our audits and the reports of other auditors, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of 2021 consolidated financial statements. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Address: No. 3 Li-Hsin Road II, Hsinchu Science Park, Hsinchu City, Taiwan, R.O.C.
Telephone: 886-3-578-2258

The reader is advised that these consolidated financial statements have been prepared originally in Chinese. In the event of a conflict between these financial statements and the original Chinese version or difference in interpretation between the two versions, the Chinese language financial statements shall prevail.

Valuation for slow-moving inventories

As of December 31, 2021, the Company's net inventories amounted to NT\$23,011 million. As the semiconductor industry is characterized by rapid changes in technology, management had 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. Therefore, we consider this is a key audit matter.

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.

Other Matter – Making Reference to the Audits of Component Auditors

We did not audit the financial statements of certain associates and joint ventures accounted for under the equity method. Those financial statements were audited by other auditors, whose reports thereon have been furnished to us, and our opinions expressed herein are based solely on the reports of other auditors. These associates and joint ventures under equity method amounted to NT\$39,806 million and NT\$29,507 million, representing 8.57% and 7.82% of consolidated total assets as of December 31, 2021 and 2020, respectively. The related shares of profits from the associates and joint ventures under the equity method amounted to NT\$8,380 million and NT\$6,686 million, representing 13.56% and 23.94% of the consolidated income before tax for the years ended December 31, 2021 and 2020, respectively, and the related shares of other comprehensive income from the associates and joint ventures under the equity method amounted to NT\$3,247 million and NT\$2,716 million, representing 5.48% and 8.52% of the consolidated total comprehensive income for the years ended December 31, 2021 and 2020, respectively.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the requirements of the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards, International Accounting Standards, Interpretations developed by the International Financial Reporting Interpretations Committee or the former Standing Interpretations Committee as endorsed and became effective by Financial Supervisory Commission of the Republic of China and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the ability to continue as a going concern of the Company, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including audit committee or supervisors, are responsible for overseeing the financial reporting process of the Company.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Company.

3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability to continue as a going concern of the Company. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the accompanying notes, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of 2021 consolidated financial statements and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other

We have audited and expressed an unqualified opinion including an Other Matter Paragraph on the parent company only financial statements of the Company as of and for the years ended December 31, 2021 and 2020.

/s/Chiu, Wan-Ju

/s/Hsu, Hsin-Min

Ernst & Young, Taiwan

February 24, 2022

Notice to Readers

The accompanying consolidated financial statements are intended only to present the consolidated financial position, results of operations and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such consolidated financial statements are those generally accepted and applied in the Republic of China.

Accordingly, the accompanying consolidated financial statements and report of independent auditors are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice.

English Translation of Consolidated Financial Statements Originally Issued in Chinese
UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars)

	As of December 31,	
	2021	2020
Assets		
Current assets		
Cash and cash equivalents	\$ 132,622,131	\$ 94,048,036
Financial assets at fair value through profit or loss, current	945,021	1,216,634
Financial assets at fair value through other comprehensive income, current	8,482,334	-
Financial assets measured at amortized cost, current	20,000	-
Contract assets, current	319,621	257,841
Accounts receivable, net	34,624,109	27,094,355
Accounts receivable-related parties, net	566,338	178,918
Other receivables	857,233	1,668,874
Current tax assets	2,597	37,598
Inventories, net	23,011,183	22,552,486
Prepayments	2,376,024	2,324,838
Other current assets	29,446,842	14,926,331
Total current assets	233,273,433	164,305,911
Non-current assets		
Financial assets at fair value through profit or loss, noncurrent	19,501,274	14,826,087
Financial assets at fair value through other comprehensive income, noncurrent	11,353,331	10,526,144
Investments accounted for under the equity method	41,692,084	31,225,677
Property, plant and equipment	129,941,703	132,774,663
Right-of-use assets	7,126,845	7,748,042
Intangible assets	3,644,933	4,877,913
Deferred tax assets	5,395,993	6,832,711
Prepayment for equipment	8,322,874	586,333
Refundable deposits	2,358,549	2,310,961
Other noncurrent assets-others	1,815,752	1,501,933
Total non-current assets	231,153,338	213,210,464
Total assets	\$ 464,426,771	\$ 377,516,375

(continued)

English Translation of Consolidated Financial Statements Originally Issued in Chinese
 UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
 CONSOLIDATED BALANCE SHEETS
 December 31, 2021 and 2020
 (Expressed in Thousands of New Taiwan Dollars)

	As of December 31,	
	2021	2020
Current liabilities		
Short-term loans	\$ 1,924,124	\$ 11,057,132
Financial liabilities at fair value through profit or loss, current	2,380,599	2,326
Contract liabilities, current	3,441,754	2,040,989
Notes and accounts payable	8,364,158	7,862,137
Other payables	21,417,215	17,877,736
Payables on equipment	7,875,927	5,448,921
Current tax liabilities	4,254,042	1,050,965
Lease liabilities, current	557,873	550,147
Other financial liabilities, current	12,718,616	-
Current portion of long-term liabilities	37,331,970	26,985,078
Other current liabilities	5,187,451	5,368,095
Total current liabilities	105,453,729	78,243,526
Non-current liabilities		
Contract liabilities, noncurrent	641,386	456,480
Bonds payable	23,077,699	16,690,474
Long-term loans	16,751,896	8,080,938
Deferred tax liabilities	1,763,159	1,631,459
Lease liabilities, noncurrent	4,510,881	5,026,717
Net defined benefit liabilities, noncurrent	3,877,321	4,162,654
Guarantee deposits	14,261,029	235,199
Other noncurrent liabilities-others	12,886,787	27,215,826
Total non-current liabilities	77,770,158	63,499,747
Total liabilities	183,223,887	141,743,273
Equity attributable to the parent company		
Capital		
Common stock	124,832,476	124,224,015
Additional paid-in capital		
Premiums	39,889,798	36,809,962
Treasury stock transactions	4,531,955	3,340,664
The differences between the fair value of the consideration paid or received from acquiring or disposing subsidiaries and the carrying amounts of the subsidiaries	466,457	466,457
Share of changes in net assets of associates and joint ventures accounted for using equity method	87,889	93,880
Employee stock options	-	88,504
Restricted stock for employees	2,238,128	2,170,666
Other	683,866	241,081
Retained earnings		
Legal reserve	15,734,416	12,536,526
Special reserve	8,164,648	11,022,314
Unappropriated earnings	91,476,725	56,617,520
Other components of equity		
Exchange differences on translation of foreign operations	(16,629,547)	(11,890,876)
Unrealized gains or losses on financial assets measured at fair value through other comprehensive income	11,715,333	3,726,229
Unearned employee compensation	(2,212,441)	(3,667,395)
Treasury stock		
Unrealized gains or losses on financial assets measured at fair value through other comprehensive income	-	(119,801)
Total equity attributable to the parent company	280,979,703	235,659,746
Non-controlling interests		
Total equity	281,202,884	235,773,102
Total liabilities and equity	\$ 464,426,771	\$ 377,516,375

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

English Translation of Consolidated Financial Statements Originally Issued in Chinese
 UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
 For the years ended December 31, 2021 and 2020
 (Expressed in Thousands of New Taiwan Dollars, Except for Earnings per Share)

	Notes	For the years ended December 31,	
		2021	2020
Operating revenues	4,6(20), 7	\$ 213,011,018	\$ 176,820,914
Operating costs	4, 6(5), 6(10), 6(15), 6(19), 6(20), 6(21), 7	(140,961,389)	(137,823,813)
Gross profit		72,049,629	38,997,101
Operating expenses	4, 6(4), 6(10), 6(15), 6(19), 6(21), 7		
Sales and marketing expenses		(4,671,599)	(4,152,242)
General and administrative expenses		(7,989,860)	(6,664,166)
Research and development expenses		(12,934,836)	(12,895,501)
Expected credit impairment gains		6,121	468,325
Subtotal		(25,590,174)	(23,243,584)
Net other operating income and expenses	4, 6(8), 6(16), 6(22)	5,226,831	6,253,890
Operating income		51,686,286	22,007,407
Non-operating income and expenses			
Interest income	4	575,719	737,913
Other income	4	1,653,006	698,155
Other gains and losses	4, 6(23), 6(28)	871,554	(11,674)
Finance costs	6(23)	(1,962,930)	(2,073,433)
Share of profit or loss of associates and joint ventures	4, 6(6)	8,495,043	6,667,952
Exchange gain, net	4	484,726	-
Exchange loss, net	4	-	(100,141)
Subtotal		10,117,118	5,918,772
Income from continuing operations before income tax		61,803,404	27,926,179
Income tax expense	4, 5, 6(25)	(6,691,394)	(745,767)
Net income		55,112,010	27,180,412
Other comprehensive income (loss)	6(24)		
Items that will not be reclassified subsequently to profit or loss			
Remeasurements of defined benefit pension plans	4, 6(15)	(197,477)	(192,581)
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income		5,811,342	4,815,361
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss		3,361,023	2,824,216
Income tax related to items that will not be reclassified subsequently	4, 5, 6(25)	(104,643)	54,424
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign operations		(4,741,016)	(2,920,280)
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss		(24,474)	60,221
Income tax related to items that may be reclassified subsequently	4, 5, 6(25)	26,800	44,173
Total other comprehensive income (loss)		4,131,555	4,685,534
Total comprehensive income (loss)		\$ 59,243,565	\$ 31,865,946
Net income (loss) attributable to:			
Shareholders of the parent		\$ 55,780,255	\$ 29,189,489
Non-controlling interests		(668,245)	(2,009,077)
		\$ 55,112,010	\$ 27,180,412
Comprehensive income (loss) attributable to:			
Shareholders of the parent		\$ 59,911,829	\$ 33,748,370
Non-controlling interests		(668,264)	(1,882,424)
		\$ 59,243,565	\$ 31,865,946
Earnings per share (NTD)	4, 6(26)		
Earnings per share-basic		\$ 4.57	\$ 2.42
Earnings per share-diluted		\$ 4.48	\$ 2.35

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

English Translation of Consolidated Financial Statements Originally Issued in Chinese
 UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
 CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
 For the years ended December 31, 2021 and 2020
 (Expressed in Thousands of New Taiwan Dollars)

	Equity Attributable to the Parent Company												
	Capital			Retained Earnings				Other Components of Equity				Total Equity	
Notes	Common Stock	Collected in Advance	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
Balance as of January 1, 2020	\$ 117,243,187	\$ 332,611	\$ 39,550,394	\$ 11,572,579	\$ 14,513,940	\$ 34,733,761	\$ (8,948,337)	\$ (2,073,977)	\$ -	\$ (19,801)	\$ 206,804,357	\$ 410,065	\$ 207,214,422
Appropriation and distribution of 2019 retained earnings				963,947		(963,947)							
Cash dividends													
Special reserve reversed													
Net income (loss) for the year ended December 31, 2020													
Other comprehensive income (loss) for the year ended December 31, 2020													
Total comprehensive income (loss)													
Share-based payment transaction	2,000,300		2,628,061							1,678,272	2,639,238		2,639,238
Conversion of convertible bonds	4,980,528	(332,611)	1,862,366								6,510,283		6,510,283
Treasury stock acquired	4,618		(29,388)			33,378		(33,378)		(1,678,272)	(29,388)		(1,678,272)
Share of changes in net assets of associates and joint ventures accounted for using equity method													
Disposal of subsidiaries													
The differences between the fair value of the consideration paid or received from acquiring or disposing subsidiaries and the carrying amounts of the subsidiaries													
Changes in subsidiaries' ownership													
Adjustments for dividends subsidiaries received from parent company													
Disposal of equity instruments investments measured at fair value through other comprehensive income													
Non-Controlling Interests													
Others													
Balance as of December 31, 2020	124,224,015		43,211,214	12,536,526	11,022,314	56,617,520	(11,890,876)	3,726,229	(3,667,395)	(19,801)	235,659,746	113,356	235,773,102
Appropriation and distribution of 2020 retained earnings													
Legal reserve													
Cash dividends				3,197,890		(3,197,890)							
Special reserve reversed													
Net income (loss) for the year ended December 31, 2021													
Other comprehensive income (loss) for the year ended December 31, 2021													
Total comprehensive income (loss)													
Share-based payment transaction													
Share of changes in net assets of associates and joint ventures accounted for using equity method													
Changes in subsidiaries' ownership													
Adjustments for dividends subsidiaries received from parent company													
Non-Controlling Interests													
Share exchange													
Others													
Balance as of December 31, 2021	\$ 124,832,476	\$ -	\$ 47,898,093	\$ 15,734,416	\$ 8,164,648	\$ 91,476,725	\$ (16,629,547)	\$ 11,715,333	\$ (2,212,441)	\$ -	\$ 280,979,703	\$ 223,181	\$ 281,202,884

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

English Translation of Consolidated Financial Statements Originally Issued in Chinese

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars)

	For the years ended December 31,	
	2021	2020
Cash flows from operating activities:		
Net income before tax	\$ 61,803,404	\$ 27,926,179
Adjustments to reconcile net income before tax to net cash provided by operating activities:		
Depreciation	44,179,632	46,163,693
Amortization	2,894,942	2,744,383
Expected credit impairment gains	(6,121)	(468,325)
Net gain of financial assets and liabilities at fair value through profit or loss	(2,892,470)	(2,011,403)
Interest expense	1,868,089	2,004,418
Interest income	(575,719)	(737,913)
Dividend income	(1,653,006)	(698,155)
Share-based payment	1,745,745	959,219
Share of profit of associates and joint ventures	(8,495,043)	(6,667,952)
Gain on disposal of property, plant and equipment	(143,735)	(1,137,320)
Loss on disposal of investments	10,964	60,940
Exchange gain on financial assets and liabilities	(505,434)	(1,386,657)
Loss (gain) on lease modification	6	(1,765)
Amortization of deferred government grants	(4,069,055)	(3,994,818)
Others	243,447	-
Income and expense adjustments	32,602,242	34,828,345
Changes in operating assets and liabilities:		
Financial assets and liabilities at fair value through profit or loss	119,904	876,876
Contract assets	(81,887)	(49,108)
Notes receivable and accounts receivable	(8,590,622)	(1,501,100)
Other receivables	134,111	(224,488)
Inventories	(871,589)	(1,014,039)
Prepayments	(299,418)	3,053,557
Other current assets	71,566	(71,573)
Contract fulfillment costs	(71,828)	4,200
Contract liabilities	1,637,105	1,072,225
Notes and accounts payable	688,652	(944,909)
Other payables	4,092,040	2,338,043
Other current liabilities	(506,837)	(593,710)
Net defined benefit liabilities	(482,809)	(55,300)
Other noncurrent liabilities-others	71,430	53,743
Cash generated from operations	90,315,464	65,698,941
Interest received	505,379	758,235
Dividend received	3,006,829	1,041,972
Interest paid	(1,539,069)	(1,735,327)
Income tax paid	(1,936,712)	(18,629)
Net cash provided by operating activities	90,351,891	65,745,192

(continued)

English Translation of Consolidated Financial Statements Originally Issued in Chinese

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars)

	For the years ended December 31,	
	2021	2020
Cash flows from investing activities:		
Acquisition of financial assets at fair value through profit or loss	\$ (921,916)	\$ (1,118,572)
Proceeds from disposal of financial assets at fair value through profit or loss	439,145	326,127
Acquisition of financial assets measured at amortised cost	(20,000)	-
Acquisition of investments accounted for under the equity method	-	(59,900)
Proceeds from disposal of investments accounted for under the equity method	-	30,611
Increase in prepayment for investments	(5,025)	-
Proceeds from capital reduction and liquidation of investments	42,150	27,200
Disposal of subsidiary	714,358	(785,772)
Acquisition of property, plant and equipment	(48,034,633)	(26,345,302)
Proceeds from disposal of property, plant and equipment	216,314	1,737,125
Increase in refundable deposits	(274,015)	(160,254)
Decrease in refundable deposits	220,750	448,893
Acquisition of intangible assets	(1,924,924)	(2,009,031)
Government grants related to assets acquisition	2,498,984	242,264
Increase in other financial assets	(37,121,310)	(18,422,183)
Decrease in other financial assets	22,132,639	5,984,342
Increase in other noncurrent assets-others	(125,917)	(7,049)
Net cash used in investing activities	(62,163,400)	(40,111,501)
Cash flows from financing activities:		
Increase in short-term loans	7,205,015	16,271,732
Decrease in short-term loans	(16,179,231)	(17,205,124)
Proceeds from bonds issued	25,760,800	-
Bonds issuance costs	(57,108)	-
Redemption of bonds	(2,000,000)	(13,702,875)
Proceeds from long-term loans	15,560,661	13,528,900
Repayments of long-term loans	(11,472,124)	(13,391,980)
Increase in guarantee deposits	14,812,963	303,720
Decrease in guarantee deposits	(593,555)	(363,539)
Cash payments for the principal portion of the lease liability	(699,680)	(726,626)
Cash dividends	(19,871,129)	(9,765,694)
Treasury stock acquired	-	(1,678,272)
Treasury stock sold to employees	-	1,677,900
Change in non-controlling interests	23,430	(551,608)
Others	65	2,120
Net cash provided by (used in) financing activities	12,490,107	(25,601,346)
Effect of exchange rate changes on cash and cash equivalents	(2,104,503)	(1,476,786)
Net increase (decrease) in cash and cash equivalents	38,574,095	(1,444,441)
Cash and cash equivalents at beginning of year	94,048,036	95,492,477
Cash and cash equivalents at end of year	\$ 132,622,131	\$ 94,048,036

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the Years Ended December 31, 2021 and 2020

(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 Road II, Hsinchu Science Park, Hsinchu City, Taiwan. The principal operating activities of UMC and its subsidiaries (collectively as "the Company") are described in Notes 4(3) and 14.

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

The consolidated financial statements of the Company were authorized for issue in accordance with a resolution of the Board of Directors' meeting on February 24, 2022.

3. NEWLY ISSUED OR REVISED STANDARDS AND INTERPRETATIONS

(1) The Company applied International Financial Reporting Standards, International Accounting Standards, and Interpretations issued, revised or amended which are endorsed by Financial Supervisory Commission ("FSC") and become effective for annual periods beginning on or after January 1, 2021. There were no newly adopted or revised standards and interpretations that have material impact on the Company's financial position and performance.

(2) Standards issued by International Accounting Standards Board ("IASB") which are endorsed by FSC, but not yet adopted by the Company are listed below:

New, Revised or Amended Standards and Interpretations	Effective Date issued by IASB
Narrow-scope amendments of IFRS, including Amendments to IFRS 3, Amendments to IAS 16, Amendments to IAS 37	January 1, 2022
Annual Improvements to IFRS Standards 2018 - 2020: Amendments to IFRS 1 "First-time Adoption of International Financial Reporting Standards" Amendments to IFRS 9 "Financial Instruments" Amendments to IFRS 16 "Leases"	January 1, 2022

a. Narrow-scope amendments of IFRS, including Amendments to IFRS 3, Amendments to IAS 16, Amendments to IAS 37

i. Updating a Reference to the Conceptual Framework (Amendments to IFRS 3)

The amendments updated IFRS 3 by replacing a reference to an old version of the Conceptual Framework for Financial Reporting with a reference to the latest version, which was issued in March 2018. The amendments also added an exception to the recognition principle of IFRS 3 to avoid the issue of potential "day 2" gains or losses arising for liabilities and contingent liabilities. Besides, the amendments clarify existing guidance in IFRS 3 for contingent assets that would not be affected by replacing the reference to the Conceptual Framework.

ii. Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16)

The amendments prohibit a company from deducting from the cost of property, plant and equipment amounts received from selling items produced while the company is preparing the asset for its intended use. Instead, a company will recognise such sales proceeds and related cost in profit or loss.

iii. Onerous Contracts - Cost of Fulfilling a Contract (Amendments to IAS 37)

The amendments clarify what costs a company should include as the cost of fulfilling a contract when assessing whether a contract is onerous.

b. Annual Improvements to IFRS Standards 2018 - 2020

i. Amendment to IFRS 1 First-time Adoption of International Financial Reporting Standards

The amendment simplifies the application of IFRS 1 by a subsidiary that becomes a first-time adopter after its parent in relation to the measurement of cumulative translation differences.

ii. Amendment to IFRS 9 Financial Instruments ("IFRS 9")

The amendment clarifies the fees a company includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability.

iii. Amendment to Illustrative Examples Accompanying IFRS 16 Leases

The amendment to Illustrative Example 13 accompanying IFRS 16 modifies the treatment of lease incentives relating to lessee's leasehold improvements.

The potential effects of adopting the standards or interpretations issued by IASB but not yet endorsed by FSC on the Company's financial statements in future periods are summarized as below:

c. IFRS 10 "Consolidated Financial Statements" ("IFRS 10") and IAS 28 "Investments in Associates and Joint Ventures" - Sale or Contribution of Assets between an Investor and its Associate or Joint Ventures (Amendment) ("IAS 28")
 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.

d. IFRS 17 "Insurance Contracts" ("IFRS 17")

IFRS 17 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects (including recognition, measurement, presentation and disclosure requirements). The core of IFRS 17 is the General (building block) Model, under this model, on initial recognition, an entity shall measure a group of insurance contracts at the total of the fulfilment cash flows and the contractual service margin. The carrying amount of a group of insurance contracts at the end of each reporting period shall be the sum of the liability for remaining coverage and the liability for incurred claims.

Other than the General Model, the standard also provides a specific adaptation for contracts with direct participation features (the Variable Fee Approach) and a simplified approach (Premium Allocation Approach) mainly for short-duration contracts.

IFRS 17 was issued in May 2017 and it was amended in June 2020. The amendments include deferral of the date of initial application of IFRS 17 by two years to annual beginning on or after 1 January 2023 (from the original effective date of 1 January 2021); provide additional transition reliefs; simplify some requirements to reduce the costs of applying IFRS 17 and revise some requirements to make the results easier to explain. IFRS 17 replaces an interim Standard – IFRS 4 Insurance Contracts – from annual reporting periods beginning on or after 1 January 2023.

The abovementioned standards and interpretations were issued by IASB and endorsed by FSC so that they are applicable for annual periods beginning on or after January 1, 2022. Apart from the impact of Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37) which is described below, the rest of the standards listed are not expected to have material impact on the Company's financial position and performance.

The Company expect to apply the amended IAS 37 to contracts which it has not yet fulfilled all its obligation at the beginning of the annual reporting period since 2022 (the date of initial application). The adoption of the amendments has no material impact on the Company. The cumulative effect of initially applying the amendments will be recognized as adjustments to the provisions (classified under other current liabilities), retained earnings and non-controlling interests, respectively at the date of initial application.

(3) Standards issued by IASB but not yet endorsed by FSC (the effective dates are to be determined by FSC) are listed below:

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 Ventures	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2023
Amendments to IAS 1 "Presentation of Financial Statements" – Classification of Liabilities as Current or Non-current	January 1, 2023
Amendments to IAS 1 "Presentation of Financial Statements" – Disclosure Initiative - Accounting Policies	January 1, 2023
Amendments to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" – Definition of Accounting Estimates	January 1, 2023
Amendment to IAS 12 "Income Taxes" – Deferred Tax related to Assets and Liabilities arising from a Single Transaction	January 1, 2023

(3) General Description of Reporting Entitya. 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 TIFRSs. 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 are as follows:

As of December 31, 2021 and 2020

Investor	Subsidiary	Business nature	Percentage of ownership (%)	
			2021	2020
UMC	UMC GROUP (USA)	IC Sales	100.00	100.00
UMC	UNITED MICROELECTRONICS (EUROPE) B.V.	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.	Marketing support activities	100.00	100.00

e. IAS 1 "Presentation of Financial Statements" ("IAS 1") - Classification of Liabilities as Current or Non-current (Amendment)

These are the amendments to paragraphs 69-76 of IAS 1 presentation of financial statements and the amended paragraphs related to the classification of liabilities as current or non-current.

f. IAS 1 "Presentation of Financial Statements" ("IAS 1") - Disclosure Initiative - Accounting Policies (Amendment)

The amendments improve accounting policy disclosures that to provide more useful information to investors and other primary users of the financial statements.

g. IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" ("IAS 8") - Definition of Accounting Estimates (Amendment)

The amendments introduce the definition of accounting estimates and included other amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors to help companies distinguish changes in accounting estimates from changes in accounting policies.

h. IAS 12 "Income Taxes" ("IAS 12") - Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendment)

The amendments narrow the scope of the recognition exemption in paragraphs 15 and 24 of IAS 12 so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences.

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

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES(1) Statement of Compliance

The Company's consolidated financial statements were prepared in accordance with Regulations Governing the Preparation of Financial Reports by Securities Issuers (Regulations), IFRSs, IASs, IFRIC and SIC, which are endorsed by FSC (TIFRSs).

(2) Basis of Preparation

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

(4) Business Combinations and Goodwill

Investor	Subsidiary	Business nature	Percentage of ownership (%)	
			2021	2020
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.	Sales and manufacturing of integrated circuits	100.00	100.00
UMC and FORTUNE	WAVETEK MICROELECTRONICS CORPORATION (WAVETEK)	Sales and manufacturing of integrated circuits	80.37	81.40
TLC	SOARING CAPITAL CORP.	Investment holding	100.00	100.00
SOARING CAPITAL CORP.	UNTRUTH 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	100.00	100.00
TERA ENERGY	EVERRICH ENERGY INVESTMENT (HK) LIMITED (EVERRICH-HK)	Investment holding	100.00	100.00
EVERRICH-HK	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
OMNI	UMC TECHNOLOGY JAPAN CO., LTD.	Semiconductor manufacturing technology development and consulting services	-	100.00
WAVETEK	WAVETEK MICROELECTRONICS INVESTMENT (SAMOA) LIMITED (WAVETEK-SAMOA)	Investment holding	100.00	100.00
WAVETEK-SAMOA	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.	Integrated circuits design services	100.00	100.00
UNITED MICROCHIP CORPORATION and HEJIAN	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD. (USCXM)	Sales and manufacturing of integrated circuits	69.95	67.76

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) 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 an unconditional right to defer settlement of the liability for at least twelve months after the reporting date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

All other liabilities are classified as non-current.

(8) 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.

(9) Financial Instruments

Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument.

The Company determines the classification of its financial assets at initial recognition. In accordance with IFRS 9 and the Regulations, 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.

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

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 recognized initially at fair value and subsequently measured at fair value with changes in fair value 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.

The debt instruments are measured at fair value through other comprehensive income if both of the following conditions are met:

- (i) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets 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 changes in the fair value of such financial assets at fair value through other comprehensive income are recognized in other comprehensive income. Before derecognition, impairment gains or losses, interest revenue and foreign exchange gains and losses are recognized in profit or loss. When the financial assets are derecognized the cumulative gain or loss previously recognized in other comprehensive income is reclassified from other comprehensive income to profit or loss as a reclassification adjustment.

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.

- 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.

(10) Hedge Accounting

Cash flow hedges

The Company manages exposures arising from foreign currency exchange risk. With the adoption of IFRS 9, the Company designates a hedging relationship between the hedging instrument and the hedged item with the existence of an economic relationship and determines the hedge ratio to meet the hedge effectiveness. The Company designates certain hedging instruments to partially hedge the foreign currency exchange rate risks associated with certain highly probable forecast transactions. The separate component of equity associated with the hedged item is adjusted to the lower of the following (in absolute amounts):

- a. the cumulative gain or loss on the hedging instrument from inception of the hedge; and
- b. the cumulative change in fair value (present value) of the expected future cash flows on the hedged item from inception of the hedge.

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.

The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognized in other comprehensive income, whereas the ineffective portion of the change in the fair value of the hedging instrument is recognized directly in profit or loss. If a hedge of a forecast transaction subsequently results in the recognition of a non-financial asset or a non-financial liability, the associated gains or losses that were recognized in other comprehensive income are included in the initial cost of the asset or liability.

The Company prospectively discontinues hedge accounting only when the hedging relationship ceases to meet the qualifying criteria; for instance when the hedging instrument expires or is sold, terminated or exercised.

(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, a proportionate share of the gain or loss previously recognized in other comprehensive income is reclassified to profit and loss or other appropriate account(s). Any remaining difference will be charged to additional paid-in capital. When a change in equity of an associate does not result from its profit or loss or other comprehensive income, and such changes do not affect the Company's ownership percentage, the Company recognizes its proportionate share of all related changes in equity. Accordingly, upon disposal of the associate, the Company reclassifies the aforementioned additional paid-in capital to profit or loss on a pro rata basis.

(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.

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, and any borrowing costs incurred for long-term construction projects are capitalized if the recognition criteria are met. 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 estimated useful lives of the assets are as follows:

Buildings	7-56 years
Machinery and equipment	6-7 years
Transportation equipment	6-7 years
Furniture and fixtures	3-7 years
Leasehold improvement	The shorter of lease terms or useful lives

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 (3-6 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 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.

In addition, the liability component of convertible bonds is classified as a current liability if within 12 months the bondholders may exercise the put right. After the put right expires, the liability component of the convertible bonds should be reclassified as a non-current liability if it meets the definition of a non-current liability in all other respects.

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.

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

Convertible bonds

UMC evaluates the terms of the convertible bonds issued to determine whether it contains both a liability and an equity component. Furthermore, UMC assesses if the economic characteristics and risks of the put and call options embedded in the convertible bonds are closely related to the economic characteristics and risk of the host contract before separating the equity element.

For the liability component excluding the derivatives, its fair value is determined based on the effective interest rate applied at that time by the market to instruments of comparable credit status. The liability component is classified as a financial liability measured at amortized cost using the effective interest method before the instrument is converted or settled. For the embedded derivative that is not closely related to the host contract, it is classified as a liability component and subsequently measured at fair value through profit or loss unless it qualifies as an equity component. The equity component is recognized initially at the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Its carrying amount is not remeasured in the subsequent accounting periods. If the convertible bond issued does not have an equity component, it is accounted for as a hybrid instrument in accordance with the requirements under IFRS 9.

If the convertible bondholders exercise their conversion right before maturity, UMC shall adjust the carrying amount of the liability component. The adjusted carrying amount of the liability component at conversion and the carrying amount of equity component are credited to common stock and additional paid-in capital-premiums. No gain or loss is recognized upon bond conversion.

(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) 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.

(21) 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.

(22) Revenue Recognition

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.

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.

The additional income tax for undistributed earnings is recognized as income tax expense in the subsequent year when the distribution proposal is approved by the shareholders' meeting.

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, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss;
- 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, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss;
- 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.

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.

Interest income

For financial assets measured at amortized cost and financial assets at fair value through other comprehensive income, interest income is recorded using the effective interest method and recognized in profit or loss.

Dividends

Revenue is recognized when the Company's right to receive the dividends is established, which is generally when shareholders approve the dividend.

(23) Income Tax

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

(24) 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 of outstanding shares 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. Given the global economic climate and unforeseen effects from COVID-19 pandemic, the process of estimation has become more challenging. 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 12 for more details.

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.

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.

(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(5). 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.

(3) Income Tax

Uncertainties exist with respect to the interpretation of complex tax regulations, changes in tax laws, and the amount and timing of future taxable income. The Company establishes provisions, based on reasonable estimates, for possible consequences of audits by the tax authorities of the respective countries in which it operates. The amount of such provisions is based on various factors, such as experience of previous tax audits and different interpretations of tax regulations made by the taxable entity and the responsible tax authority. Such differences of interpretation may arise on a wide variety of issues depending on the conditions prevailing in the respective domicile of the Company.

Deferred tax assets are recognized for all carryforward of unused tax losses, tax credits and deductible temporary differences to the extent that it is probable that future taxable profit will be available or there are sufficient taxable temporary differences against which the unused tax losses, unused tax credits or deductible temporary differences can be utilized. The amount of deferred tax assets determined to be recognized is based upon the likely timing and the level of future taxable profits and taxable temporary differences. Please refer to Note 6(25) for more details on unrecognized deferred tax assets.

6. CONTENTS OF SIGNIFICANT ACCOUNTS(1) Cash and Cash Equivalents

	As of December 31,	
	2021	2020
Cash on hand and petty cash	\$5,684	\$5,765
Checking and savings accounts	33,738,883	20,163,007
Time deposits	88,876,572	66,939,601
Repurchase agreements collateralized by government bonds and corporate notes	10,000,992	6,939,663
Total	<u>\$132,622,131</u>	<u>\$94,048,036</u>

(2) Financial Assets at Fair Value through Profit or Loss

	As of December 31,	
	2021	2020
Financial assets mandatorily measured at fair value through profit or loss		
Common stocks	\$13,289,438	\$9,654,682
Preferred stocks	2,602,622	3,299,004
Funds	3,862,932	2,674,476
Convertible bonds	691,303	412,175
Forward contracts	-	2,384
Total	<u>\$20,446,295</u>	<u>\$16,042,721</u>

Current	\$945,021	\$1,216,634
Non-current	19,501,274	14,826,087
Total	<u>\$20,446,295</u>	<u>\$16,042,721</u>

UMC's subsidiary, FORTUNE VENTURE CAPITAL CORP., exchanged shares with CHIPBOND TECHNOLOGY CORPORATION (CHIPBOND) on November 5, 2021, and obtained 14 million common shares newly issued by CHIPBOND. Please refer to Note 6(18) for further information.

(3) Financial Assets at Fair Value through Other Comprehensive Income

	As of December 31,	
	2021	2020
Equity instruments		
Common stocks	\$19,683,806	\$10,355,999
Preferred stocks	151,859	170,145
Total	<u>\$19,835,665</u>	<u>\$10,526,144</u>
Current	\$8,482,334	\$-
Non-current	11,353,331	10,526,144
Total	<u>\$19,835,665</u>	<u>\$10,526,144</u>

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. UMC exchanged shares with CHIPBOND on November 5, 2021, and obtained 53 million common shares newly issued by CHIPBOND for the strategic cooperation between the Company and CHIPBOND. Please refer to Note 6(18) for further information.

b. Dividend income recognized in profit or loss from equity instruments designated as fair value through other comprehensive income are listed below:

	For the years ended	
	December 31,	
	2021	2020
Held at end of period	\$465,679	\$286,795
Derecognized during the period	-	-
Total	\$465,679	\$286,795

c. In consideration of the Company's investment strategy, the Company disposed and derecognized certain investments designated as fair value through other comprehensive income. Details on derecognition of such investments are listed below:

	For the years ended	
	December 31,	
	2021	2020
Fair value on the date of disposal	\$-	\$9,012,450
Cumulative gains (losses) reclassified to retained earnings due to derecognition	\$-	\$1,825,365

Please refer to UNIMICRON in Note 6(6) for further information of 2020.

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) Accounts Receivable, Net

	As of December 31,	
	2021	2020
Accounts receivable	\$34,818,600	\$27,300,439
Less: loss allowance	(194,491)	(206,084)
Net	\$34,624,109	\$27,094,355

Aging analysis of accounts receivable:

	As of December 31,	
	2021	2020
Neither past due	\$30,758,397	\$23,801,905
Past due:		
≤ 30 days	3,294,617	2,730,865
31 to 60 days	138,854	95,398
61 to 90 days	8,026	13,258
91 to 120 days	43,413	23,774
≥ 121 days	575,293	635,239
Subtotal	4,060,203	3,498,534
Total	\$34,818,600	\$27,300,439

Movement of loss allowance for accounts receivable:

	For the years ended	
	December 31,	
	2021	2020
Beginning balance	\$206,084	\$697,590
Net recognize (reversal) for the period	(11,593)	(491,506)
Ending balance	\$194,491	\$206,084

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, 2021 and 2020, 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.

(5) Inventories, Net

	As of December 31,	
	2021	2020
Raw materials	\$3,371,520	\$5,507,002
Supplies and spare parts	5,106,770	4,290,672
Work in process	14,043,143	11,872,971
Finished goods	489,750	881,841
Total	\$23,011,183	\$22,552,486

a. For the years ended December 31, 2021 and 2020, the Company recognized NT\$135,856 million and NT\$133,143 million, respectively, in operating costs, of which NT\$426 million and NT\$272 million were related to reversal of write-down of inventories.

b. None of the aforementioned inventories were pledged.

(6) Investments Accounted for Under the Equity Method

a. Details of investments accounted for under the equity method are as follows:

	As of December 31,		Percentage of ownership or voting rights	Amount	Percentage of ownership or voting rights
	2021	2020			
<u>Listed companies</u>					
FARADAY TECHNOLOGY CORP. (FARADAY) (Note A)	\$1,779,618	\$1,589,448	13.78		13.78
UNIMICRON TECHNOLOGY CORP. (UNIMICRON) (Note B)	10,418,777	9,107,377	13.30		13.36
<u>Unlisted companies</u>					
MTIC HOLDINGS PTE. LTD. (Note C)	-	26,966	45.44		45.44
PURIUMFIL INC.	7,253	6,206	44.45		44.45
UNITECH CAPITAL INC.	976,559	823,185	42.00		42.00
TRIKNIGHT CAPITAL CORPORATION	4,122,087	2,488,169	40.00		40.00
HSUN CHIEH CAPITAL CORP.	229,598	195,675	40.00		40.00
HSUN CHIEH INVESTMENT CO., LTD.	14,092,662	10,165,563	36.49		36.49
YANN YUAN INVESTMENT CO., LTD.	9,741,234	6,551,136	28.22		30.87
UNITED LED CORPORATION HONG KONG LIMITED	98,954	96,026	25.14		25.14
VSENSE CO., LTD. (Note C)	-	941	23.98		23.98
TRANSLINK CAPITAL PARTNERS I, L.P. (Note D)	225,342	174,985	10.38		10.38
Total	\$41,692,084	\$31,225,677			

Note A: Beginning from June 2015, the Company accounts for its investment in FARADAY as an associate given the fact that the Company obtained the ability to exercise significant influence over FARADAY through representation on its Board of Directors.

Note B: Beginning from June 2020, the Company accounts for its investment in UNIMICRON as an associate given the fact that the Company obtained the ability to exercise significant influence over UNIMICRON through representation on its Board of Directors. UNIMICRON was previously measured at fair value through other comprehensive income and reclassified as investments accounted for under the equity method. Cumulative fair value changes that was previously recognized in other comprehensive income up to reclassification date was reclassified to retained earnings in the current period.

Note C: When the Company's share of losses of an associate or joint venture equals or exceeds its interest in that associate or joint venture, 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 D: The Company follows international accounting practices in equity accounting for limited partnerships and uses the equity method to account for these investees.

The carrying amount of investments accounted for using the equity method for which there are published price quotations amounted to NT\$12,198 million and NT\$10,697 million, as of December 31, 2021 and 2020, respectively. The fair value of these investments were NT\$53,491 million and NT\$18,885 million as of December 31, 2021, and 2020, respectively.

Certain investments accounted for under the equity method were audited by other independent accountants. Shares of profit or loss of these associates and joint ventures amounted to NT\$8,380 million and NT\$6,686 million for the years ended December 31, 2021 and 2020, respectively. Share of other comprehensive income (loss) of these associates and joint ventures amounted to NT\$3,247 million and NT\$2,716 million for the years ended December 31, 2021 and 2020, respectively. The balances of investments accounted for under the equity method were NT\$39,806 million and NT\$29,507 million as of December 31, 2021 and 2020, respectively.

(8) Property, Plant and Equipment

2021

a. Assets Used by the Company:

Cost:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Leasehold improvement	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2021	\$1,690,613	\$37,257,510	\$871,569,325	\$54,898	\$6,908,778	\$63,774	\$16,529,296	\$934,074,194
Additions	-	-	-	-	-	-	38,284,083	38,284,083
Disposals	-	(20,455)	(3,587,695)	(791)	(5,010)	-	(22,822)	(3,636,773)
Transfers and reclassifications	(96,439)	114,081	35,718,256	2,158	433,504	204	(31,692,267)	4,479,497
Exchange effect	(102,831)	(523,656)	(5,893,187)	(306)	(32,098)	(2,696)	(242,257)	(6,797,051)
As of December 31, 2021	\$1,491,343	\$36,827,480	\$897,806,699	\$55,959	\$7,305,174	\$61,282	\$22,856,033	\$966,403,970

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Leasehold improvement	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2021	\$-	\$19,851,288	\$777,687,345	\$42,732	\$5,715,339	\$49,963	\$-	\$803,346,667
Depreciation	-	1,474,241	41,329,061	5,310	531,085	7,247	-	43,346,944
Disposals	-	(20,455)	(3,580,477)	(791)	(5,003)	-	-	(3,606,726)
Transfers and reclassifications	-	1,645	125,413	-	-	-	-	127,058
Exchange effect	-	(121,750)	(4,656,461)	(143)	(19,038)	(2,085)	-	(4,799,477)
As of December 31, 2021	\$-	\$21,184,969	\$810,904,881	\$47,108	\$6,222,383	\$55,125	\$-	\$838,414,466
Net carrying amount:	\$1,491,343	\$15,642,511	\$86,901,818	\$8,851	\$1,082,791	\$6,157	\$22,856,033	\$127,989,504

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 owns significant influence over the aforementioned associates.

None of the aforementioned associates and joint ventures 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, 2021 and 2020 were NT\$(30) million and NT\$(53) 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,	
	2021	2020
Income (loss) from continuing operations	\$8,495,043	\$6,667,952
Other comprehensive income (loss)	3,367,033	2,914,560
Total comprehensive income (loss)	\$11,862,076	\$9,582,512

c. One of UMC's associates, HSUN CHIEH INVESTMENT CO., LTD., held 441 million shares of UMC's stock as of December 31, 2021 and 2020, respectively. Another associate, YANN YUAN INVESTMENT CO., LTD., held 160 million and 201 million shares of UMC's stock as of December 31, 2021 and 2020, respectively.

(7) Other current assets

	As of December 31,	
	2021	2020
Time deposits with original maturities of over three months to a year	\$28,834,684	\$14,305,779
Costs to fulfill a contract	612,158	548,986
Others	-	71,566
Total	\$29,446,842	\$14,926,331

b. Assets Subject to Operating Leases:

Cost:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2021	\$459,622	\$2,451,311	\$125,413	\$1,315,633	\$4,351,979
Transfers and reclassifications	96,439	(18,542)	(125,413)	-	(47,516)
Exchange effect	(7,051)	(10,380)	-	(2,930)	(20,361)
As of December 31, 2021	\$549,010	\$2,422,389	\$-	\$1,312,703	\$4,284,102

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2021	\$-	\$1,007,545	\$125,413	\$1,171,885	\$2,304,843
Depreciation	-	94,130	-	67,347	161,477
Transfers and reclassifications	-	(1,645)	(125,413)	-	(127,058)
Exchange effect	-	(4,917)	-	(2,442)	(7,359)
As of December 31, 2021	\$-	\$1,095,113	\$-	\$1,236,790	\$2,331,903
Net carrying amount:	\$549,010	\$1,327,276	\$-	\$75,913	\$1,952,199

2020

a. Assets Used by the Company:

Cost:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Leasehold improvement	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2020	\$1,692,123	\$38,437,588	\$865,547,572	\$65,909	\$6,842,124	\$65,883	\$5,583,516	\$918,234,715
Additions	-	-	-	-	-	-	26,420,747	26,420,747
Disposals	-	(1,316,833)	(5,305,744)	(10,856)	(169,716)	-	(12,938)	(6,816,087)
Transfers and reclassifications	-	109,586	17,142,065	-	246,622	62	(15,528,464)	1,969,871
Exchange effect	(1,510)	27,169	(5,814,568)	(155)	(10,232)	(2,171)	66,435	(5,735,052)
As of December 31, 2020	\$1,690,613	\$37,257,510	\$871,569,325	\$54,898	\$6,908,778	\$63,774	\$16,529,296	\$934,074,194

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Leasehold improvement	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2020	\$-	\$18,950,520	\$745,722,965	\$47,794	\$5,383,434	\$46,147	\$-	\$770,150,860
Depreciation	-	1,688,455	43,089,767	5,334	513,055	7,894	-	45,304,505
Disposals	-	(788,342)	(530,137)	(10,412)	(169,680)	-	-	(6,269,807)
Transfers and reclassifications	-	-	-	-	1,082	(1,924)	-	(842)
Exchange effect	-	655	(5,824,014)	16	(12,552)	(2,154)	-	(5,838,049)
As of December 31, 2020	\$-	\$19,851,288	\$777,687,345	\$42,732	\$5,715,339	\$49,963	\$-	\$803,346,667
Net carrying amount:	\$1,690,613	\$17,406,222	\$93,881,980	\$12,166	\$1,193,439	\$13,811	\$16,529,296	\$130,727,527

b. Assets Subject to Operating Leases:

Cost:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2020	\$459,635	\$2,637,271	\$125,413	\$1,315,180	\$4,537,499
Disposals	-	(179,132)	-	-	(179,132)
Exchange effect	(13)	(6,828)	-	453	(6,388)
As of December 31, 2020	\$459,622	\$2,451,311	\$125,413	\$1,315,633	\$4,351,979

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2020	\$-	\$1,019,036	\$125,413	\$1,102,809	\$2,247,258
Depreciation	-	100,454	-	69,425	169,879
Disposals	-	(107,240)	-	-	(107,240)
Exchange effect	-	(4,705)	-	(349)	(5,054)
As of December 31, 2020	\$-	\$1,007,545	\$125,413	\$1,171,885	\$2,304,843
Net carrying amount:	\$459,622	\$1,443,766	\$-	\$143,748	\$2,047,136

In order to improve operations, reduce fixed costs and obtain the funds required for the company future operation, the subsidiary of new business segment (NEXPOWER) disposed of its building and facility equipment located in Taichung City in accordance with a resolution of the Board of Directors' meeting. The Company completed the disposal in the third quarter of 2020 and recorded a gain on disposal of NT\$1,081 million in the other operating income and expenses.

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 1 to 30 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,	
	2021	2020
Land (including land use right)	\$4,877,702	\$5,146,342
Buildings	284,011	352,119
Machinery and equipment	1,940,084	2,227,035
Transportation equipment	18,704	12,252
Other equipment	6,344	10,294
Net	\$7,126,845	\$7,748,042

For the years ended

	December 31,	
	2021	2020
<u>Depreciation</u>		
Land (including land use right)	\$325,268	\$333,402
Buildings	121,373	120,111
Machinery and equipment	210,188	223,120
Transportation equipment	9,858	8,145
Other equipment	4,524	4,531
Total	\$671,211	\$689,309

i. For the years ended December 31, 2021 and 2020, the Company's addition to right-of-use assets amounted to NT\$207 million and NT\$567 million, respectively.

ii. Please refer to Note 8 for right-of-use assets pledged as collateral.

(b) Lease Liabilities

	As of December 31,	
	2021	2020
Current	\$557,873	\$550,147
Non-current	4,510,881	5,026,717
Total	\$5,068,754	\$5,576,864

Please refer to Note 6(23) 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 Assets

2021

Cost:

	Goodwill	Software	Patents and technology license fees		Total
			Others		
As of January 1, 2021	\$15,012	\$4,264,558	\$4,530,465	\$3,497,252	\$12,307,287
Additions	-	1,333,882	56,331	330,976	1,721,189
Write-off	-	(587,102)	-	(458,295)	(1,045,397)
Reclassifications	-	(758)	-	-	(758)
Exchange effect	-	(165,543)	(95,632)	(21,862)	(283,037)
As of December 31, 2021	\$15,012	\$4,845,037	\$4,491,164	\$3,348,071	\$12,699,284

The amortization amounts of intangible assets were as follows:

	For the years ended December 31,	
	2021	2020
Operating costs	\$798,011	\$866,497
Operating expenses	\$2,055,428	\$1,844,288
<u>(11) Short-Term Loans</u>		
	As of December 31,	
	2021	2020
Unsecured bank loans	\$1,924,124	\$11,057,132
<u>Interest rates applied</u>		
	2021	2020
	0.15%-3.60%	0.00%-4.05%

The Company's unused short-term lines of credit amounted to NT\$72,743 million and NT\$63,177 million as of December 31, 2021 and 2020, respectively.

(12) Financial Liabilities at Fair Value through Profit or Loss, Current

	As of December 31,	
	2021	2020
Embedded derivatives in exchangeable bonds	\$2,380,599	\$-
Forward contracts	-	2,326
Total	\$2,380,599	\$2,326

(13) Bonds Payable

	As of December 31,	
	2021	2020
Unsecured domestic bonds payable	\$31,300,000	\$18,700,000
Unsecured exchangeable bonds payable	10,817,047	-
Less: Discounts on bonds payable	(1,580,389)	(9,616)
Total	40,536,658	18,690,384
Less: Current or exchangeable portion due within one year	(17,458,959)	(1,999,910)
Net	\$23,077,699	\$16,690,474

Accumulated Amortization and Impairment:

	Goodwill	Software	Patents and technology license fees	Others	Total
As of January 1, 2021	\$7,398	\$2,035,028	\$2,852,037	\$2,534,911	\$7,429,374
Amortization	-	1,566,948	538,874	747,617	2,853,439
Write-off	-	(587,102)	-	(458,295)	(1,045,397)
Exchange effect	-	(101,050)	(66,244)	(15,771)	(183,065)
As of December 31, 2021	\$7,398	\$2,913,824	\$3,324,667	\$2,808,462	\$9,054,351
Net carrying amount:					
As of December 31, 2021	\$7,614	\$1,931,213	\$1,166,497	\$539,609	\$3,644,933

2020

Cost:

	Goodwill	Software	Patents and technology license fees	Others	Total
As of January 1, 2020	\$15,012	\$3,347,148	\$4,183,505	\$3,548,006	\$11,093,671
Additions	-	1,201,288	212,269	862,063	2,275,620
Write-off	-	(312,411)	(11,023)	(915,703)	(1,239,137)
Reclassifications	-	(3,808)	-	-	(3,808)
Exchange effect	-	32,341	145,714	2,886	180,941
As of December 31, 2020	\$15,012	\$4,264,558	\$4,530,465	\$3,497,252	\$12,307,287

Accumulated Amortization and Impairment:

	Goodwill	Software	Patents and technology license fees	Others	Total
As of January 1, 2020	\$7,398	\$951,176	\$2,299,223	\$2,637,627	\$5,895,424
Amortization	-	1,363,607	536,953	810,225	2,710,785
Write-off	-	(312,411)	(11,023)	(915,703)	(1,239,137)
Reclassifications	-	841	-	-	841
Exchange effect	-	31,815	26,884	2,762	61,461
As of December 31, 2020	\$7,398	\$2,035,028	\$2,852,037	\$2,534,911	\$7,429,374
Net carrying amount:					
As of December 31, 2020	\$7,614	\$2,229,530	\$1,678,428	\$962,341	\$4,877,913

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
Seven-year	In mid-March 2013	NT\$2,500 million	1.50%	Interest was paid annually and the principal was fully repaid in March 2020.
Seven-year	In mid-June 2014	NT\$2,000 million	1.70%	Interest was paid annually and the principal was fully repaid in June 2021.
Ten-year	In mid-June 2014	NT\$3,000 million	1.95%	Interest will be paid annually and the principal will be repayable in June 2024 upon maturity.
Five-year	In late March 2017	NT\$6,200 million	1.15%	Interest will be paid annually and the principal will be repayable in March 2022 upon maturity.
Seven-year	In late March 2017	NT\$2,100 million	1.43%	Interest will be paid annually and the principal will be repayable in March 2024 upon maturity.
Five-year	In early October 2017	NT\$2,000 million	0.94%	Interest will be paid annually and the principal will be repayable in October 2022 upon maturity.
Seven-year	In early October 2017	NT\$3,400 million	1.13%	Interest will be paid annually and the principal will be repayable in October 2024 upon maturity.
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.

b. On May 18, 2015, UMC issued SGX-ST listed currency linked zero coupon convertible bonds. In accordance with IAS 32 “Financial Instruments Presentation”, the value of the conversion right of the convertible bonds was determined at issuance and recognized in additional paid-in capital-stock options amounting to NT\$1,894 million, after reduction of issuance costs amounting to NT\$9 million. The effective interest rate on the liability component of the convertible bonds was determined to be 2.03%. The terms and conditions of the bonds are as follows:

- i. Issue Amount: US\$600 million
- ii. Period: May 18, 2015 - May 18, 2020 (Maturity date)
- iii. Redemption:
 - (i) UMC may redeem the bonds, in whole or in part, after 3 years of the issuance and prior to the maturity date, at the principal amount of the bonds with an interest calculated at the rate of -0.25% per annum (the Early Redemption Amount) if the closing price of the ordinary shares of UMC on the TWSE, for a period of 20 out of 30 consecutive trading days, the last of which occurs not more than 5 days prior to the date upon which notice of such redemption is published, is at least 125% of the conversion price. The Early Redemption Price will be converted into NTD based on the Fixed Exchange Rate (NTD 30.708=USD 1.00), and this fixed NTD amount will be converted using the prevailing rate at the time of redemption for payment in USD.
 - (ii) UMC may redeem the bonds, in whole, but not in part, at the Early Redemption Amount if at least 90% in principal amount of the bonds has already been converted, redeemed or repurchased and cancelled.
 - (iii) UMC may redeem all, but not part, of the bonds, at the Early Redemption Amount at any time, in the event of certain changes in the R.O.C.’s tax rules which would require UMC to gross up for payments of principal, or to gross up for payments of interest or premium.
 - (iv) All or any portion of the bonds will be redeemable at Early Redemption Amount at the option of bondholders on May 18, 2018 at 99.25% of the principal amount.
 - (v) Bondholders have the right to require UMC to redeem all of the bonds at the Early Redemption Amount if UMC’s ordinary shares cease to be listed on the Taiwan Stock Exchange.
 - (vi) In the event that a change of control as defined in the indenture of the bonds occurs to UMC, the bondholders 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 Conversion:
- (i) Underlying Securities: Ordinary shares of UMC
 - (ii) Conversion Period: The bonds are convertible at any time on or after June 28, 2015 and prior to May 8, 2020, into UMC ordinary shares; 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) Conversion Price and Adjustment: The conversion price was originally NT\$17.50 per share. The conversion price will be subject to adjustments upon the occurrence of certain events set out in the indenture.
- v. Conversion of Bonds:
- The last conversion date of the bonds was on March 31, 2020. As of the date, the outstanding principal amount of the convertible bonds totaling US\$231 million had been converted into 498 million shares.
- Upon the maturity date of May 18, 2020, UMC fully redeemed the remaining unconverted bonds at 98.76% of the principal amount. The principal amount of redemption amounted to US\$369 million. UMC reclassified cancelled convertible rights of NT\$1,166 million from additional paid in capital-stock options to additional paid in capital-others.
- c. 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: US\$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 Microelectronics Corporation ("Novatek") on the Taiwan Stock Exchange (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 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\$709.2 per Novatek common share on December 31, 2021.

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.

(14) Long-Term Loans

a. Details of long-term loans as of December 31, 2021 and 2020 were as follows:

Lenders	As of December 31,		Redemption
	2021	2020	
Secured Long-Term Loan from Mega International Commercial Bank (1)	\$-	\$1,640	Repayable quarterly from July 3, 2017 to July 5, 2021 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Mega International Commercial Bank (2)	14,598	19,464	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 Taiwan Cooperative Bank (1)	47,568	59,459	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)	13,125	21,146	Repayable monthly from May 31, 2019 to May 31, 2023 with monthly interest payments.
Secured Long-Term Loan from Taiwan Cooperative Bank (3)	44,000	56,000	Repayable monthly from August 13, 2020 to August 13, 2025 with monthly interest payments.
Secured Long-Term Loan from Taiwan Cooperative Bank (4)	22,759	28,965	Repayable monthly from October 29, 2020 to August 29, 2025 with monthly interest payments.
Secured Long-Term Loan from Taiwan Cooperative Bank (5)	101,000	-	Repayable monthly from April 15, 2021 to April 15, 2026 with monthly interest payments. Interest-only payment for the first year.
Secured Syndicated Loans from China Development Bank and 6 others (1) (Note A)	18,158,940	22,236,343	Repayable semi-annually from October 20, 2016 to October 20, 2024 with semi-annually interest payments. Interest-only payment for the first and the second year.

As of December 31,

Lenders	As of December 31,		Redemption
	2021	2020	
Secured Syndicated Loans from China Development Bank and 6 others (2)	\$12,236,000	\$-	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	47,000	-	Repayable monthly from December 2, 2021 to December 2, 2026 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from KGI Bank	21,000	-	Repayable semi-annually from December 27, 2021 to December 27, 2026 with monthly interest payments. Interest-only payment for the first and the second year.
Unsecured Long-Term Loan from ICBC Bank	-	1,702,589	Repayable semi-annually from September 20, 2019 to September 9, 2021 with quarterly interest payments. Interest-only payment for the first semi-annually year.
Unsecured Long-Term Loan from Xiamen Bank	436,126	440,500	Repayable semi-annually from November 24, 2020 to May 24, 2022 of RMB 0.1 million with monthly interest payments and the remaining principal will be repaid once at maturity. Interest-only payment for the first semi-annually year.
Unsecured Long-Term Loan from Bank of China	982,791	-	Repayable semi-annually from June 24, 2023 to June 24, 2026 with quarterly interest payments.
Unsecured Long-Term Loan from Bank of Taiwan (1)	500,000	2,000,000	Repayable quarterly from March 10, 2022 to December 10, 2024 with monthly interest payments.
Unsecured Long-Term Loan from Bank of Taiwan (2)	450,000	-	Repayable quarterly from March 24, 2023 to March 24, 2025 with monthly interest payments.
Unsecured Long-Term Loan from Taiwan Cooperative Bank	-	2,000,000	Repayable quarterly from May 5, 2023 to May 5, 2025 with monthly interest payments.
Unsecured Revolving Loan from Mega International Commercial Bank (Note B)	500,000	1,500,000	Repayable semi-annually from October 16, 2020 to April 16, 2022 with monthly interest payments.
Unsecured Revolving Loan from Taipei Fubon Bank (Note C)	200,000	700,000	Repayable annually from August 9, 2020 to August 9, 2023 with monthly interest payments.

Lenders	As of December 31,		Redemption
	2021	2020	
Unsecured Revolving Loan from Chang Hwa Commercial Bank (Note D)	\$550,000	\$1,000,000	Repayable quarterly from January 27, 2021 to October 27, 2022 with monthly interest payments.
Unsecured Revolving Loan from KGI Bank (1) (Note E)	-	1,000,000	Repayable annually from December 11, 2021 to December 11, 2023 with monthly interest payments.
Unsecured Revolving Loan from KGI Bank (2) (Note E)	500,000	-	Repayable annually from August 10, 2023 to August 10, 2026 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (1) (Note F)	-	300,000	Settlement due on May 15, 2025 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (2) (Note G)	300,000	-	Settlement due on February 25, 2026 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (3) (Note G)	300,000	-	Settlement due on March 15, 2026 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (4) (Note G)	200,000	-	Settlement due on June 15, 2026 with monthly interest payments.
Unsecured Revolving Loan from Yuanta Commercial Bank (Note H)	1,000,000	-	Repayable annually from March 2, 2023 to March 2, 2026 with monthly interest payments.
Subtotal	36,624,907	33,066,106	
Less: Current portion	(19,873,011)	(24,985,168)	
Total	\$16,751,896	\$8,080,938	
	For the years ended		
	December 31,		
	2021	2020	
Interest rates applied	0.85%~4.66%	0.84%~4.67%	

Note A: USCXM, the subsidiary of UMC failed to comply with the loan covenant to maintain its financial ratio at certain level and therefore the loan is reclassified to current liabilities as of December 31, 2021 and 2020. The bank exemption of 2021 and 2020 have been obtained as of February 7, 2022 and April 21, 2021, respectively.

Note B: UMC entered into a 5-year loan agreement with Mega International Commercial Bank, effective from October 17, 2016. 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 two years and six months after the first use and every six months thereafter, with a total of six adjustments. The expiration date of the agreement is April 16, 2022. As of December 31, 2021 and 2020, the line of credit were fully utilized.

Note C: UMC entered into a 5-year loan agreement with Taipei Fubon Bank, effective from February 9, 2018. The agreement offered UMC a revolving line of credit of NT\$2 billion. This line of credit will be reduced starting from the end of the two years after the first use and every twelve months thereafter, with a total of four adjustments. The expiration date of the agreement is August 9, 2023. As of December 31, 2021 and 2020, the unused line of credit were both NT\$0.8 billion.

Note D: UMC entered into a 5-year loan agreement with Chang Hwa Commercial Bank, effective from November 2, 2016. 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 third year after the first use and every three months thereafter, with a total of nine adjustments. The expiration date of the agreement is October 27, 2022. As of December 31, 2021 and 2020, the unused line of credit were NT\$0.8 billion and NT\$1.7 billion, respectively.

Note E: UMC entered into a 5-year loan agreement with KGI Commercial Bank, effective from September 11, 2018. The agreement offered UMC a revolving line of credit of NT\$2.5 billion which has been modified into NT\$3 billion as of May 10, 2021. 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 August 10, 2026. As of December 31, 2021 and 2020, the unused line of credit were NT\$2.5 billion and NT\$1 billion, respectively.

Note F: First Commercial Bank approved the 1-year credit loan on December 30, 2019, which has expired on December 30, 2020.

Note G: First Commercial Bank approved the 1-year credit loan on January 18, 2021, which offered UMC a revolving line of credit of NT\$2 billion starting from the approval date to January 17, 2022. As of December 31, 2021, the unused line of credit was NT\$1.2 billion.

Note H: 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, 2021, the unused line of credit was NT\$3 billion.

b. Please refer to Note 8 for property, plant and equipment and right-of-use assets pledged as collateral for long-term loans.

(15) Post-Employment Benefits

a. Defined contribution plan

The employee pension plan under the Labor Pension Act of the 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\$1,636 million and NT\$1,478 million were contributed by the Company for the years ended December 31, 2021 and 2020, respectively.

b. Defined benefit plan

i. The employee pension plan mandated by the Labor Standards Act of the 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. The Company 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, 2021 and 2020, total pension expenses of NT\$23 million and NT\$40 million, respectively, were recognized by the Company.

ii. Movements in present value of defined benefit obligation and fair value of plan assets were as follows:

	For the years ended December 31,	
	2021	2020
Defined benefit obligation at beginning of year	\$ (5,561,999)	\$ (5,411,069)
Items recognized as profit or loss:		
Service cost	(11,009)	(13,090)
Interest cost	(16,130)	(36,254)
Subtotal	(27,139)	(49,344)
Remeasurements recognized in other comprehensive income (loss):		
Arising from changes in demographic assumptions	(4,537)	-
Arising from changes in financial assumptions	(123,140)	(173,615)
Experience adjustments	(91,268)	(70,461)
Subtotal	(218,945)	(244,076)
Benefits paid	349,750	142,490
Defined benefit obligation at end of year	\$ (5,458,333)	\$ (5,561,999)

Movements in fair value of plan assets during the year:

	For the years ended December 31,	
	2021	2020
Beginning balance of fair value of plan assets	\$ 1,399,345	\$ 1,385,696
Items recognized as profit or loss:		
Interest income on plan assets	4,059	9,284
Contribution by employer	505,890	95,360
Benefits paid	(349,750)	(142,490)
Remeasurements recognized in other comprehensive income (loss):		
Return on plan assets, excluding amounts included in interest income	21,468	51,495
Fair value of plan assets at end of year	\$ 1,581,012	\$ 1,399,345

The actual returns on plan assets of the Company for the years ended December 31, 2021 and 2020 were NT\$26 million and NT\$61 million, respectively.

iii. The defined benefit plan recognized on the consolidated balance sheets were as follows:

	As of December 31,	
	2021	2020
Present value of the defined benefit obligation	\$ (5,458,333)	\$ (5,561,999)
Fair value of plan assets	1,581,012	1,399,345
Funded status	(3,877,321)	(4,162,654)
Net defined benefit liabilities, noncurrent recognized on the consolidated balance sheets	\$ (3,877,321)	\$ (4,162,654)

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,	
	2021	2020
Cash	24%	16%
Equity instruments	43%	48%
Debt instruments	23%	25%
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,	
	2021	2020
Discount rate	0.62%	0.29%
Rate of future salary increase	4.25%	3.50%

vi. Expected future benefit payments are as follows:

Year	As of December 31, 2021
2022	\$373,879
2023	373,406
2024	397,426
2025	432,167
2026	435,179
2027 and thereafter	3,721,746
Total	\$5,733,803

The Company expects to make pension fund contribution of NT\$697 million in 2022. The weighted-average durations of the defined benefit obligation were 8 years and 9 years as of December 31, 2021 and 2020, respectively.

vii. Sensitivity analysis:

	As of December 31, 2021	
	Discount rate	Rate of future salary increase
	0.5%	0.5%
	increase	decrease
	decrease	increase
Decrease (increase) in defined benefit obligation	\$207,999	\$(220,561)
		\$(184,551)
		\$176,567

	As of December 31, 2020	
	Discount rate	Rate of future salary increase
	0.5%	0.5%
	increase	decrease
	decrease	increase
Decrease (increase) in defined benefit obligation	\$226,798	\$-
		\$(204,390)
		\$195,078

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,	
	2021	2020
Beginning balance	\$10,207,109	\$13,551,553
Arising during the period	2,498,990	578,844
Recorded in profit or loss:		
Other operating income	(4,069,055)	(3,994,818)
Exchange effect	(93,246)	71,530
Ending balance	\$8,543,798	\$10,207,109
Current (classified under other current liabilities)	\$4,096,742	\$3,836,211
Non-current (classified under other noncurrent liabilities-others)	4,447,056	6,370,898
Total	\$8,543,798	\$10,207,109

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,	
	2021	2020
Refund liabilities	\$724,207	\$1,252,451

(18) Equity

a. Capital stock:

i. UMC had 26,000 million common shares authorized to be issued as of December 31, 2021 and 2020, of which 12,483 million shares and 12,422 million shares were issued as of December 31, 2021 and 2020, respectively, each at a par value of NT\$10.

ii. UMC had 149 million and 127 million ADSs, which were traded on the NYSE as of December 31, 2021 and 2020, respectively. The total number of common shares of UMC represented by all issued ADSs were 746 million shares and 636 million shares as of December 31, 2021 and 2020, respectively. One ADS represents five common shares.

- ii. According to the Securities and Exchange Law of the R.O.C., the total shares of treasury stock shall not exceed 10% of UMC's issued stock, and the total purchase amount shall not exceed the sum of the retained earnings, additional paid-in capital-premiums and realized additional paid-in capital. As such, the number of shares of treasury stock that UMC held as of December 31, 2021 and 2020, did not exceed the limit.
- iii. In compliance with Securities and Exchange Law of the R.O.C., treasury stock held by the parent company should not be pledged, nor should it be entitled to voting rights or receiving dividends. Stock held by subsidiaries is treated as treasury stock. These subsidiaries have the same rights as other shareholders except for subscription to new stock issuance and voting rights.
- iv. UMC's subsidiary, FORTUNE VENTURE CAPITAL CORP., held shares of UMC's stock through acquiring shares of UNITED SILICON INC. in 1997, and these shares were converted to UMC's stock in 2000 as a result of the Company's 5 in 1 merger. As of December 31, 2020, FORTUNE VENTURE CAPITAL CORP. held 16 million shares of UMC's stock and the closing price on December 31, 2020, was NT\$47.15. On September 3, 2021, the share exchange transaction with CHIPBOND was approved by FORTUNE's Board of Directors' meeting. The 16 million shares of UMC held by FORTUNE were exchanged for 14 million common shares newly issued by CHIPBOND.
- 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, if applicable, may be distributed preferentially as preferred shares dividends for the current year, and if there is still a remaining balance, 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.

- iii. Please refer to Note 6(13) for the Company's conversion of unsecured convertible bonds into ordinary shares of UMC for the year ended December 31, 2020.
- iv. On June 9, 2021 and September 1, 2020, UMC issued restricted stocks for its employees in a total of 1 million shares and 200 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(19) for the information of restricted stocks.
- v. As of December 31, 2021, UMC has recalled and cancelled 2 million shares of 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.
- vi. On September 3, 2021, the Board of Directors' meeting approved the share exchange transaction with CHIPBOND. UMC issued 61 million common shares with a par value of NT\$10 and obtained 53 million common shares newly issued by CHIPBOND. The aforementioned issuance of new shares was approved by the competent authority and the change in share registration was completed. The share exchanged date was November 5, 2021. Please refer to Note 6(3) for further information.

b. Treasury stock:

- i. UMC carried out a treasury stock program and repurchased its shares from the centralized securities exchange market. The purpose for the repurchase and changes in treasury stock during the years ended December 31, 2021 and 2020 were as follows:

For the year ended December 31, 2021: None.

For the year ended December 31, 2020

(In thousands of shares)

Purpose	As of	
	January 1, 2020	December 31, 2020
	Increase	Decrease
For transfer to employees	-	105,000
	105,000	-

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 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 earnings distribution or offsetting accumulated deficits.

The appropriation of earnings for 2020 was approved by the shareholders' meeting held on July 7, 2021, while the appropriation of earnings for 2021 was proposed by the Board of Directors' meeting on February 24, 2022. The details of distribution were as follows:

	Appropriation of earnings (in thousand NT dollars)		Cash dividend per share (NT dollars)	
	2021	2020	2021	2020
Legal reserve	\$5,832,570	\$3,197,890		
Special reserve	(3,250,434)	(2,857,666)		
Cash dividends	-	19,875,842	\$-	\$1.60

In addition, the Board of Directors' meeting held on February 24, 2022 proposed to distribute cash from additional paid-in capital of NT\$37,446 million, at approximately NT\$3.00 per share.

The aforementioned 2020 appropriation approved by shareholders' meeting was consistent with the resolutions of the Board of Directors' meeting held on February 24, 2021.

The cash dividend per share for 2020 was adjusted to NT\$1.59988820 per share. The adjustment was due to the net increase of outstanding common shares from cancellation and issuance of the restricted stocks.

The appropriation of 2021 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(21) for information on the employees and directors' compensation.

d. Non-controlling interests:

	For the years ended December 31,	
	2021	2020
Beginning balance	\$113,356	\$410,065
Attributable to non-controlling interests:		
Net loss	(668,245)	(2,009,077)
Other comprehensive income (loss)	(19)	126,653
Disposal of subsidiaries	-	(51,565)
The differences between the fair value of the consideration paid or received from acquiring or disposing subsidiaries and the carrying amounts of the subsidiaries	-	106,879
Changes in subsidiaries' ownership	(11,126)	(10,331)
Non-controlling interests	23,430	(551,608)
Others	765,785	2,092,340
Ending balance	\$223,181	\$113,356

(19) Share-Based Payment

a. Treasury stock plan for employees

In August 2018, the Company executed a compensation plan to offer 200 million shares of treasury stock to qualified employees of UMC. The compensation cost for the share-based payment was measured at fair value, having recognized in expense the difference between the closing quoted market price of the shares at the grant date and the cash received from employees. The closing quoted market price of the Company's shares on the grant date was NT\$16.95 per share. For the stocks vested on the date of grant, the Company recognized the entire compensation cost once granted, whereas for the stocks with requisite service conditions to vest at the end of one or two years from the date of grant, the Company recognizes the compensation cost over the vesting period in which the services conditions are fulfilled, together with a corresponding increase in equity. The compensation plan had expired in September 2020. For the year ended December 31, 2020, the compensation cost of NT\$107 million was recognized in expenses by the Company.

In September 2020, the Company executed a compensation plan to offer 105 million shares of treasury stock to qualified employees of the Company. The compensation cost for the share-based payment was measured at fair value, having recognized in expense the difference between the closing quoted market price of the shares at the grant date and the cash received from employees. The closing quoted market price of the Company's shares on the grant date was NT\$21.45 per share. For the stocks vested on the date of grant, the Company recognized the entire compensation cost once granted, whereas for the stocks with requisite service conditions to vest at the end of one year from the date of grant, the Company recognizes the compensation cost over the period in which the services conditions are fulfilled, together with a corresponding increase in equity. The compensation plan had expired in September 2021. For the years ended December 31, 2021 and 2020, the compensation costs of NT\$226 million and NT\$348 million, respectively, were recognized in expenses by the Company.

b. Restricted stock plan for employees

On June 10, 2020, the shareholders approved a compensation plan in their meeting to issue restricted stocks to qualified employees of UMC without consideration. The maximum shares to be issued are 233 million common shares. The Company is authorized to issue restricted stocks in one tranche or in installments, under the custody of trust institution, within one year from the date of receiving the effective registration from the competent authority.

The issuance plan was authorized for effective registration by the Securities and Futures Bureau of the FSC and accordingly, 1 million shares and 200 million shares of restricted stock for employees were issued without consideration on June 9, 2021 and September 1, 2020, respectively. 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 restricted stocks at certain percentage and time frame. For those employees who fail to fulfill the vesting conditions, the Company will recall and cancel their stocks without consideration. During the vesting period, the restricted stock holders are entitled the same rights as those of common stock holders including the right to receive dividends, but are restricted to sell, pledge, set guarantee, transfer, grant, or dispose 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 aforementioned compensation costs for the equity-settled share-based payment were measured at fair value based on the closing quoted market price of the shares on the grant date, NT\$3.0 and NT\$21.8 per share, respectively. 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, 2021 and 2020, the compensation costs of NT\$1,520 million and NT\$504 million, respectively, were recognized in expenses by the Company.

c. Stock appreciation right plan for employees

In June 2021 and September 2020, the Company executed a compensation plan to grant 1 million units and 26 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 cost for the cash-settled share-based payment was measured at fair value on the grant date by using Black-Scholes Option Pricing Model and will be remeasured at the end of each reporting period until settlement. As of December 31, 2021, the assumptions used are as below:

	Granted in	
	June 2021	September 2020
Share price of measurement date (NT\$/ per share)	\$65.00	\$65.00
Expected volatility	38.52%-47.75%	40.11%-42.88%
Expected life	1.44-3.44 years	0.67-2.67 years
Expected dividend yield	5.27%	5.27%
Risk-free interest rate	0.38%-0.50%	0.32%-0.46%

For the years ended December 31, 2021 and 2020, the compensation costs of NT\$271 million and NT\$80 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-others amounted to NT\$352 million and NT\$81 million as of December 31, 2021 and 2020, respectively. The intrinsic value for the liabilities of vested rights were both nil.

(20) Operating Revenues

a. Disaggregation of revenue

i. By Product

	For the years ended December 31,	
	2021	2020
Wafer	\$204,594,399	\$169,885,201
Others	8,416,619	6,935,713
Total	<u>\$213,011,018</u>	<u>\$176,820,914</u>

ii. By geography

	For the years ended December 31,	
	2021	2020
Taiwan	\$80,655,096	\$65,003,509
Singapore	29,068,748	26,054,856
China (includes Hong Kong)	31,176,136	22,629,388
Japan	13,705,192	15,363,352
USA	24,270,210	24,546,963
Europe	5,628,998	6,416,235
Others	28,506,638	16,806,611
Total	<u>\$213,011,018</u>	<u>\$176,820,914</u>

The geographic breakdown of the Company's operating revenues was based on the location of the Company's customers.

iii. By the timing of revenue recognition

	For the years ended December 31,	
	2021	2020
At a point in time	\$211,074,982	\$174,492,036
Over time	1,936,036	2,328,878
Total	<u>\$213,011,018</u>	<u>\$176,820,914</u>

b. Contract balances

i. Contract assets, current

	As of December 31,		
	2021	2020	2019
Sales of goods and services	\$677,326	\$625,222	\$599,491
Less: Loss allowance	(357,705)	(367,381)	(385,248)
Net	<u>\$319,621</u>	<u>\$257,841</u>	<u>\$214,243</u>

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 December 31,		
	2021	2020	2019
Sales of goods and services	\$4,083,140	\$2,497,469	\$1,470,195
Current	\$3,441,754	\$2,040,989	\$988,115
Non-current	641,386	456,480	482,080
Total	<u>\$4,083,140</u>	<u>\$2,497,469</u>	<u>\$1,470,195</u>

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\$1,416 million and NT\$706 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, 2021 and 2020.

c. The Company's transaction price allocated to unsatisfied performance obligations amounted to NT\$167 million and NT\$2,759 million as of December 31, 2021 and 2020, 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. As of the report date, partial contract was due in May 2021. 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, 2021 and 2020, the Company recognized costs to fulfill engineering service contracts eligible for capitalization as other current assets which amounted to NT\$612 million and NT\$549 million, respectively. Subsequently, the Company will expense from costs to fulfill a contract to operating costs when the related obligations are satisfied.

(21) Operating Costs and Expenses

The Company's employee benefit, depreciation and amortization and operating expenses are summarized as follows:

	For the years ended December 31,					
	2021		2020			
	Operating costs	Operating expenses	Operating costs	Operating expenses		
Employee benefit expenses						
Salaries	\$23,388,888	\$11,806,207	\$35,195,095	\$20,367,325	\$9,412,151	\$29,779,476
Labor and health insurance	1,183,315	458,179	1,641,494	1,061,848	452,848	1,514,696
Pension	1,259,044	399,879	1,658,923	1,138,429	379,298	1,517,727
Other employee benefit expenses	335,829	144,668	480,497	274,838	121,858	396,696
Depreciation	42,002,745	1,908,719	43,911,464	43,969,732	1,926,226	45,895,958
Amortization	834,384	2,060,558	2,894,942	895,732	1,848,651	2,744,383

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 recognizes the employees and directors' compensation in the profit or loss during the periods when earned for the years ended December 31, 2021 and 2020. 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 2020 were reported to the shareholders' meeting on July 7, 2021, while the distributions of employees and directors' compensation for 2021 were approved through the Board of Directors' meeting on February 24, 2022. The details of distribution were as follows:

	2021	2020
Employees' compensation – Cash	\$4,770,909	\$2,581,675
Directors' compensation	25,264	32,369

The aforementioned employees and directors' compensation for 2020 reported during the shareholders' meeting were consistent with the resolutions of the Board of Directors' meeting held on February 24, 2021.

Information relevant to the aforementioned employees and directors' compensation can be obtained from the "Market Observation Post System" on the website of the TWSE.

(22) Net Other Operating Income and Expenses

	For the years ended December 31,	
	2021	2020
Government grants	\$5,269,412	\$5,179,643
Rental income from property, plant and equipment	187,166	198,860
Gain on disposal of property, plant and equipment	143,735	1,137,320
Others	(373,482)	(261,933)
Total	\$5,226,831	\$6,253,890

(23) Non-Operating Income and Expenses

a. Other gains and losses

	For the years ended December 31,	
	2021	2020
Gain on valuation of financial assets and liabilities at fair value through profit or loss	\$2,892,470	\$2,011,403
Loss on disposal of investments	(10,964)	(60,940)
Others	(2,009,952)	(1,962,137)
Total	\$871,554	\$(11,674)

Others included the one-time payment to MICRON TECHNOLOGY, INC. (MICRON) due to the worldwide settle agreement between UMC and MICRON (Please refer to Note 9(7)) and the losses of financial instrument transaction recognized in 2021, and the losses for the settlement approved by the U.S. Department of Justice regarding allegation of conspiracy to engage in theft of trade secrets recognized in 2020, respectively.

b. Finance costs

	For the years ended December 31,	
	2021	2020
Interest expenses		
Bonds payable	\$437,055	\$377,193
Bank loans	1,285,708	1,417,028
Lease liabilities	145,187	154,730
Others	139	55,467
Financial expenses	94,841	69,015
Total	\$1,962,930	\$2,073,433

(24) Components of Other Comprehensive Income (Loss)

	For the year ended December 31, 2021			
	Arising during the period	Reclassification adjustments during the period	Other comprehensive income (loss) before tax effect	Other comprehensive income (loss) net of tax
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translation of foreign operations	\$(4,743,299)	\$2,283	\$(4,741,016)	\$20,782
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	(24,080)	(394)	(24,474)	6,018
Total other comprehensive income (loss)	\$4,207,509	\$1,889	\$4,209,398	\$(77,843)

	For the year ended December 31, 2020			
	Arising during the period	Reclassification adjustments during the period	Other comprehensive income (loss) before tax effect	Other comprehensive income (loss) net of tax
Items that will not be reclassified subsequently to profit or loss:				
Remeasurements of defined benefit pension plans	\$(192,581)	\$-	\$(192,581)	\$38,516
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	4,815,361	-	4,815,361	15,805
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss	2,824,216	-	2,824,216	103
Total other comprehensive income (loss)	\$4,567,013	\$19,924	\$4,586,937	\$98,597

	For the year ended December 31, 2021			
	Arising during the period	Reclassification adjustments during the period	Other comprehensive income (loss) before tax effect	Other comprehensive income (loss) net of tax
Items that will not be reclassified subsequently to profit or loss:				
Exchange differences on translation of foreign operations	(2,917,361)	(2,919)	(2,920,280)	34,708
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	37,378	22,843	60,221	9,465
Total other comprehensive income (loss)	\$4,567,013	\$19,924	\$4,586,937	\$98,597

(25) Income Tax

a. The major components of income tax expense (benefit) for the years ended December 31, 2021 and 2020 were as follows:

i. Income tax expense (benefit) recorded in profit or loss

	For the years ended December 31,	
	2021	2020
Current income tax expense (benefit):	\$5,530,942	\$1,259,721
Current income tax charge	(150,260)	(1,140,060)
Adjustments in respect of current income tax of prior periods		
Deferred income tax expense (benefit):		
Deferred income tax related to origination and reversal of temporary differences	407,280	46,156
Deferred income tax related to recognition and derecognition of tax losses and unused tax credits	1,054,445	827,859
Adjustment of prior year's deferred income tax	(130,841)	(246,173)
Deferred income tax arising from write-down or reversal of write-down of deferred tax assets	(20,172)	(1,736)
Income tax expense recorded in profit or loss	<u>\$6,691,394</u>	<u>\$745,767</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,	
	2021	2020
Remeasurements of defined benefit pension plans	\$39,495	\$38,516
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	(144,138)	15,805
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss	-	103
Income tax related to items that will not be reclassified subsequently to profit or loss	<u>\$(104,643)</u>	<u>\$54,424</u>

(ii) Items that may be reclassified subsequently to profit or loss:

	For the years ended December 31,	
	2021	2020
Exchange differences on translation of foreign operations	\$20,782	\$34,708
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	6,018	9,465
Income tax related to items that may be reclassified subsequently to profit or loss	\$26,800	\$44,173
iii. Income tax charged directly to equity		
Current income tax expense (benefit):		
Disposal of parent company's stock by subsidiary recognized as treasury stock transactions		\$-(203)
Deferred income tax expense (benefit):		
Recognize (reversal) of temporary difference arising from initial recognition of the equity component of the compound financial instrument	-	3,691
Income tax charged directly to equity	<u>\$(203)</u>	<u>\$3,691</u>

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,	
	2021	2020
Income before tax	\$61,803,404	\$27,926,179
At UMC's statutory income tax rate	12,360,681	5,585,236
Adjustments in respect of current income tax of prior periods	(150,260)	(1,140,060)
Net changes in loss carry-forward and investment tax credits	(514,094)	592,348
Adjustment of deferred tax assets/liabilities for write-downs/reversals and different jurisdictional tax rates	183,123	(505,537)

	For the years ended	
	December 31,	
	2021	2020
Tax effect of non-taxable income and non-deductible expenses:		
Tax exempt income	\$(3,258,695)	\$(2,500,688)
Investment gain	(2,050,272)	(1,511,065)
Dividend income	(171,725)	(130,672)
Others	6,463	32,268
Basic tax	-	2,803
Effect of different tax rates applicable to UMC and its subsidiaries	116,174	(191,687)
Taxes withheld in other jurisdictions	43,443	25,193
Others	126,556	487,628
Income tax expense recorded in profit or loss	<u>\$6,691,394</u>	<u>\$745,767</u>
c. Significant components of deferred income tax assets and liabilities were as follows:		
	As of December 31,	
	2021	2020
Deferred income tax assets		
Depreciation	\$2,155,961	\$2,116,855
Loss carry-forward	62,367	685,531
Pension	770,847	828,410
Refund liabilities	140,861	240,165
Allowance for inventory valuation losses	433,630	595,910
Investment loss	267,518	225,304
Unrealized profit on intercompany sales	1,125,370	1,348,202
Investment tax credits	-	331,174
Others	439,439	461,160
Total deferred income tax assets	<u>5,395,993</u>	<u>6,832,711</u>
Deferred income tax liabilities		
Unrealized exchange gain	(580,191)	(559,334)
Depreciation	(78,792)	(156,000)
Investment gain	(793,982)	(599,389)
Bonds	(6,353)	-
Amortizable assets	(303,841)	(316,049)
Others	-	(687)
Total deferred income tax liabilities	<u>(1,763,159)</u>	<u>(1,631,459)</u>
Net deferred income tax assets	<u>\$3,632,834</u>	<u>\$5,201,252</u>

	For the years ended	
	December 31,	
	2021	2020
Balance as of January 1	\$5,201,252	\$5,720,217
Amounts recognized in profit or loss during the period	(1,310,712)	(626,106)
Amounts recognized in other comprehensive income (loss)	(77,843)	98,597
Amounts recognized in equity	-	3,691
Exchange adjustments	(179,863)	4,853
Balance as of December 31	<u>\$3,632,834</u>	<u>\$5,201,252</u>

d. Movement of deferred tax

e. The Company is subject to taxation in Taiwan and other foreign jurisdictions. As of December 31, 2021, income tax returns of UMC and its subsidiaries in Taiwan have been examined by the tax authorities through 2018, while in other foreign jurisdictions, relevant tax authorities have completed the examination through 2012. There is an uncertain tax position that the outcome of the income tax returns of certain companies within the Company may not be accepted by the tax authorities of the respective countries of operations. For the recognition and measurement of deferred income tax and current income tax which involved significant accounting judgments, estimates and assumptions, please refer to Note 5(3).

f. UMC was granted income tax exemption for several periods with respect to income derived from the expansion of operations. The income tax exemption had expired on December 31, 2020.

g. 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.

h. The information of the unused tax loss carry-forward for which no deferred income tax assets have been recognized were as follows:

	As of December 31,	
	2021	
	2021	2020
Expiry period		
1-5 years	\$38,562,420	\$40,910,279
6-10 years	2,730,567	2,674,422
Total	<u>\$41,292,987</u>	<u>\$43,584,701</u>

(27) Reconciliation of Liabilities Arising from Financing Activities

For the year ended December 31, 2021:

Items	As of January 1, 2021	Cash Flows	Non-cash changes			As of December 31, 2021
			Foreign exchange (Note A)	Others (Note A)	Others (Note B)	
Short-term loans	\$11,057,132	\$(8,974,216)	\$(158,792)	\$-		\$1,924,124
Long-term loans (current portion included)	33,066,106	4,088,537	(529,736)	-		36,624,907
Bonds payable (current portion included)	18,690,384	23,703,692	-	(1,857,418)		40,536,658
Guarantee deposits (current portion included)	235,992	14,219,408	(85,631)	-		14,369,769 (Note E)
Lease liabilities	5,576,864	(699,680)	(144,419)	335,989		5,068,754
Other financial liabilities	20,746,624	-	(163,387)	382,972		20,966,209

For the year ended December 31, 2020:

Items	As of January 1, 2020	Cash Flows	Non-cash changes			As of December 31, 2020
			Foreign exchange (Note A)	Others (Note A)	Others (Note C)	
Short-term loans	\$12,015,206	\$(933,392)	\$(75,751)	\$51,069		\$11,057,132
Long-term loans (current portion included)	33,902,074	136,920	(972,888)	-		33,066,106
Bonds payable (current portion included)	38,781,416	(13,702,875)	-	(6,388,157)		18,690,384
Guarantee deposits (current portion included)	296,694	(59,819)	(883)	-		235,992 (Note E)
Lease liabilities	6,031,025	(726,626)	(10,036)	282,501		5,576,864
Other financial liabilities	20,093,441	-	281,219	371,964		20,746,624

i. As of December 31, 2021 and 2020, deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT\$4,433 million and NT\$2,942 million, respectively.

j. As of December 31, 2021 and 2020, the taxable temporary differences of unrecognized deferred tax liabilities associated with investments in subsidiaries amounted to NT\$14,904 million and NT\$11,463 million, respectively.

(26) Earnings Per Share

a. Earnings per share-basic

	For the years ended December 31,	
	2021	2020
Net income attributable to the parent company	\$55,780,255	\$29,189,489
Weighted-average number of ordinary shares for basic earnings per share (thousand shares)	12,218,347	12,072,969
Earnings per share-basic (NTD)	\$4.57	\$2.42

b. Earnings per share-diluted

	For the years ended December 31,	
	2021	2020
Net income attributable to the parent company	\$55,780,255	\$29,189,489
Effect of dilution	-	69,019
Income attributable to shareholders of the parent	\$55,780,255	\$29,258,508
Weighted-average number of ordinary shares for basic earnings per share (thousand shares)	12,218,347	12,072,969
Effect of dilution	159,478	30,911
Restricted stocks for employees	80,243	65,657
Employees' compensation	-	303,630
Unsecured convertible bonds		
Weighted-average number of ordinary shares after dilution (thousand shares)	12,458,068	12,473,167
Earnings per share-diluted (NTD)	\$4.48	\$2.35

Note A: Other non-cash changes mainly consisted of discount amortization measured by the effective interest method.

Note B: Please refer to Note 6(13) for the Company's exchangeable bonds.

Note C: Please refer to Note 6(13) for the Company's convertible bonds.

Note D: Please refer to Note 9(6) for more details on other financial liabilities.

Note E: Guarantee deposits mainly consisted of deposits of capacity reservation.

(28) Deconsolidation of Subsidiaries

NEXPOWER TECHNOLOGY CORP. (NEXPOWER)

NEXPOWER, the subsidiary of UMC, was resolved for dissolution and liquidation by the shareholders' meeting on November 11, 2020 and the liquidator took control on the same day. According to IFRS 10 and related questions and answers issued, the Company has lost control over NEXPOWER and therefore derecognized its relevant assets and liabilities at the date when the control was lost.

a. Derecognized assets and liabilities mainly consisted of:

Assets	
Cash and cash equivalents	\$776,586
Other current assets	18
	<u>776,604</u>
Liabilities	
Other payables	(194)
	<u>(194)</u>
Net assets of deconsolidation	<u>\$776,410</u>

b. Consideration received and gain recognized from the deconsolidation:

Cash received	\$722,559
Less: Net assets of the deconsolidation	(776,410)
Add: Non-controlling interests	51,565
Other comprehensive income from equity reclassified to profit or loss due to derecognition	4,061
Gain on deconsolidation (Note A)	<u>\$1,775</u>

Note A: Gain on deconsolidation was recognized as other gains and losses in the consolidated statement of comprehensive income.

c. Analysis of net cash outflow arising from deconsolidation of the subsidiary:

Cash received	\$722,559
Net cash of subsidiary derecognized	<u>(776,586)</u>
Net cash outflow from deconsolidation	<u>\$(54,027)</u>

7. RELATED PARTY TRANSACTIONS

The following is a summary of transactions between the Company and related parties during the financial reporting periods:

(1) Name and Relationship of Related Parties

Name of related parties	Relationship with the Company
FARADAY TECHNOLOGY CORP. and its Subsidiaries	Associate
HSUN CHIEH INVESTMENT CO., LTD.	Associate
UNIMICRON TECHNOLOGY CORP.	Associate
SILICON INTEGRATED SYSTEMS CORP.	The Company's director
PHOTONICS DNP MASK CORPORATION	Other related parties
UNITEDVISION SEMICONDUCTOR CO., LTD.	Other related parties
UPI SEMICONDUCTOR CORP.	Other related parties

(2) Significant Related Party Transactions

a. Operating transactions

Operating revenues

	For the years ended	
	December 31,	
	2021	2020
Associates	\$2,778,544	\$2,085,425
Others	38,797	26,856
Total	<u>\$2,817,341</u>	<u>\$2,112,281</u>

8. ASSETS PLEDGED AS COLLATERAL

The following table lists assets of the Company pledged as collateral:

As of December 31, 2021 and 2020

Items	Carrying Amount		Party to which asset(s) was pledged	Purpose of pledge
	2021	2020		
Refundable Deposits (Time deposit)	\$811,660	\$811,072	Customs	Customs duty guarantee
Refundable Deposits (Time deposit)	234,304	234,286	Science Park Bureau	Collateral for land lease
Refundable Deposits (Time deposit)	20,619	18,215	Science Park Bureau	Collateral for dormitory lease
Refundable Deposits (Time deposit)	26,600	41,785	Liquefied Natural Gas Business Division, CPC Corporation, Taiwan	Energy resources guarantee
Refundable Deposits (Time deposit)	1,151,200	1,000,000	Bank of China and Agricultural Bank of China	Bank performance guarantee
Refundable Deposits (Bank deposit)	6,711	-	Shanghai Commercial Bank	Collateral for letter of credit
Buildings	5,014,814	5,310,769	Taiwan Cooperative Bank and Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Machinery and equipment	25,189,533	21,370,450	Taiwan Cooperative Bank, Mega International Commercial Bank, KGI bank, First Commercial Bank and Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Transportation equipment	1,802	3,174	Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Furniture and fixtures	161,604	281,663	Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Right-of-use assets	280,697	289,552	Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Total	\$32,899,544	\$29,360,966		

9. SIGNIFICANT CONTINGENCIES AND UNRECOGNIZED CONTRACT COMMITMENTS

- (1) As of December 31, 2021, amounts available under unused letters of credit for importing machinery and equipment were NT\$0.3 billion.
- (2) As of December 31, 2021, the Company entrusted financial institutes to open performance guarantee, mainly related to the litigations and customs tax guarantee, amounting to NT\$1.6 billion.
- (3) The Company entered into several patent license agreements and development contracts of intellectual property for a total contract amount of approximately NT\$2.8 billion. As of December 31, 2021, the portion of royalties and development fees not yet recognized was NT\$0.9 billion.
- (4) The Company entered into several construction contracts for the expansion of its operations. As of December 31, 2021, these construction contracts amounted to approximately NT\$19.6 billion and the portion of the contracts not yet recognized was approximately NT\$14.4 billion.
- (5) The Company entered into several wafer-processing contracts with its customers. According to the contracts, the Company shall provide agreed production capacity with the customers.
- (6) The Board of Directors of UMC resolved in October 2014 to participate in a 3-way agreement with Xiamen Municipal People's Government and FUJIAN ELECTRONIC & INFORMATION GROUP to form a company which will focus on 12" wafer foundry services. The Company obtained R.O.C. government authority's approval for the investment and invested RMB 8.3 billion in USCXM in instalments from January 2015 to September 2018, according to the agreement that the Company obtained the ability to exercise control. Furthermore, based on the agreement, UMC recognized a financial liability in other financial liabilities, current and other noncurrent liabilities-others, respectively for the purchase from the other investors of their investments in USCXM at their original investment cost plus interest totally amounting to RMB 4.9 billion, beginning from the seventh year (2022) following the last instalment payment made by the other investors. Accordingly, the Company recognizes non-controlling interests as required by IFRS 10 during the reporting period. At the end of each reporting period, the Company recognizes a financial liability for its commitment to the other investors in accordance with IFRS 9, at the same time derecognizing the non-controlling interests. Any difference between the financial liability and the non-controlling interests balance is recognized in equity.

(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”). 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 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 also 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 motion is currently pending.

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.

(8) On March 14, 2019, a putative class action complaint was filed in the United States District Court for the Southern District of New York against the Company and certain of its officers and/or directors, alleging violations of Section 10(b) of the Securities Exchange Act and Rule 10b-5 thereunder, arising out of an alleged scheme to misappropriate trade secrets. On May 3, 2021, the court approved the settlement reached between the plaintiffs and the defendants and UMC paid a settlement amount of US\$3 million to be allocated to the class plaintiffs and reimbursement of legal fees of class plaintiffs. The settlement has been recorded in non-operating other losses and has no material financial and operational effect on UMC’s business.

10. SIGNIFICANT DISASTER LOSS

None.

11. SIGNIFICANT SUBSEQUENT EVENTS

On January 27, 2022, Intellectual Property and Commercial Court issued a ruling for a suit alleging UMC misappropriated trade secrets. Please refer to Note 9(7) for further information.

12. OTHERS

(1) Categories of financial instruments

	As of December 31,	
	2021	2020
Financial Assets		
Financial assets at fair value through profit or loss	\$20,446,295	\$16,042,721
Financial assets at fair value through other comprehensive income	19,835,665	10,526,144
Financial assets measured at amortized cost		
Cash and cash equivalents (cash on hand excluded)	132,616,447	94,042,271
Receivables	36,047,680	28,942,147
Refundable deposits	2,358,549	2,310,961
Other financial assets	28,863,470	14,386,131
Total	\$240,168,106	\$166,250,375
Financial Liabilities		
Financial liabilities at fair value through profit or loss	\$2,380,599	\$2,326
Financial liabilities measured at amortized cost		
Short-term loans	1,924,124	11,057,132
Payables	37,657,300	31,188,794
Guarantee deposits (current portion included)	14,369,769	235,992
Bonds payable (current portion included)	40,536,658	18,690,384
Long-term loans (current portion included)	36,624,907	33,066,106
Lease liabilities	5,068,754	5,576,864
Other financial liabilities	20,966,209	20,746,624
Total	\$159,528,320	\$120,564,222

(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/weakens against USD by 10%, the profit for the years ended December 31, 2021 and 2020 decreases/increases by NT\$1,104 million and NT\$1,336 million, respectively. When RMB strengthens/weakens against USD by 10%, the profit for the years ended December 31, 2021 and 2020 increases/decreases by NT\$375 million and NT\$1,625 million, respectively. When JPY strengthens/weakens against USD by 10%, the profit for the years ended December 31, 2021 and 2020 decreases/increases by NT\$434 million and NT\$473 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), 6(13) and 6(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, 2021 and 2020 to decrease/increase by NT\$39 million and NT\$44 million, respectively.

Equity price risk

The Company's listed and unlisted equity securities 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, while 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.

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, 2021 and 2020 by NT\$393 million and NT\$263 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 for the years ended December 31, 2021 and 2020 by NT\$867 million and NT\$ 453 million, respectively.

Please refer to Note 12(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, 2021 and 2020, accounts receivable from the top ten customers represent 60% and 62% 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, 2021				Total
	Less than 1 year	2 to 3 years	4 to 5 years	> 5 years	
Non-derivative financial liabilities					
Short-term loans	\$1,939,109	\$-	\$-	\$-	\$1,939,109
Payables	37,455,640	-	-	-	37,455,640
Guarantee deposits	108,740	3,432,749	-	10,828,280	14,369,769
Bonds payable (Note)	8,612,255	8,869,431	10,656,506	4,178,008	32,316,200
Long-term loans	21,084,795	2,543,611	11,021,076	5,976,645	40,626,127
Lease liabilities	688,613	1,198,528	1,050,786	2,841,010	5,778,937
Other financial liabilities	12,738,246	8,492,466	-	-	21,230,712
Total	\$82,627,398	\$24,536,785	\$22,728,368	\$23,823,943	\$153,716,494

Note : 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 was NT\$8,482 million as of December 31, 2021. 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.

	As of December 31, 2020					Total
	Less than 1 year	2 to 3 years	4 to 5 years	> 5 years		
Non-derivative financial liabilities						
Short-term loans	\$11,240,785	\$-	\$-	\$-	\$-	\$11,240,785
Payables	31,008,010	-	-	-	-	31,008,010
Guarantee deposits	793	163,618	-	-	71,581	235,992
Bonds payable	2,374,587	8,484,393	8,563,021	-	-	19,422,001
Long-term loans	25,885,932	5,889,382	2,424,965	-	-	34,200,279
Lease liabilities	695,790	1,280,476	1,102,021	3,354,217	-	6,432,504
Other financial liabilities	-	17,120,418	4,280,333	-	-	21,400,751
Total	\$71,205,897	\$32,938,287	\$16,370,340	\$3,425,798	\$-	\$123,940,322

Derivative financial liabilities					
Forward exchange contracts					
Gross settlement					
Inflow	\$393,442	\$-	\$-	\$-	\$393,442
Outflow	(395,768)	-	-	-	(395,768)
Net	\$(2,326)	\$-	\$-	\$-	\$(2,326)

(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, 2021

None.

As of December 31, 2020

Type	Notional Amount	Contract Period
Forward exchange contracts	Sell USD 82 million	December 11, 2020-February 5, 2021

(7) Fair value of financial instruments

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, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss, current	\$761,320	\$-	\$183,701	\$945,021
Financial assets at fair value through profit or loss, noncurrent	9,323,064	497,751	9,680,459	19,501,274
Financial assets at fair value through other comprehensive income, current	8,482,334	-	-	8,482,334
Financial assets at fair value through other comprehensive income, noncurrent	8,849,869	-	2,503,462	11,353,331
Financial liabilities:				
Financial liabilities at fair value through profit or loss, current	-	-	2,380,599	2,380,599
Financial assets:				
Financial assets at fair value through profit or loss, current	\$1,049,334	\$2,384	\$164,916	\$1,216,634
Financial assets at fair value through profit or loss, noncurrent	5,546,320	393,856	8,885,911	14,826,087
Financial assets at fair value through other comprehensive income, noncurrent	9,058,372	-	1,467,772	10,526,144
Financial liabilities:				
Financial liabilities at fair value through profit or loss, current	-	2,326	-	2,326

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 years ended December 31, 2021 and 2020, there were no significant 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	Preferred stock	Funds	Convertible bonds	Total	Common stock	Preferred stock	Total
As of January 1, 2021	\$3,241,478	\$3,279,003	\$2,314,016	\$216,330	\$9,050,827	\$1,297,627	\$170,145	\$1,467,772
Recognized in profit (loss)	278,951	(818,848)	1,061,793	(6,895)	515,001	-	-	-
Recognized in other comprehensive income (loss)	-	-	-	-	-	1,053,976	(18,286)	1,035,690
Acquisition	695,146	829,751	201,649	111,094	1,837,640	-	-	-
Disposal	(447,915)	(660,904)	-	(83,814)	(1,192,633)	-	-	-
Return of capital	(252)	-	(69,084)	-	(69,336)	-	-	-
Transfer out of Level 3	(161,564)	-	-	-	(161,564)	-	-	-
Exchange effect	(21,518)	(48,756)	(43,722)	(1,779)	(115,775)	-	-	-
As of December 31, 2021	\$3,584,326	\$2,880,246	\$3,464,652	\$234,936	\$9,864,160	\$2,351,603	\$151,859	\$2,503,462

	Financial liabilities at fair value through profit or loss
As of January 1, 2021	\$-
Recognized in profit (loss)	360,494
Issuance	2,020,105
As of December 31, 2021	\$2,380,599

	Financial assets at fair value through profit or loss					Financial assets at fair value through other comprehensive income		
	Common stock	Preferred stock	Funds	Convertible bonds	Total	Common stock	Preferred stock	Total
As of January 1, 2020	\$2,880,688	\$3,279,294	\$2,011,025	\$104,708	\$8,275,715	\$1,130,430	\$175,494	\$1,305,924
Recognized in profit (loss)	589,664	180,523	19,611	39,648	829,446	-	-	-
Recognized in other comprehensive income (loss)	-	-	-	-	-	167,197	(5,349)	161,848
Acquisition	547,952	294,251	340,323	303,456	1,485,962	-	-	-
Disposal	(308,041)	(374,112)	-	(227,223)	(909,376)	-	-	-
Return of capital	(1,903)	-	-	-	(1,903)	-	-	-
Transfer out of Level 3	(428,188)	-	-	-	(428,188)	-	-	-
Exchange effect	(38,674)	(100,953)	(56,943)	(4,259)	(200,829)	-	-	-
As of December 31, 2020	\$3,241,478	\$3,279,003	\$2,314,016	\$216,330	\$9,050,827	\$1,297,627	\$170,145	\$1,467,772

The total profit of NT\$330 million and nil for the years ended December 31, 2021 and 2020, 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 loss of NT\$360 million and nil for the years ended December 31, 2021 and 2020, 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, 2021					
Category	Valuation technique	Significant unobservable inputs	Interrelationship between inputs and fair value	Sensitivity analysis of interrelationship between inputs and fair value	
Unlisted stock	Market Approach	Discount for lack of marketability	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, 2021 by NT\$281 million and NT\$242 million, respectively, and decrease/increase the Company's other comprehensive income (loss) for the year ended December 31, 2021 by NT\$186 million.	
Embedded derivatives in exchangeable bonds	Binomial tree valuation model	Volatility	45.84%	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, 2021 by NT\$283 million and NT\$278 million, respectively.

As of December 31, 2020					
Category	Valuation technique	Significant unobservable inputs	Interrelationship between inputs and fair value	Sensitivity analysis of interrelationship between inputs and fair value	
Unlisted stock	Market Approach	Discount for lack of marketability	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, 2020 by NT\$283 million and NT\$231 million, respectively, and decrease/increase the Company's other comprehensive income (loss) for the year ended December 31, 2020 by NT\$106 million.	

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, volatility, credit spread and risk-free interest 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 short-term financial instruments including cash and cash equivalents, receivables, refundable deposits, other financial assets, short-term loans, payables and guarantee deposits approximate their carrying amount due to their maturities within one year.

As of December 31, 2021

Items	Fair value	Fair value measurements during reporting period using			Carrying amount
		Level 1	Level 2	Level 3	
Bonds payables (current portion included)	\$41,947,014	\$31,442,469	\$10,504,545	\$-	\$40,536,658
Long-term loans (current portion included)	36,624,907	-	36,624,907	-	36,624,907

As of December 31, 2020

Items	Fair value measurements during reporting period using			Carrying amount
	Fair value	Level 1	Level 2	
Bonds payables (current portion included)	\$18,861,597	\$18,861,597	\$-	\$18,690,384
Long-term loans (current portion included)	33,066,106	-	33,066,106	33,066,106

(8) Significant financial assets and liabilities denominated in foreign currencies

The following information was summarized by the foreign currencies other than the functional currency of the Company. The exchange rates disclosed were used to translate the foreign currencies into the functional currency. The significant financial assets and liabilities denominated in foreign currencies were as follows:

	As of December 31,					
	2021			2020		
	Foreign Currency (thousand)	Exchange Rate	NTD (thousand)	Foreign Currency (thousand)	Exchange Rate	NTD (thousand)
Financial Assets						
Monetary items						
USD:NTD	\$979,780	27.62	\$27,061,533	\$711,855	28.43	\$20,238,047
RMB:NTD	1,647	4.320	7,115	1,957	4.355	8,525
SGD:USD	61,404	0.7375	1,250,787	48,101	0.7559	1,033,694
USD:RMB	510,165	6.3757	14,051,480	182,252	6.5249	5,178,866
USD:JPY	166,107	115.02	4,556,692	195,035	103.52	5,544,168
Non-Monetary items						
USD:NTD	190,267	27.62	5,255,170	143,991	28.43	4,093,667
Financial Liabilities						
Monetary items						
USD:NTD	578,045	27.72	16,023,407	241,111	28.53	6,878,910
RMB:NTD (Note C)	4,798,085	4.370	20,967,632	4,710,181	4.405	20,748,348
SGD:USD	102,625	0.7413	2,108,815	87,190	0.7596	1,893,220
USD:RMB	645,684	6.3757	17,989,938	763,407	6.5249	21,941,982
USD:JPY	17,916	115.02	499,929	29,542	103.52	852,317

Note A : The foreign currency transactions mentioned above are expressed in terms of the amount before elimination.

Note B : Please refer to the consolidated statements of comprehensive income for the total of realized and unrealized foreign exchange gain and loss. Since there were varieties of foreign currency transactions and functional currencies within the subsidiaries of the Company, the Company was unable to disclose foreign exchange gain (loss) towards each foreign currency with significant impact.

Note C : Please refer to Note 9(6) for more details on other financial liabilities.

(9) Significant intercompany transactions among consolidated entities for the years ended December 31, 2021 and 2020 are disclosed in Attachment 1.

(10) 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, 2021 and 2020 were as follows:

	As of December 31,	
	2021	2020
Total liabilities	\$183,223,887	\$141,743,273
Less: Cash and cash equivalents	(132,622,131)	(94,048,036)
Net debt	50,601,756	47,695,237
Total equity	281,202,884	235,773,102
Total capital	\$331,804,640	\$283,468,339
Debt to capital ratios	15.25%	16.83%

13. ADDITIONAL DISCLOSURES

- (1) The following are additional disclosures for the Company and its affiliates as required by the R.O.C. Securities and Futures Bureau:
- Financing provided to others for the year ended December 31, 2021: Please refer to Attachment 2.
 - Endorsement/Guarantee provided to others for the year ended December 31, 2021: Please refer to Attachment 3.
 - Securities held as of December 31, 2021 (excluding subsidiaries, associates and joint venture): Please refer to Attachment 4.
 - Individual securities acquired or disposed of with accumulated amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 5.
 - Acquisition of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 6.
 - Disposal of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 7.
 - Related party transactions for purchases and sales amounts exceeding the lower of NT\$100 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 8.
 - Receivables from related parties with amounts exceeding the lower of NT\$100 million or 20 percent of capital stock as of December 31, 2021: Please refer to Attachment 9.
 - Names, locations and related information of investees as of December 31, 2021 (excluding investment in Mainland China): Please refer to Attachment 10.
 - Financial instruments and derivative transactions: Please refer to Note 12.

(2) Investment in Mainland China

- Investee company name, main businesses and products, total amount of capital, method of investment, accumulated inflow and outflow of investments from Taiwan, net income (loss) of investee company, percentage of ownership, investment income (loss), carrying amount of investments, cumulated inward remittance of earnings and limits on investment in Mainland China: Please refer to Attachment 11.
- Directly or indirectly significant transactions through third regions with the investees in Mainland China, including price, payment terms, unrealized gain or loss, and other events with significant effects on the operating results and financial condition: Please refer to Attachment 1, 2, 3, 8 and 9.
- Information of major shareholders as of December 31, 2021: Please refer to Attachment 12.

14. 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. The Company maintains a diversified customer base across industries, including communication, consumer electronics, computer, memory and others, while continuing to focus on manufacturing for high growth, large volume applications, including networking, telecommunications, internet, multimedia, PCs and graphics. 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,	
	2021	2020
Taiwan	\$81,505,018	\$64,563,752
Singapore	10,610,974	11,621,141
China (includes Hong Kong)	48,667,135	59,643,273
Japan	10,010,255	11,591,851
USA	24,116	46,484
Europe	18,210	21,257
Others	2,489	1,126
Total	<u>\$150,838,197</u>	<u>\$147,488,884</u>

Non-current assets include property, plant and equipment, right-of-use assets, intangible assets, prepayment for equipment and other noncurrent assets-others.

(3) Major customers

Individual customers accounting for at least 10% of operating revenues for the years ended December 31, 2021 and 2020 were as follows:

	For the years ended December 31,	
	2021	2020
Customer A from wafer fabrication segment	\$21,935,208	\$20,380,814

ATTACHMENT 1 (Significant intercompany transactions between consolidated entities)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

For the year ended December 31, 2021

No. (Note 1)	Related party	Counterparty	Relationship with the Company (Note 2)	Transactions			Percentage of consolidated operating revenues or consolidated total assets (Note 4)
				Account	Amount	Collection periods (Note 3)	
0	UNITED MICROELECTRONICS CORPORATION	UMC GROUP (USA)	1	Sales	\$48,440,369	Net 60 days	23%
0	UNITED MICROELECTRONICS CORPORATION	UMC GROUP (USA)	1	Accounts receivable	6,286,428	-	1%
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	1	Sales	1,222,320	Net 30 days	1%
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	1	Accounts receivable	29,012	-	0%
1	UNITED SEMICONDUCTOR JAPAN CO., LTD.	UMC GROUP (USA)	3	Sales	2,917,993	Net 60 days	1%
1	UNITED SEMICONDUCTOR JAPAN CO., LTD.	UMC GROUP (USA)	3	Accounts receivable	428,363	-	0%
2	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	UMC GROUP (USA)	3	Sales	1,444,736	Net 60 days	1%
2	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	UMC GROUP (USA)	3	Accounts receivable	221,375	-	0%
3	WAVETEK MICROELECTRONICS CORPORATION	UMC GROUP (USA)	3	Sales	545,785	Net 60 days	0%
3	WAVETEK MICROELECTRONICS CORPORATION	UMC GROUP (USA)	3	Accounts receivable	126,580	-	0%
3	WAVETEK MICROELECTRONICS CORPORATION	UNITED MICROELECTRONICS CORPORATION	2	Sales	110,620	Month-end 30 days	0%
4	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UMC GROUP (USA)	3	Sales	366,968	Net 60 days	0%
4	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UMC GROUP (USA)	3	Accounts receivable	60,147	-	0%

For the year ended December 31, 2020

No. (Note 1)	Related party	Counterparty	Relationship with the Company (Note 2)	Transactions			Percentage of consolidated operating revenues or consolidated total assets (Note 4)
				Account	Amount	Collection periods (Note 3)	
0	UNITED MICROELECTRONICS CORPORATION	UMC GROUP (USA)	1	Sales	\$49,357,981	Net 60 days	28%
0	UNITED MICROELECTRONICS CORPORATION	UMC GROUP (USA)	1	Accounts receivable	5,388,172	-	1%
0	UNITED MICROELECTRONICS CORPORATION	UMC GROUP JAPAN	1	Sales	1,220,419	Net 60 days	1%
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	1	Sales	1,183,180	Net 30 days	1%
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	1	Accounts receivable	24,831	-	0%
1	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	UMC GROUP (USA)	3	Sales	970,358	Net 60 days	1%
1	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	UMC GROUP (USA)	3	Accounts receivable	250,092	-	0%
2	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UMC GROUP (USA)	3	Sales	137,860	Net 60 days	0%
2	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UMC GROUP (USA)	3	Accounts receivable	33,069	-	0%
2	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UMC GROUP JAPAN	3	Sales	106,077	Net 60 days	0%
3	UNITED SEMICONDUCTOR JAPAN CO., LTD.	UMC GROUP (USA)	3	Sales	1,395,094	Net 60 days	1%
3	UNITED SEMICONDUCTOR JAPAN CO., LTD.	UMC GROUP (USA)	3	Accounts receivable	456,860	-	0%

Note 1: UMC and its subsidiaries are coded as follows:

1. UMC is coded "0".

2. The subsidiaries are coded consecutively beginning from "1" in the order presented in the table above.

Note 2: Transactions are categorized as follows:

1. The holding company to subsidiary.

2. Subsidiary to holding company.

3. Subsidiary to subsidiary.

Note 3: The sales price to the above related parties was determined through mutual agreement in reference to market conditions.

Note 4: The percentage with respect to the consolidated asset/liability for transactions of balance sheet items are based on each item's balance at period-end.

For profit or loss items, cumulative balances are used as basis.

Note 5: UMC authorized technology licenses to its subsidiary, UNITED SEMICONDUCTOR (XIAMEN) CO., LTD., in the amount of USD 0.35 billion which was recognized as deferred revenue.

Since it was a downstream transaction, the deferred revenue would be realized over time.

ATTACHMENT 2 (Financing provided to others for the year ended December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

No. (Note 1)	Lender	Counter-party	Financial statement account	Related Party	Maximum balance for the period	Ending balance	Actual amount provided	Interest rate	Nature of financing	Amount of sales to (purchases from) counter-party	Reason for financing	Loss allowance	Collateral		
													Item	Value	
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Other receivables - related parties	Yes	\$10,219,400	\$-	\$-	-	The need for short-term financing	\$-	Business turnover	\$-	None	\$-	
0	UNITED MICROELECTRONICS CORPORATION	WAVE TEK MICROELECTRONICS CORPORATION	Other receivables - related parties	Yes	500,000	500,000	-	1.20%	The need for short-term financing	-	Business turnover	-	None	28,097,970	112,391,881

Note 1: The parent company and its subsidiaries are coded as follows:

- (i) The parent company is coded "0".
- (ii) The subsidiaries are coded consecutively beginning from "1" in the order presented in the table above.

Note 2: Limit of financing amount for individual counter-party shall not exceed 10% of the lender's net assets value as of the period.
Limit of total financing amount shall not exceed 40% of the Company's net asset value.

ATTACHMENT 3 (Endorsement/Guarantee provided to others for the year ended December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

No. (Note 1)	Endorsor/Guarantor	Receiving party	Relationship (Note 2)	Limit of guarantee/endorsement amount for receiving party (Note 3)	Maximum balance for the period	Ending balance	Actual amount provided	Amount of collateral guarantee/endorsement	Percentage of accumulated guarantee amount to net assets value from the latest financial statement	Limit of total guarantee/endorsement amount (Note 4)
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	2	\$126,440,866	\$18,753,100	\$16,865,800	\$14,566,258	\$-	6.00%	\$126,440,866

HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.

No. (Note 1)	Endorsor/Guarantor	Receiving party	Relationship (Note 2)	Limit of guarantee/endorsement amount for receiving party (Note 6)	Maximum balance for the period	Ending balance	Actual amount provided	Amount of collateral guarantee/endorsement	Percentage of accumulated guarantee amount to net assets value from the latest financial statement	Limit of total guarantee/endorsement amount (Note 6)
1	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	6	\$11,050,851	\$7,450,073	\$6,998,970	\$6,438,276	\$-	28.50%	\$11,050,851

Note 1: The parent company and its subsidiaries are coded as follows:

1. The parent company is coded "0".
 2. The subsidiaries are coded consecutively beginning from "1" in the order presented in the table above.
- Note 2: According to the "Guidelines Governing the Preparation of Financial Reports by Securities Issuers" issued by the R.O.C. Securities and Futures Bureau, receiving parties should be disclosed as one of the following:
1. A company with which it does business.
 2. A company in which the public company directly and indirectly holds more than 50% of the voting shares.
 3. A company that directly and indirectly holds more than 50% of the voting shares in the public company.
 4. A company in which the public company holds, directly or indirectly, 90% or more of the voting shares.
 5. A company that fulfills its contractual obligations by providing mutual endorsements/guarantees for another company in the same industry or for joint builders for purposes of undertaking a construction project.
 6. A company that all capital contributing shareholders make endorsements/ guarantees for their jointly invested company in proportion to their shareholding percentages.
 7. Companies in the same industry provide among themselves joint and several security for a performance guarantee of a sales contract for pre-construction homes pursuant to the Consumer Protection Act for each other.

Note 3: The amount of endorsements/guarantees shall not exceed 45% of the net worth of endorser/guarantor; and the ceilings on the amount of endorsements/guarantees for any single entity are as follows:

1. The amount of endorsements/guarantees for any single entity shall not exceed 45% of net worth of endorser/guarantor.
2. The amount of endorsements/guarantees for a company which endorser/guarantor does business with, except the ceiling rules abovementioned shall not exceed the needed amounts arising from business dealings which is the higher amount of total sales or purchase transactions between endorser/guarantor and the receiving party.

The aggregate amount of endorsements/guarantees that the Company as a whole is permitted to make shall not exceed 45% of the Company's net worth, and the aggregate amount of endorsements/guarantees for any single entity shall not exceed 45% of the Company's net worth.

Note 4: Limit of total guarantee/endorsement amount shall not exceed 45% of UMC's net assets value as of December 31, 2021.

Note 5: Total endorsement amount is up to USD 290 million and CNY 2.05 billion. As of December 31, 2021, actual amount provided was NT\$14.57 billion.

Note 6: Limit of total endorsed/guaranteed amount shall not exceed 45% of HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.'s net assets value as of December 31, 2021.

The amount of endorsements/guarantees for any single entity shall not exceed 45% of net worth of HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.'s net assets value as of December 31, 2021.

The aggregate amount of endorsements/guarantees that the Company as a whole is permitted to make shall not exceed 45% of the Company's net worth, and the aggregate amount of endorsements/guarantees for any single entity shall not exceed 45% of the Company's net worth.

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Fund	MILLERFUL NO.1 REAL ESTATE INVESTMENT TRUST	-	Financial assets at fair value through profit or loss, current	22,355	\$231,598	1.35	\$231,598
Stock	PIXART IMAGING, INC.	-	Financial assets at fair value through profit or loss, current	1,600	243,200	1.12	243,200
Stock	KING YUAN ELECTRONICS CO., LTD.	-	Financial assets at fair value through profit or loss, current	2,675	119,840	0.22	119,840
Fund	RED ARC GLOBAL INVESTMENTS (IRELAND) ICA V TERM LIQUIDITY FUND	-	Financial assets at fair value through profit or loss, current	57	166,682	0.15	166,682
Stock	PIXTech, INC.	-	Financial assets at fair value through profit or loss, noncurrent	9,883	-	17.63	-
Stock	UNITED FU SHEN CHEN TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	17,511	-	15.75	-
Stock	HOLTEK SEMICONDUCTOR INC.	-	Financial assets at fair value through profit or loss, noncurrent	22,144	2,491,229	9.79	2,491,229
Stock	UNITED INDUSTRIAL GASES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	16,680	1,431,868	7.66	1,431,868
Stock	OCTASIA INVESTMENT HOLDING INC.	-	Financial assets at fair value through profit or loss, noncurrent	4,530	414,143	6.29	414,143
Stock	AMIC TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,412	-	4.71	-
Stock	SUBTRON TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	12,521	414,436	4.23	414,436
Stock	KING YUAN ELECTRONICS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	20,483	917,624	1.68	917,624
Stock	ENNOSTAR INC.	-	Financial assets at fair value through profit or loss, noncurrent	5,357	410,920	0.78	410,920
Stock	PROMOS TECHNOLOGIES INC.	-	Financial assets at fair value through profit or loss, noncurrent	324	-	0.72	-
Stock-Preferred stock	TONBU, INC.	-	Financial assets at fair value through profit or loss, noncurrent	938	-	-	-
Stock-Preferred stock	AETAS TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,166	-	-	-
Stock-Preferred stock	TA SHEE GOLF & COUNTRY CLUB	-	Financial assets at fair value through profit or loss, noncurrent	0	22,375	-	22,375
Stock	NOVATEK MICROELECTRONICS CORP.	-	Financial assets at fair value through other comprehensive income, current	15,737	8,482,334	2.59	8,482,334
Stock	SILICON INTEGRATED SYSTEMS CORP.	The Company's director	Financial assets at fair value through other comprehensive income, noncurrent	129,577	3,407,886	19.02	3,407,886
Stock	UNIMICRON HOLDING LIMITED	Associate	Financial assets at fair value through other comprehensive income, noncurrent	20,000	1,461,098	12.15	1,461,098
Stock	ITE TECH, INC.	-	Financial assets at fair value through other comprehensive income, noncurrent	13,960	1,514,658	8.67	1,514,658
Stock	CHIPBOND TECHNOLOGY CORPORATION	-	Financial assets at fair value through other comprehensive income, noncurrent	53,164	3,546,027	7.20	3,546,027
Stock	NOVATEK MICROELECTRONICS CORP.	-	Financial assets at fair value through other comprehensive income, noncurrent	708	381,298	0.11	381,298
Stock-Preferred stock	MTIC HOLDINGS PTE. LTD.	Associate	Financial assets at fair value through other comprehensive income, noncurrent	12,000	151,859	-	151,859

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

		December 31, 2021						
Type of securities	Name of securities	Relationship	Financial statement account	Carrying amount	Percentage of ownership (%)	Fair value/ Net assets value	Shares as collateral (thousand)	
Bonds	Convertible bonds		Financial assets measured at amortized cost, current	\$20,000	-	N/A	None	
	CRYSTAL WISE TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, current	-	-	27,620	None	
	GEAR RADIO LTD.	-	Financial assets at fair value through profit or loss, current	-	-	27,620	None	
	DARCHUN VENTURE CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,514	19.65	2,423	None	
	SOLARGATE TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	957	15.94	-	None	
	TRENDFORCE CAPITAL FUND SPC-TRENDFORCE CAPITAL FUND I SP	-	Financial assets at fair value through profit or loss, noncurrent	15	15.06	86,913	None	
	TRONC-E CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,800	14.49	-	None	
	EVERGLORY RESOURCE TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,500	10.23	17,575	None	
	CENTERA PHOTONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	3,750	10.07	25,950	None	
	ADVANCE MATERIALS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	10,719	9.12	131,305	None	
	MONTJADE ENGINEERING CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,800	8.18	13,626	None	
	EXCELSIUS MEDICAL CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,500	7.50	16,365	None	
	TAIWAN REDEYE BIOMEDIAL INC.	-	Financial assets at fair value through profit or loss, noncurrent	743	7.43	9,992	None	
	WIN WIN PRECISION TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,150	6.93	45,896	None	
	RISELINK VENTURE CAPITAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	11	6.67	729	None	
	HYE TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,200	5.45	36,000	None	
	LICO TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	6,609	5.32	-	None	
	AMPAK TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	3,050	5.06	361,425	None	
	EMPASS TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	330	4.50	5,650	None	
	ACT GENOMICS HOLDINGS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	4,600	4.24	59,714	None	
	MERIDIGEN BIOTECH CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,838	4.20	-	None	
	TAIWAN AULISA MEDICAL DEVICES TECHNOLOGIES, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,114	4.01	7,109	None	
	EXCELLENCE OPTOELECTRONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	6,374	3.49	175,919	None	
	SUBTRON TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	10,059	3.40	332,946	None	
	SOLID STATE SYSTEM CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,400	3.21	74,040	None	
	TOPOINT TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	4,416	3.11	186,582	None	
	TRANSLINK CAPITAL PARTNERS IV, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	2.96	214,515	None	

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)	
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)		Fair value/ Net assets value
Stock	BRIGHT SHELAND INTERNATIONAL CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,200	\$37,740	2.87	\$37,740	None
Stock	TAIWAN SEMICONDUCTOR CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	6,741	475,375	2.54	475,375	None
Stock	CHITEC TECHNOLOGY CORP., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	640	34,407	2.15	34,407	None
Stock	FORMOSA PHARMACEUTICALS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	2,100	72,030	2.12	72,030	None
Fund	VERTEX V (C.I.) FUND L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	136,158	2.07	136,158	None
Stock	TERASILIC CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	600	10,710	2.05	10,710	None
Stock	CHIPBOND TECHNOLOGY CORPORATION	-	Financial assets at fair value through profit or loss, noncurrent	13,989	933,033	1.89	933,033	None
Fund	VERTEX VI FUND L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	33,151	1.65	33,151	None
Stock	ACER E-ENABLING SERVICE BUSINESS INC.	-	Financial assets at fair value through profit or loss, noncurrent	550	121,000	1.51	121,000	None
Stock	YUEN FOONG YU CONSUMER PRODUCTS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	4,000	200,800	1.50	200,800	None
Stock	M3 TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	440	146,520	1.20	146,520	None
Stock	LINTES TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	615	75,645	1.08	75,645	None
Stock	CRYSTALWISE TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	888	25,178	1.01	25,178	None
Stock	UNICTRON TECHNOLOGIES CORP.	-	Financial assets at fair value through profit or loss, noncurrent	474	95,511	0.99	95,511	None
Stock	CUBTEK INC.	-	Financial assets at fair value through profit or loss, noncurrent	850	76,500	0.93	76,500	None
Stock	POWERTEC ELECTROCHEMICAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	9,930	-	0.70	-	None
Stock	TAIWAN PHARMACEUTICALS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	514	5,191	0.68	5,191	None
Stock	ROARING SUCCESS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	317	6,489	0.64	6,489	None
Stock	CLIENTRON CORP.	-	Financial assets at fair value through profit or loss, noncurrent	363	12,142	0.57	12,142	None
Stock	EVERGREEN AVIATION TECHNOLOGIES CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,600	100,800	0.45	100,800	None
Stock	FITPOWER INTEGRATED TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	500	141,000	0.27	141,000	None
Stock	SOLAR APPLIED MATERIALS TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,173	59,947	0.20	59,947	None
Stock	RAYDIUM SEMICONDUCTOR CORP.	-	Financial assets at fair value through profit or loss, noncurrent	120	68,760	0.18	68,760	None
Stock	CHANG WAH ELECTROMATERIALS INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,055	41,034	0.15	41,034	None
Stock	WAFER WORKS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	800	68,400	0.15	68,400	None
Stock	TIGERAIR TAIWAN CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	598	18,658	0.15	18,658	None

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021		Shares as collateral (thousand)		
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount \$63		Percentage of ownership (%)	Fair value/ Net assets value \$63
Stock	WALTOP INTERNATIONAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	13	\$63	0.15	\$63	None
Stock	FORTEMEDIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	21	27	0.02	27	None
Stock	YANG MING MARINE TRANSPORT CORP.	-	Financial assets at fair value through profit or loss, noncurrent	224	27,104	0.01	27,104	None
Stock-Preferred Stock	EIOULE INTERNATIONAL LIMITED	-	Financial assets at fair value through profit or loss, noncurrent	23,909	124,335	-	124,335	None
Stock-Preferred Stock	FLOADIA CORP.	-	Financial assets at fair value through profit or loss, noncurrent	2	-	-	-	None
Stock-Preferred Stock	FORTEMEDIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	311	2,165	-	2,165	None
Stock-Preferred Stock	ACEPODIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	2,055	68,868	-	68,868	None
Stock-Preferred Stock	BRAVOTEK CORP.	-	Financial assets at fair value through profit or loss, noncurrent	2,250	66,870	-	66,870	None
Stock-Preferred Stock	GEAR RADIO LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,400	57,652	-	57,652	None
Stock-Preferred Stock	SONATUS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	249	27,620	-	27,620	None
Stock-Preferred Stock	HAHOW INC.	-	Financial assets at fair value through profit or loss, noncurrent	151,217	110,480	-	110,480	None
Stock-Preferred Stock	CENTERA PHOTONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	526	15,782	-	15,782	None
Convertible bonds	YEONG GUAN ENERGY TECHNOLOGY GROUP CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	100	9,850	-	9,850	None
Convertible bonds	BRIGHT SHELAND INTERNATIONAL CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	250	25,310	-	25,310	None
Convertible bonds	MERCURIES & ASSOCIATES HOLDING, LTD.	-	Financial assets at fair value through profit or loss, noncurrent	250	28,525	-	28,525	None
Convertible bonds	CHANG WAH TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	750	105,375	-	105,375	None
Convertible bonds	LOTES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	300	41,775	-	41,775	None
Convertible bonds	TA LIANG TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	60	7,653	-	7,653	None
Convertible bonds	PHISON ELECTRONICS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,900	234,175	-	234,175	None
Convertible bonds	ULTRA CHIP, INC.	-	Financial assets at fair value through profit or loss, noncurrent	30	3,704	-	3,704	None
Stock	SHIN-ETSU HANDOTAI TAIWAN CO., LTD.	-	Financial assets at fair value through other comprehensive income, noncurrent	10,500	890,505	7.00	890,505	None
Convertible bonds	ZHONG YANG TECHNOLOGY CO., LTD.	-	Prepayments for investments	50	5,025	-	N/A	None

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousands; Currency denomination in NTD or in foreign currencies)

TLC CAPITAL CO., LTD.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Convertible bonds	EIOULE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, current	\$150,833	-	\$150,833	None
Fund	EVERY CAPITAL ASIA FUND, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	198,055	18.18	198,055	None
Stock	BEAUTY ESSENTIALS INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	116,391	13.99	116,391	None
Fund	OAK HILL OPPORTUNITIES FUND, SEGREGATED PORTFOLIO	-	Financial assets at fair value through profit or loss, noncurrent	334,339	13.00	334,339	None
Stock	WINKING ENTERTAINMENT LTD.	-	Financial assets at fair value through profit or loss, noncurrent	138,583	10.23	138,583	None
Stock	ARTERY TECHNOLOGY CORPORATION	Associate	Financial assets at fair value through profit or loss, noncurrent	141,193	9.99	141,193	None
Fund	EVERY CAPITAL ASIA FUND II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	137,272	7.14	137,272	None
Stock	EVERGLORY RESOURCE TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	8,436	4.91	8,436	None
Fund	TRANSLINK CAPITAL PARTNERS III, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	171,420	4.24	171,420	None
Stock	SUNDIA MEDITECH GROUP	-	Financial assets at fair value through profit or loss, noncurrent	78	3.20	-	None
Stock	WELLYSUN INC.	-	Financial assets at fair value through profit or loss, noncurrent	15,890	2.34	15,890	None
Stock	EXCELLENCE OPTOELECTRONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	87,854	1.74	87,854	None
Stock	PLAYNITRIDE INC.	-	Financial assets at fair value through profit or loss, noncurrent	180,789	1.68	180,789	None
Stock	ADVANCE MATERIALS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	23,260	1.62	23,260	None
Stock	HANDA PHARMACEUTICALS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	69,200	0.82	69,200	None
Stock	SIMPLO TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	467,286	0.77	467,286	None
Stock	TXC CORP.	-	Financial assets at fair value through profit or loss, noncurrent	208,678	0.64	208,678	None
Stock	LINTES TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	44,895	0.64	44,895	None
Stock	POWTEC ELECTROCHEMICAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	6,470	0.46	-	None
Stock	YUEN FOONG YU CONSUMER PRODUCTS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	50,200	0.37	50,200	None
Stock	EVERGREEN STEEL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	55,000	0.24	55,000	None
Stock	ALLIED SUPREME CORP.	-	Financial assets at fair value through profit or loss, noncurrent	25,273	0.11	25,273	None
Stock	VALUE VALVES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,600	0.10	3,600	None
Stock	CHANG WAH ELECTROMATERIALS INC.	-	Financial assets at fair value through profit or loss, noncurrent	19,696	0.07	19,696	None
Stock	ADVANCED ENERGY SOLUTION HOLDING CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,872	-	1,872	None
Capital-Preferred stock	GUANGXI CHIPBETTER MICROELECTRONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	59,939	-	59,939	None
Capital-Preferred stock	CANAANTEK CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	39,832	-	39,832	None

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

TLC CAPITAL CO., LTD.

							December 31, 2021					
Type of securities	Name of securities	Relationship	Financial statement account	Units (thousand)/ bonds/shares (thousand)	Carrying amount	Percentage of ownership (%)	Fair value/ Net assets value	Shares as collateral (thousand)				
Capital-Preferred stock	HEFEI TBSTEST TECHNOLOGIES CO., LTD	-	Financial assets at fair value through profit or loss, noncurrent	168	\$24,809	-	\$24,809	None				
Capital-Preferred stock	LINSI MICROELECTRONICS (SHENZHEN) CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	459	25,920	-	25,920	None				
Capital-Preferred stock	WUHAN JIMU INTELLIGENT TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	41	26,470	-	26,470	None				
Stock-Preferred stock	YOUJIA GROUP LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,685	1,222	-	1,222	None				
Stock-Preferred stock	AL07 LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,377	-	-	-	None				
Stock-Preferred stock	ADWO MEDIA HOLDINGS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	5,332	-	-	-	None				
Stock-Preferred stock	IMO, INC.	-	Financial assets at fair value through profit or loss, noncurrent	8,519	-	-	-	None				
Stock-Preferred stock	GAME VIDEO LTD.	-	Financial assets at fair value through profit or loss, noncurrent	279	-	-	-	None				
Stock-Preferred stock	EJOULE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	35,863	186,502	-	186,502	None				
Stock-Preferred stock	TURNING POINT LASERS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,000	64,861	-	64,861	None				
Stock-Preferred stock	JSAB HOLDING LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,817	34,674	-	34,674	None				
Stock-Preferred stock	SILC TECHNOLOGIES, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,697	75,955	-	75,955	None				
Stock-Preferred stock	SINO APPLIED TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	855	12,429	-	12,429	None				
Stock-Preferred stock	RAMON SPACE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	249	55,240	-	55,240	None				
Stock-Preferred stock	XMEMS LABS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	2,990	55,240	-	55,240	None				

UMC CAPITAL CORP.

							December 31, 2021					
Type of securities	Name of securities	Relationship	Financial statement account	Units (thousand)/ bonds/shares (thousand)	Carrying amount	Percentage of ownership (%)	Fair value/ Net assets value	Shares as collateral (thousand)				
Convertible bonds	CLOUDWORDS, INC.	-	Financial assets at fair value through profit or loss, current	-	USD 190	-	USD 190	None				
Capital	TRANSLINK MANAGEMENT III, L.L.C.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 1,370	14.33	USD 1,370	None				
Fund	TRANSLINK CAPITAL PARTNERS III, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 16,780	11.47	USD 16,780	None				
Fund	TRANSLINK CAPITAL PARTNERS IV, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 23,300	8.87	USD 23,300	None				
Stock	OCTASIA INVESTMENT HOLDING INC.	-	Financial assets at fair value through profit or loss, noncurrent	5,594	USD 18,516	7.76	USD 18,516	None				
Stock	ALL-STARS SP IV LTD.	-	Financial assets at fair value through profit or loss, noncurrent	7	USD 6,854	5.03	USD 6,854	None				
Fund	TRANSLINK CAPITAL PARTNERS II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 4,387	4.53	USD 4,387	None				
Stock	CNEX LABS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	454	-	4.43	-	None				
Fund	GROVE VENTURES II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 2,063	3.25	USD 2,063	None				

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UMC CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021		Percentage of ownership (%)	Fair value/ Net assets value	Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount			
Fund	SIERRA VENTURES XI, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	12,427	1.76	USD 12,427	None
Fund	STORM VENTURES FUND V, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	7,600	1.69	USD 7,600	None
Fund	SIERRA VENTURES XII, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	2,689	1.38	USD 2,689	None
Stock	NEUROBLADE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	37 USD	1,398	0.90	USD 1,398	None
Stock	ACHIEVE MADE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	80 USD	5	0.46	USD 5	None
Stock	APIER GROUP INC.	-	Financial assets at fair value through profit or loss, noncurrent	320 USD	3,686	0.32	USD 3,686	None
Stock-Preferred stock	ACHIEVE MADE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,644 USD	1,042	-	USD 1,042	None
Stock-Preferred stock	GLYMPSE, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,349 USD	2,691	-	USD 2,691	None
Stock-Preferred stock	ATSCALE, INC.	-	Financial assets at fair value through profit or loss, noncurrent	8,520 USD	6,072	-	USD 6,072	None
Stock-Preferred stock	SENSIFREE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	614 USD	1,014	-	USD 1,014	None
Stock-Preferred stock	DCARD HOLDINGS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	30,075 USD	7,522	-	USD 7,522	None
Stock-Preferred stock	GCT SEMICONDUCTOR, INC.	-	Financial assets at fair value through profit or loss, noncurrent	175 USD	111	-	USD 111	None
Stock-Preferred stock	FORTEMEDIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	12,241 USD	6,762	-	USD 6,762	None
Stock-Preferred stock	SIFOTONICS TECHNOLOGIES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,500 USD	9,204	-	USD 9,204	None
Stock-Preferred stock	NEVO ENERGY, INC.	-	Financial assets at fair value through profit or loss, noncurrent	4,980	-	-	-	None
Stock-Preferred stock	NEXENTA SYSTEMS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	6,555	-	-	-	None
Stock-Preferred stock	CLOUDWORDS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	9,461 USD	5,401	-	USD 5,401	None
Stock-Preferred stock	EAST VISION TECHNOLOGY LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,770	-	-	-	None
Stock-Preferred stock	BLUESPACE.AI, INC.	-	Financial assets at fair value through profit or loss, noncurrent	533 USD	1,768	-	USD 1,768	None
Stock-Preferred stock	REED SEMICONDUCTOR CORP.	-	Financial assets at fair value through profit or loss, noncurrent	3,864 USD	2,327	-	USD 2,327	None
Stock-Preferred stock	A.A.TARANIS VISUAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	400 USD	4,544	-	USD 4,544	None
Stock-Preferred stock	NEUROBLADE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	33 USD	2,000	-	USD 2,000	None
Stock-Preferred stock	HYPERLIGHT CORP.	-	Financial assets at fair value through profit or loss, noncurrent	117 USD	800	-	USD 800	None
Stock-Preferred stock	AMMAX BIO, INC.	-	Financial assets at fair value through profit or loss, noncurrent	493 USD	1,000	-	USD 1,000	None
Convertible bonds	GLYMPSE, INC.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	1,855	-	USD 1,855	None

ATTACHMENT 4 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

TERA ENERGY DEVELOPMENT CO., LTD.

Type of securities	Name of securities	Relationship	December 31, 2021				Shares as collateral (thousand)
			Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	Fair value/ Net assets value	
Stock	TIAN TAI PHOTOELECTRICITY CO., LTD.	-	357	\$5,171	1.18	\$5,171	None

SINO PARAGON LIMITED

Type of securities	Name of securities	Relationship	December 31, 2021				Shares as collateral (thousand)
			Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	Fair value/ Net assets value	
Fund	SPARKLABS GLOBAL VENTURES FUND I, L.P.	-	-	\$95,549	11.13	\$95,549	None
Fund	SPARKLABS KOREA FUND II, L.P.	-	-	40,124	5.00	40,124	None

UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.

Type of securities	Name of securities	Relationship	December 31, 2021				Shares as collateral (thousand)
			Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	Fair value/ Net assets value	
Fund	Lanhor Fund	-	-	RMB 26,988	9.71	RMB 26,988	None

ATTACHMENT 5 (Individual securities acquired or disposed of with accumulated amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Type of securities	Name of the securities	Financial statement account	Counter-party	Relationship	Beginning balance		Addition		Disposal		Ending balance		
					Units (thousand)/ bonds/shares (thousand)	Amount	Units (thousand)/ bonds/shares (thousand)	Amount	Units (thousand)/ bonds/shares (thousand)	Amount	Gain (Loss) from disposal	Units (thousand)/ bonds/shares (thousand)	Amount
Stock	CHIPBOND TECHNOLOGY CORPORATION	Financial assets at fair value through other comprehensive income, noncurrent	CHIPBOND TECHNOLOGY CORPORATION	-	-	53,164	\$3,498,179	-	-	-	-	53,164	\$3,346,027

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of the securities	Financial statement account	Counter-party	Relationship	Beginning balance		Addition		Disposal		Ending balance		
					Units (thousand)/ bonds/shares (thousand)	Amount (Note 1)	Units (thousand)/ bonds/shares (thousand)	Amount	Units (thousand)/ bonds/shares (thousand)	Amount	Gain (Loss) from disposal	Units (thousand)/ bonds/shares (thousand)	Amount
Stock	UNITED MICROELECTRONICS CORP.	Financial assets at fair value through other comprehensive income, noncurrent	CHIPBOND TECHNOLOGY CORPORATION	-	16,079	16,079	\$758,112	-	-	\$920,443	-	16,079	\$813,329
Stock	CHIPBOND TECHNOLOGY CORPORATION	Financial assets at fair value through profit or loss, noncurrent	CHIPBOND TECHNOLOGY CORPORATION	-	-	13,989	920,443	-	-	-	-	13,989	933,033

ATTACHMENT 6 (Acquisition of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

Where counter-party is a related party, details of prior transactions

Name of properties	Transaction date	Transaction amount	Payment status	Counter-party	Relationship	Former holder of property	Relationship between former holder and acquirer of property	Date of transaction	Transaction amount	Price reference	Date of acquisition and status of utilization	Other commitments
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None

ATTACHMENT 7 (Disposal of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

Names of properties	Transaction date	Date of original acquisition	Carrying amount	Transaction amount	Status of proceeds collection	Gain (Loss) from disposal	Counter-party	Relationship	Reason of disposal	Price reference	Other commitments
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None

ATTACHMENT 8 (Related party transactions for purchases and sales amounts exceeding the lower of NTS\$100 million or 20 percent of capital stock for the year ended December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Subsidiary	Sales	\$48,440,369	30 %	Net 60 days	N/A	N/A	\$6,286,428	24 %	
FARADAY TECHNOLOGY CORPORATION	Associate	Sales	1,969,746	1 %	Month-end 60 days	N/A	N/A	271,158	1 %	
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Subsidiary	Sales	1,222,320	1 %	Net 30 days	N/A	N/A	29,012	0 %	
UNITEDS SEMICONDUCTOR (SHANDONG) CO., LTD.	Subsidiary	Sales	178,331	0 %	Net 30 days	N/A	N/A	18,818	0 %	

UMC GROUP (USA)

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UNITED MICROELECTRONICS CORPORATION	Parent company	Purchases	1,662,118	90 %	Net 60 days	N/A	N/A	228,390	88 %	
UNITED SEMICONDUCTOR JAPAN CO., LTD.	Associate	Purchases	98,856	5 %	Net 60 days	N/A	N/A	15,615	6 %	
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Associate	Purchases	50,581	3 %	Net 60 days	N/A	N/A	8,047	3 %	
WAVE TEK MICROELECTRONICS CORPORATION	Associate	Purchases	19,007	1 %	Net 60 days	N/A	N/A	4,583	2 %	
HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	Associate	Purchases	13,055	1 %	Net 60 days	N/A	N/A	2,184	1 %	

UNITED SEMICONDUCTOR JAPAN CO., LTD.

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	11,452,092	17 %	Net 60 days	N/A	N/A	1,796,073	11 %	

UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	332,658	8 %	Net 60 days	N/A	N/A	51,244	7 %	
FARADAY TECHNOLOGY CORPORATION	Associate	Sales	120,610	3 %	Net 60 days	N/A	N/A	48,160	7 %	

WAVE TEK MICROELECTRONICS CORPORATION

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	\$545,785	18 %	Net 60 days	N/A	N/A	\$126,580	25 %	
UNITED MICROELECTRONICS CORPORATION	Parent company	Sales	110,620	4 %	Month-end 30 days	N/A	N/A	-	-	

HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	84,497	3 %	Net 60 days	N/A	N/A	13,923	3 %	

ATTACHMENT 9 (Receivables from related parties with amounts exceeding the lower of NT\$100 million or 20 percent of capital stock as of December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Subsidiary	\$-	\$6,286,428	\$9,679	8.30	\$5	Collection in subsequent period	\$6,308,151	\$12,044
FARADAY TECHNOLOGY CORP.	Associate	-	271,158	-	10.16	-	-	271,439	235

UNITED SEMICONDUCTOR JAPAN CO., LTD.

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Associate	JPY -	1,796,073	JPY -	6.62	JPY -	-	1,796,073	JPY -

UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Associate	RMB -	51,244	RMB -	6.12	RMB -	-	25,272	RMB 60
FARADAY TECHNOLOGY CORP.	Associate	RMB -	48,160	RMB -	4.51	RMB -	-	29,372	RMB 57

WAVETEK MICROELECTRONICS CORPORATION

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Associate	\$-	\$126,580	\$-	4.31	\$-	-	\$126,580	\$-

ATTACHMENT 10 (Names, locations and related information of investee companies as of December 31, 2021) (Not including investment in Mainland China)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

Investee company	Address	Main businesses and products		Initial Investment		Investment as of December 31, 2021				Investment income (loss) recognized	Note
		IC Sales	Other	Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
UMC GROUP (USA)	USA	IC Sales		USD	USD	16,438	16,438	100.00	\$1,732,285	\$64,742	\$64,742
UNITED MICROELECTRONICS (EUROPE) B.V.	The Netherlands	Marketing support activities		USD	USD	5,421	5,421	100.00	136,051	4,151	4,151
UMC CAPITAL CORP.	Cayman Islands	Investment holding		USD	USD	81,500	81,500	100.00	5,314,580	1,362,690	1,362,690
GREEN EARTH LIMITED	Samoa	Investment holding		USD	USD	977,000	977,000	100.00	10,277,015	(1,124,730)	(1,124,730)
TLC CAPITAL CO., LTD.	Taipei City, Taiwan	Venture capital		USD	USD	4,610,000	4,610,000	100.00	4,648,384	132,881	132,881
UMC INVESTMENT (SAMOA) LIMITED	Samoa	Investment holding		USD	USD	1,520	1,520	100.00	38,865	(1,096)	(1,096)
FORTUNE VENTURE CAPITAL CORP.	Taipei City, Taiwan	Consulting and planning for venture capital		USD	USD	3,440,053	3,440,053	100.00	7,498,124	942,304	916,579
UMC KOREA CO., LTD.	Korea	Marketing support activities		KRW	KRW	550,000	550,000	100.00	20,575	1,161	1,161
OMNI GLOBAL LIMITED	Samoa	Investment holding		USD	USD	4,300	4,300	100.00	626,457	56,705	56,705
SINO PARAGON LIMITED	Samoa	Investment holding		USD	USD	2,600	2,600	100.00	138,220	(4,133)	(4,133)
BEST ELITE INTERNATIONAL LIMITED	British Virgin Islands	Investment holding		USD	USD	309,102	309,102	100.00	25,139,523	4,633,937	4,633,937
UNITED SEMICONDUCTOR JAPAN CO., LTD.	Japan	Sales and manufacturing of integrated circuits		JPY	JPY	64,421,068	64,421,068	100.00	18,222,094	3,088,751	3,088,751
WAVETEK MICROELECTRONICS CORPORATION	Hsinchu County, Taiwan	Sales and manufacturing of integrated circuits		USD	USD	1,903,741	1,903,741	79.73	805,037	504,288	403,565
MTIC HOLDINGS PTE. LTD.	Singapore	Investment holding		SGD	SGD	12,000	12,000	45.44	-	(236,980)	(26,295)
UNITECH CAPITAL INC.	British Virgin Islands	Investment holding		USD	USD	21,000	21,000	42.00	976,559	707,036	296,955
TRIKNIGHT CAPITAL CORPORATION	Taipei City, Taiwan	Investment holding		USD	USD	2,342,800	2,342,800	40.00	4,122,087	5,377,442	2,150,977
HSUN CHIEH INVESTMENT CO., LTD.	Taipei City, Taiwan	Investment holding		USD	USD	336,241	336,241	36.49	14,092,662	11,488,620	4,191,965
YANN YUAN INVESTMENT CO., LTD.	Taipei City, Taiwan	Investment holding		USD	USD	2,300,000	2,300,000	28.22	9,741,234	373,486	105,867
FARADAY TECHNOLOGY CORPORATION	Hsinchu City, Taiwan	Design of application-specific integrated circuit		USD	USD	38,918	38,918	13.78	1,779,618	990,347	136,430
UNIMICRON TECHNOLOGY CORP.	Taoyuan City, Taiwan	Manufacturing of PCB		USD	USD	2,438,565	2,438,565	13.30	10,418,777	1,155,055	1,485,292

ATTACHMENT 10 (Names, locations and related information of investee companies as of December 31, 2021) (Not including investment in Mainland China)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
TERA ENERGY DEVELOPMENT CO., LTD.	Hsinchu City, Taiwan	\$100,752	\$100,752	7,800	100.00	\$88,952	\$26,632	\$26,632	
PURIUMFIL INC.	Hsinchu City, Taiwan	10,000	10,000	1,000	44.45	7,253	2,355	1,047	
UNITED LED CORPORATION HONG KONG LIMITED	Hongkong	USD 22,500	USD 22,500	22,500	25.14	98,954	14,434	3,629	
WAVE/TEK MICROELECTRONICS CORPORATION	Hsinchu County, Taiwan	8,856	8,856	1,194	0.64	7,295	504,288	3,252	

TLC CAPITAL CO., LTD.

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
SOARING CAPITAL CORP.	Samoa	USD 900	USD 900	900	100.00	\$7,182	\$(904)	\$(904)	
HSUN CHIEH CAPITAL CORP.	Samoa	USD 8,000	USD 8,000	8,000	40.00	229,598	98,440	39,376	
VSENSE CO., LTD.	Taipei City, Taiwan	95,916	95,916	4,251	25.98	-	(20,978)	(961)	

UMC CAPITAL CORP.

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
TRANSLINK CAPITAL PARTNERS I, L.P.	Cayman Islands	USD 3,934	USD 4,036	-	10.38	USD 8,159	USD 44,221	USD 3,954	

TERA ENERGY DEVELOPMENT CO., LTD.

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
EVERRICH ENERGY INVESTMENT (HK) LIMITED	Hongkong	USD 750	USD 750	750	100.00	\$43,023	\$2,036	\$2,036	

WAVE/TEK MICROELECTRONICS CORPORATION

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
WAVE/TEK MICROELECTRONICS INVESTMENT (SAMOA) LIMITED	Samoa	USD 1,650	USD 1,650	1,650	100.00	\$2,690	\$(258)	\$(258)	

ATTACHMENT 10 (Names, locations and related information of investee companies as of December 31, 2021) (Not including investment in Mainland China)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

WAVETEK MICROELECTRONICS INVESTMENT (SAMOA) LIMITED

Investee company	Address	Main businesses and products		Initial Investment			Investment as of December 31, 2021			Note
		Marketing service		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company	
WAVETEK MICROELECTRONICS CORPORATION (USA)	USA			USD	60 USD	60	100.00	\$2,657	\$(43)	\$(43)

BESTELITE INTERNATIONAL LIMITED

Investee company	Address	Main businesses and products		Initial Investment			Investment as of December 31, 2021			Note
		Investment holding		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company	
INFOSHINE TECHNOLOGY LIMITED	British Virgin Islands			USD	354,000 USD	-	100.00	\$25,218,528	\$4,640,155	\$4,640,155

INFOSHINE TECHNOLOGY LIMITED

Investee company	Address	Main businesses and products		Initial Investment			Investment as of December 31, 2021			Note
		Investment holding		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company	
OAKWOOD ASSOCIATES LIMITED	British Virgin Islands			USD	354,000 USD	-	100.00	\$25,218,528	\$4,640,155	\$4,640,155

OMNI GLOBAL LIMITED

Investee company	Address	Main businesses and products		Initial Investment			Investment as of December 31, 2021			Note
		Research & Development		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company	
UNITED MICROTECHNOLOGY CORPORATION (CALIFORNIA)	USA			USD	1,000 USD	0	100.00	\$35,116	\$1,469	\$1,469
ECP VITA PTE. LTD.	Singapore		Insurance	USD	9,000 USD	9,000	100.00	575,076	50,180	50,180
UMC TECHNOLOGY JAPAN CO., LTD.	Japan		Semiconductor manufacturing technology development and consulting services	- JPY	35,000	-	-	-	(182)	(182)

Note: UMC TECHNOLOGY JAPAN CO., LTD. was dissolved and liquidated on March 29, 2021.

GREEN EARTH LIMITED

Investee company	Address	Main businesses and products		Initial Investment			Investment as of December 31, 2021			Note
		Investment holding		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company	
UNITED MICROCHIP CORPORATION	Cayman			USD	974,050 USD	974,050	100.00	\$10,252,341	\$(1,124,020)	\$(1,124,020)

ATTACHMENT 11 (Investment in Mainland China as of December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

Investee company	Main businesses and products	Total amount of paid-in capital	Method of investment (Note 1)	Investment flows		Accumulated outflow of investment from Taiwan as of January 1, 2021	Net income (loss) of investee company	Percentage of ownership	Investment income (loss) recognized (Note 2)	Carrying amount as of December 31, 2021	Accumulated inward remittance of earnings as of December 31, 2021
				Outflow	Inflow						
				(USD)	(USD)						
UNITRUTH ADVISOR (SHANGHAI) CO., LTD.	Investment Holding and advisory	\$22,096 (USD)	(i) SOARING CAPITAL CORP.	\$22,096 (USD)	\$-	\$22,096 (USD)	\$ (865)	100.00%	\$865 (iii)	\$7,050	\$-
EVERRICH (SHANDONG) ENERGY CO., LTD.	Solar engineering integrated design services	20,715 (USD)	(ii) EVERRICH ENERGY INVESTMENT (HK) LIMITED	20,715 (USD)	-	20,715 (USD)	2,083	100.00%	2,083 (ii)	42,631	121,307 (USD)
UNITED LED CORPORATION	Research, manufacturing and sales in LED epitaxial wafers	2,320,080 (USD)	(ii) UNITED LED CORPORATION HONG KONG LIMITED	559,305 (USD)	-	559,305 (USD)	14,908 (3,451)	25.14%	3,745 (867) (ii)	95,995 (22,221)	-
HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	Sales and manufacturing of integrated circuits	13,587,670 (RMB)	(i) OAKWOOD ASSOCIATES LIMITED	8,537,397 (USD)	-	8,537,397 (USD)	4,636,816 (1,073,337)	99.9985% (Note 4)	4,636,747 (1,073,321) (RMB)	24,557,075 (5,684,508)	-
UNITED SEMICONDUCTOR (SHANDONG) CO., LTD.	Design support of integrated circuits	129,600 (RMB)	(iii) HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	-	-	-	126,412 (29,262)	99.9985%	126,408 (29,261) (RMB)	416,664 (96,450)	-
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Sales and manufacturing of integrated circuits	63,494,470 (RMB)	(ii) UNITED MICROCHIP CORPORATION and (iii) HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	26,652,361 (USD)	-	26,652,361 (USD)	(2,368,401) (548,241)	69.95%	(1,606,703) (371,922) (RMB)	16,306,851 (3,774,734)	-
Investment amounts authorized by Investment Commission, MOEA				\$55,791,874 (USD)	\$58,767,571 (USD)	\$168,587,822	Upper limit on investment				

Note 1 : The methods for engaging in investment in Mainland China include the following:

- (i) Direct investment in Mainland China.
- (ii) Indirectly investment in Mainland China through companies registered in a third region (Please specify the name of the company in third region).
- (iii) Other methods.

Note 2 : The investment income (loss) recognized in current period, the investment income (loss) were determined based on the following basis:

- (i) The financial statements were audited by an international certified public accounting firm in cooperation with an R.O.C. accounting firm.
- (ii) The financial statements were audited by the auditors of the parent company.
- (iii) Others.

Note 3 : Initial investment amounts denominated in foreign currencies are translated into New Taiwan Dollars using the spot rates at the financial report date.

Note 4 : The Company indirectly invested in HEJIAN TECHNOLOGY (SUZHOU) CO., LTD. via investment in BEST ELITE INTERNATIONAL LIMITED, an equity investee. The investment has been approved by the Investment Commission, MOEA in the total amount of USD 383,569 thousand. As of December 31, 2021, the amount of investment has been all remitted.

Note 5 : The investment to UNITED SEMICONDUCTOR (XIAMEN) CO., LTD. (USCXM) from HEJIAN TECHNOLOGY (SUZHOU) CO., LTD. and indirectly invested in USCXM via investment in GREEN EARTH LIMITED.

The consent to invest in USCXM's investment has been approved by the Investment Commission, MOEA in the total amount of USD 1,722,349 thousand. As of December 31, 2021, the amount of investment USD 214,283 thousand has not yet been remitted.

ATTACHMENT 12 (Information of major shareholders as of December 31, 2021)

UNITED MICROELECTRONICS CORPORATION

Name	Number of shares	Percentage of ownership (%)
JPMorgan Chase Bank, N.A. acting in its capacity as depository and representative to the holders of ADRs	746,370,855	5.97

Independent Auditors' Report Translated from Chinese

To United Microelectronics Corporation

Opinion

We have audited the accompanying parent company only balance sheets of United Microelectronics Corporation (the "Company") as of December 31, 2021 and 2020, and the related parent company only statements of comprehensive income, changes in equity and cash flows for the years ended December 31, 2021 and 2020, and notes to the parent company only financial statements, including the summary of significant accounting policies (together "the parent company only financial statements").

In our opinion, based on our audits and the reports of other auditors (please refer to the *Other Matter – Making Reference to the Audits of Component Auditors* section of our report), the parent company only financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and its financial performance and cash flows for the years ended December 31, 2021 and 2020, in conformity with the requirements of the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Parent Company Only Financial Statements* section of our report. We are independent of the Company in accordance with the Norm of Professional Ethics for Certified Public Accountant of the Republic of China (the "Norm"), and we have fulfilled our other ethical responsibilities in accordance with the Norm. Based on our audits and the reports of other auditors, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of 2021 parent company only financial statements. These matters were addressed in the context of our audit of the parent company only financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

**UNITED MICROELECTRONICS CORPORATION
PARENT COMPANY ONLY
FINANCIAL STATEMENTS
WITH REPORT OF INDEPENDENT AUDITORS
FOR THE YEARS ENDED
DECEMBER 31, 2021 AND 2020**

Address: No. 3 Li-Hsin Road II, Hsinchu Science Park, Hsinchu City, Taiwan, R.O.C.
Telephone: 886-3-578-2258

The reader is advised that parent company only financial statements have been prepared originally in Chinese. In the event of a conflict between these financial statements and the original Chinese version or difference in interpretation between the two versions, the Chinese language financial statements shall prevail.

Valuation for slow-moving inventories

As of December 31, 2021, the Company's net inventories amounted to NT\$15,772 million. As the semiconductor industry is characterized by rapid changes in technology, management had 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. Therefore, we consider this is a key audit matter.

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 parent company only financial statements.

Other Matter – Making Reference to the Audits of Component Auditors

We did not audit the financial statements of certain subsidiaries, associates and joint ventures accounted for under the equity method. Those financial statements were audited by other auditors, whose reports thereon have been furnished to us, and our opinions expressed herein are based solely on the reports of other auditors. These subsidiaries, associates and joint ventures under equity method amounted to NT\$39,351 million and NT\$29,135 million, representing 9.73% and 9.14% of total assets as of December 31, 2021 and 2020, respectively. The related shares of profits from the subsidiaries, associates and joint ventures under the equity method amounted to NT\$8,231 million and NT\$6,643 million, representing 13.56% and 22.27% of the income before tax for the years ended December 31, 2021 and 2020, respectively, and the related shares of other comprehensive income from the subsidiaries, associates and joint ventures under the equity method amounted to NT\$3,253 million and NT\$2,714 million, representing 5.43% and 8.04% of the comprehensive income for the years ended December 31, 2021 and 2020, respectively.

Responsibilities of Management and Those Charged with Governance for the Parent Company Only Financial Statements

Management is responsible for the preparation and fair presentation of the parent company only financial statements in accordance with the requirements of the Regulations Governing the Preparation of Financial Reports by Securities Issuers and for such internal control as management determines is necessary to enable the preparation of parent company only financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company only financial statements, management is responsible for assessing the ability to continue as a going concern of the Company, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including audit committee, are responsible for overseeing the financial reporting process of the Company.

Auditor's Responsibilities for the Audit of the Parent Company Only Financial Statements

Our objectives are to obtain reasonable assurance about whether the parent company only financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company only financial statements.

As part of an audit in accordance with auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the parent company only financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of 2021 parent company only financial statements and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Chiu, Wan-lu

Hsu, Hsin-Min

Ernst & Young, Taiwan

February 24, 2022

Notice to Readers

The accompanying parent company only financial statements are intended only to present the financial position, results of operations and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such parent company only financial statements are those generally accepted and applied in the Republic of China.

Accordingly, the accompanying parent company only financial statements and report of independent auditors are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice. As the financial statements are the responsibility of the management, Ernst & Young cannot accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may derive from the translation.

2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Company.

3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability to continue as a going concern of the Company. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the parent company only financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the parent company only financial statements, including the accompanying notes, and whether the parent company only financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the parent company only financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

English Translation of Parent Company Only Financial Statements Originally Issued in Chinese
 UNITED MICROELECTRONICS CORPORATION
 PARENT COMPANY ONLY BALANCE SHEETS
 December 31, 2021 and 2020
 (Expressed in Thousands of New Taiwan Dollars)

	As of December 31,	
	2021	2020
Assets		
Current assets		
Cash and cash equivalents	\$ 93,648,701	\$ 69,049,896
Financial assets at fair value through profit or loss, current	761,320	1,051,718
Financial assets at fair value through other comprehensive income, current	8,482,334	-
Contract assets, current	174,487	111,094
Accounts receivable, net	19,348,498	14,662,518
Accounts receivable-related parties, net	6,698,875	5,546,739
Other receivables	578,515	1,090,430
Current tax assets	-	17,563
Inventories, net	15,772,250	16,838,262
Prepayments	1,790,402	1,044,791
Other current assets	26,679,505	13,554,966
Total current assets	173,934,887	122,967,977
Non-current assets		
Financial assets at fair value through profit or loss, noncurrent	6,102,595	4,914,724
Financial assets at fair value through other comprehensive income, noncurrent	10,462,826	9,950,639
Investments accounted for under the equity method	117,053,293	98,736,624
Property, plant and equipment	76,105,085	66,640,272
Right-of-use assets	2,631,205	2,823,209
Intangible assets	3,323,995	4,167,373
Deferred tax assets	3,652,939	4,422,010
Prepayment for equipment	7,193,995	552,414
Refundable deposits	2,112,174	2,253,285
Other noncurrent assets-others	1,778,887	1,469,539
Total non-current assets	230,416,994	195,930,089
Total assets	\$ 404,351,881	\$ 318,898,066

(continued)

English Translation of Parent Company Only Financial Statements Originally Issued in Chinese
 UNITED MICROELECTRONICS CORPORATION
 PARENT COMPANY ONLY BALANCE SHEETS
 December 31, 2021 and 2020
 (Expressed in Thousands of New Taiwan Dollars)

	As of December 31,	
	2021	2020
Liabilities and Equity		
Current liabilities		
Short-term loans		1,283,850
Financial liabilities at fair value through profit or loss, current	\$	\$
Contract liabilities, current	2,380,599	2,326
Accounts payable	880,674	723,046
Other payables	5,590,327	5,518,361
Payables on equipment	16,923,279	13,639,513
Current tax liabilities	6,212,564	3,061,761
Lease liabilities, current	3,455,689	724,873
Other financial liabilities, current	258,010	244,751
Current portion of long-term liabilities	12,718,616	-
Other current liabilities	18,675,626	2,999,910
Total current liabilities	68,328,684	1,423,623
Non-current liabilities		
Contract liabilities, noncurrent	422,730	456,480
Bonds payable	23,077,699	16,690,474
Long-term loans	3,283,333	7,500,000
Deferred tax liabilities	1,316,671	1,178,595
Lease liabilities, noncurrent	2,408,740	2,586,813
Net defined benefit liabilities, noncurrent	3,877,321	4,162,654
Guarantee deposits	12,297,336	162,973
Other noncurrent liabilities-others	8,359,664	20,878,317
Total non-current liabilities	55,043,494	53,616,306
Total liabilities	123,372,178	83,238,320
Equity		
Capital		
Common stock		124,224,015
Additional paid-in capital		
Premiums	39,889,798	36,809,962
Treasury stock transactions	4,531,955	3,340,664
The differences between the fair value of the consideration paid or received from acquiring or disposing subsidiaries and the carrying amounts of the subsidiaries	466,457	466,457
Share of changes in net assets of associates and joint ventures accounted for using equity method	87,889	93,880
Employee stock options	-	88,504
Restricted stock for employees	2,238,128	2,170,666
Other	683,866	241,081
Retained earnings		
Legal reserve		12,536,526
Special reserve	15,734,416	11,022,314
Unappropriated earnings	8,164,648	56,617,520
Other components of equity		
Exchange differences on translation of foreign operations	(16,629,547)	(11,890,876)
Unrealized gains or losses on financial assets measured at fair value through other comprehensive income	11,715,333	3,726,229
Unearned employee compensation	(2,212,441)	(3,667,395)
Treasury stock		
Total equity	280,979,703	(119,801)
Total liabilities and equity	\$ 404,351,881	\$ 318,898,066

The accompanying notes are an integral part of the parent company only financial statements.

English Translation of Parent Company Only Financial Statements Originally Issued in Chinese

UNITED MICROELECTRONICS CORPORATION

PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME

For the years ended December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars, Except for Earnings per Share)

	Notes	For the years ended December 31,	
		2021	2020
Operating revenues	4, 6(20), 7	\$ 159,222,834	\$ 135,280,403
Operating costs	4, 6(5), 6(10), 6(15), 6(19), 6(20), 6(21), 7	(97,027,257)	(96,228,137)
Gross profit		<u>62,195,577</u>	<u>39,052,266</u>
Operating expenses	4, 6(4), 6(10), 6(15), 6(19), 6(21), 7		
Sales and marketing expenses		(3,495,499)	(3,075,837)
General and administrative expenses		(5,692,011)	(4,388,589)
Research and development expenses		(10,016,596)	(9,536,311)
Expected credit impairment gains		6,617	472,167
Subtotal		<u>(19,197,489)</u>	<u>(16,528,570)</u>
Net other operating income and expenses	4, 6(16), 6(22), 7	398,775	935,334
Operating income		<u>43,396,863</u>	<u>23,459,030</u>
Non-operating income and expenses			
Interest income	4	228,165	426,172
Other income	4	726,395	539,709
Other gains and losses	4, 6(23)	(806,676)	(1,116,244)
Finance costs	6(23)	(618,951)	(609,520)
Share of profit or loss of subsidiaries, associates and joint ventures	4, 6(6)	17,876,394	8,022,897
Exchange loss, net	4	(121,242)	(887,372)
Subtotal		<u>17,284,085</u>	<u>6,375,642</u>
Income from continuing operations before income tax		60,680,948	29,834,672
Income tax expense	4, 5, 6(25)	(4,900,693)	(645,183)
Net income		<u>55,780,255</u>	<u>29,189,489</u>
Other comprehensive income (loss)	6(24)		
Items that will not be reclassified subsequently to profit or loss			
Remeasurements of defined benefit pension plans	4, 6(15)	(197,477)	(192,581)
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income		5,496,342	4,574,491
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which will not be reclassified subsequently to profit or loss		3,676,023	3,065,086
Income tax related to items that will not be reclassified subsequently	4, 5, 6(25)	(104,643)	54,424
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign operations		(1,827,851)	(2,920,173)
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which may be reclassified subsequently to profit or loss		(2,936,529)	(64,686)
Income tax related to items that may be reclassified subsequently	4, 5, 6(25)	25,709	42,320
Total other comprehensive income (loss)		<u>4,131,574</u>	<u>4,558,881</u>
Total comprehensive income (loss)		<u>\$ 59,911,829</u>	<u>\$ 33,748,370</u>
Earnings per share (NTD)	4, 6(26)		
Earnings per share-basic		\$ 4.57	\$ 2.42
Earnings per share-diluted		\$ 4.48	\$ 2.35

The accompanying notes are an integral part of the parent company only financial statements.

English Translation of Parent Company Only Financial Statements Originally Issued in Chinese
 UNITED MICROELECTRONICS CORPORATION
 PARENT COMPANY ONLY STATEMENTS OF CHANGES IN EQUITY
 For the years ended December 31, 2021 and 2020
 (Expressed in Thousands of New Taiwan Dollars)

Notes	Capital		Retained Earnings				Other Components of Equity					Total Equity
	Common Stock	Collected in Advance	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		
Balance as of January 1, 2020	\$ 117,243,187	\$ 332,611	\$ 39,550,394	\$ 11,572,579	\$ 14,513,940	\$ 34,733,761	\$ (8,948,337)	\$ (2,073,977)	\$ -	\$ (119,801)	\$ 206,804,357	
Appropriation and distribution of 2019 retained earnings												
Legal reserve	-	-	-	963,947	-	(963,947)	-	-	-	-	-	
Cash dividends	-	-	-	-	-	(9,765,155)	-	-	-	-	(9,765,155)	
Special reserve reversed	-	-	-	-	(3,491,626)	3,491,626	-	-	-	-	-	
Net income for the year ended December 31, 2020	-	-	-	-	-	29,189,489	-	-	-	-	29,189,489	
Other comprehensive income (loss) for the year ended December 31, 2020	-	-	-	-	-	(157,529)	(2,942,539)	7,658,949	-	-	4,558,881	
Total comprehensive income (loss)	-	-	-	-	-	29,031,960	(2,942,539)	7,658,949	-	-	33,748,370	
Share-based payment transaction	2,000,300	-	2,628,061	-	-	-	-	-	(3,667,395)	1,678,272	2,639,238	
Conversion of convertible bonds	4,980,528	(332,611)	1,862,366	-	-	-	-	-	-	(1,678,272)	6,510,283	
Treasury stock acquired	4,6(18)	-	(29,388)	-	-	33,378	-	(33,378)	-	-	(1,678,272)	
Share of changes in net assets of associates and joint ventures accounted for using equity method	-	-	(106,879)	-	-	-	-	-	-	-	(106,879)	
The differences between the fair value of the consideration paid or received from acquiring or disposing subsidiaries and the carrying amounts of the subsidiaries	-	-	(1,218)	-	-	(816,632)	-	-	-	-	(817,850)	
Changes in subsidiaries' ownership	4	-	12,927	-	-	-	-	-	-	-	12,927	
Adjustments for dividends subsidiaries received from parent company	-	-	-	-	-	1,825,365	-	(1,825,365)	-	-	-	
Disposal of equity instruments investments measured at fair value through other comprehensive income	6(3)	-	(705,049)	-	-	(952,836)	-	-	-	-	(1,657,885)	
Others	-	-	43,211,214	12,536,526	11,022,314	56,617,520	(11,890,876)	3,726,229	(3,667,395)	(119,801)	235,659,746	
Balance as of December 31, 2020	124,224,015	-	43,211,214	12,536,526	11,022,314	56,617,520	(11,890,876)	3,726,229	(3,667,395)	(119,801)	235,659,746	
Appropriation and distribution of 2020 retained earnings												
Legal reserve	-	-	-	3,197,890	-	(3,197,890)	-	-	-	-	-	
Cash dividends	-	-	-	-	-	(19,875,842)	-	-	-	-	(19,875,842)	
Special reserve reversed	-	-	-	-	(2,857,666)	2,857,666	-	-	-	-	-	
Net income for the year ended December 31, 2021	-	-	-	-	-	55,780,255	-	-	-	-	55,780,255	
Other comprehensive income (loss) for the year ended December 31, 2021	-	-	-	-	-	(148,768)	(4,738,671)	9,019,013	-	-	4,131,574	
Total comprehensive income (loss)	-	-	-	-	-	55,631,487	(4,738,671)	9,019,013	-	-	59,911,829	
Share-based payment transaction	(2,617)	-	293,374	-	-	-	-	-	1,454,954	-	1,745,711	
Share of changes in net assets of associates and joint ventures accounted for using equity method	-	-	(5,991)	-	-	1,029,909	-	(1,029,909)	-	-	(5,991)	
Changes in subsidiaries' ownership	-	-	-	-	-	(1,009,440)	-	-	-	-	(1,009,440)	
Adjustments for dividends subsidiaries received from parent company	4	-	25,724	-	-	-	-	-	-	-	25,724	
Stock exchange	6(18)	611,078	3,930,986	-	-	-	-	-	-	119,801	4,661,865	
Others	-	-	442,786	-	-	(576,685)	-	-	-	-	(133,899)	
Balance as of December 31, 2021	\$ 124,832,476	\$ -	\$ 47,898,093	\$ 15,734,416	\$ 8,164,648	\$ 91,476,725	\$ (16,629,547)	\$ 11,715,333	\$ (2,212,441)	\$ -	\$ 280,979,703	

The accompanying notes are an integral part of the parent company only financial statements.

English Translation of Parent Company Only Financial Statements Originally Issued in Chinese

UNITED MICROELECTRONICS CORPORATION

PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS

For the years ended December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars)

	For the years ended December 31,	
	2021	2020
Cash flows from operating activities:		
Net income before tax	\$ 60,680,948	\$ 29,834,672
Adjustments to reconcile net income before tax to net cash provided by operating activities:		
Depreciation	24,674,586	28,330,741
Amortization	2,372,034	2,029,391
Expected credit impairment gains	(6,617)	(472,167)
Net gain of financial assets and liabilities at fair value through profit or loss	(1,195,142)	(828,003)
Interest expense	547,988	562,082
Interest income	(228,165)	(426,172)
Dividend income	(726,395)	(539,709)
Share-based payment	1,745,745	959,219
Share of profit of subsidiaries, associates and joint ventures	(17,876,394)	(8,022,897)
Gain on disposal of property, plant and equipment	(250,900)	(249,572)
Loss (gain) on disposal of investments	776	(499)
Exchange gain on financial assets and liabilities	(114,215)	(71,664)
Amortization of deferred government grants	(1,188,811)	(1,410,008)
Others	192,734	-
Income and expense adjustments	7,947,224	19,860,742
Changes in operating assets and liabilities:		
Financial assets and liabilities at fair value through profit or loss	684,820	199,655
Contract assets	(65,236)	(9,980)
Notes receivable and accounts receivable	(6,003,704)	(525,464)
Other receivables	66,090	(123,130)
Inventories	958,972	(752,559)
Prepayments	(967,574)	(272,585)
Other current assets	71,566	(71,566)
Contract fulfillment costs	(39,030)	(21,960)
Contract liabilities	146,727	190,417
Accounts payable	108,549	(413,353)
Other payables	3,485,059	2,926,889
Other current liabilities	(491,098)	(176,758)
Net defined benefit liabilities	(482,809)	(55,300)
Other noncurrent liabilities-others	10,688	10,750
Cash generated from operations	66,111,192	50,600,470
Interest received	233,626	468,405
Dividend received	2,202,578	972,612
Interest paid	(301,825)	(408,427)
Income tax refunded (paid)	(1,318,511)	517,370
Net cash provided by operating activities	66,927,060	52,150,430

(continued)

English Translation of Parent Company Only Financial Statements Originally Issued in Chinese

UNITED MICROELECTRONICS CORPORATION
PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS

For the years ended December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars)

	For the years ended December 31,	
	2021	2020
Cash flows from investing activities:		
Acquisition of financial assets at fair value through profit or loss	\$ -	\$ (172,452)
Acquisition of investments accounted for under the equity method	-	(9,082)
Proceeds from capital reduction and liquidation of investments	369,576	27,200
Acquisition of property, plant and equipment	(37,629,809)	(15,629,312)
Proceeds from disposal of property, plant and equipment	311,084	482,602
Increase in refundable deposits	(33,497)	(18,308)
Decrease in refundable deposits	174,094	296,368
Increase in other receivables	(500,000)	(2,113,720)
Decrease in other receivables	500,000	3,204,940
Acquisition of intangible assets	(1,700,951)	(1,891,020)
Government grants related to assets acquisition	45,651	20,230
Increase in other financial assets	(34,760,279)	(16,645,591)
Decrease in other financial assets	21,265,088	3,955,778
Increase in other noncurrent assets-others	(125,799)	(7,049)
Net cash used in investing activities	<u>(52,084,842)</u>	<u>(28,499,416)</u>
Cash flows from financing activities:		
Increase in short-term loans	3,779,450	1,918,175
Decrease in short-term loans	(4,757,950)	(1,912,310)
Proceeds from bonds issued	25,760,800	-
Bonds issuance costs	(57,108)	-
Redemption of bonds	(2,000,000)	(13,702,875)
Proceeds from long-term loans	2,250,000	13,000,000
Repayments of long-term loans	(6,250,000)	(8,900,000)
Increase in guarantee deposits	12,862,911	142,298
Decrease in guarantee deposits	(547,259)	(172,566)
Cash payments for the principal portion of the lease liability	(317,301)	(323,743)
Cash dividends	(19,871,129)	(9,765,694)
Treasury stock acquired	-	(1,678,272)
Treasury stock sold to employees	-	1,677,900
Others	65	2,120
Net cash provided by (used in) financing activities	<u>10,852,479</u>	<u>(19,714,967)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(1,095,892)</u>	<u>(1,420,987)</u>
Net increase in cash and cash equivalents	24,598,805	2,515,060
Cash and cash equivalents at beginning of year	69,049,896	66,534,836
Cash and cash equivalents at end of year	<u>\$ 93,648,701</u>	<u>\$ 69,049,896</u>

The accompanying notes are an integral part of the parent company only financial statements.

UNITED MICROELECTRONICS CORPORATION
NOTES TO PARENT COMPANY ONLY FINANCIAL STATEMENTS

For the Years Ended December 31, 2021 and 2020

(Expressed in Thousands of New Taiwan Dollars unless Otherwise Specified)

1. HISTORY AND ORGANIZATION

United Microelectronics Corporation (the Company) was incorporated in Republic of China (R.O.C) in May 1980 and commenced operations in April 1982. The Company is a full service semiconductor wafer foundry, and provides a variety of services to satisfy customer needs. The Company's ordinary shares were publicly listed on the Taiwan Stock Exchange (TWSE) in July 1985 and its American Depositary 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 Road II, Hsinchu Science Park, Hsinchu City, Taiwan.

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

The parent company only financial statements of the Company were authorized for issue in accordance with a resolution of the Board of Directors' meeting on February 24, 2022.

3. NEWLY ISSUED OR REVISED STANDARDS AND INTERPRETATIONS

(1) The Company applied International Financial Reporting Standards, International Accounting Standards, and Interpretations issued, revised or amended which are endorsed by Financial Supervisory Commission ("FSC") and become effective for annual periods beginning on or after January 1, 2021. There were no newly adopted or revised standards and interpretations that have material impact on the Company's financial position and performance.

(2) Standards issued by International Accounting Standards Board ("IASB") which are endorsed by FSC, but not yet adopted by the Company are listed below:

New, Revised or Amended Standards and Interpretations	Effective Date issued by IASB
Narrow-scope amendments of IFRS, including Amendments to IAS 16, Amendments to IAS 37	January 1, 2022
Annual Improvements to IFRS Standards 2018 - 2020: Amendments to IFRS 1 "First-time Adoption of International Financial Reporting Standards" Amendments to IFRS 9 "Financial Instruments" Amendments to IFRS 16 "Leases"	January 1, 2022

a. Narrow-scope amendments of IFRS, including Amendments to IFRS 3, Amendments to IAS 16, Amendments to IAS 37

i. Updating a Reference to the Conceptual Framework (Amendments to IFRS 3)

The amendments updated IFRS 3 by replacing a reference to an old version of the Conceptual Framework for Financial Reporting with a reference to the latest version, which was issued in March 2018. The amendments also added an exception to the recognition principle of IFRS 3 to avoid the issue of potential "day 2" gains or losses arising for liabilities and contingent liabilities. Besides, the amendments clarify existing guidance in IFRS 3 for contingent assets that would not be affected by replacing the reference to the Conceptual Framework.

ii. Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16)

The amendments prohibit a company from deducting from the cost of property, plant and equipment amounts received from selling items produced while the company is preparing the asset for its intended use. Instead, a company will recognise such sales proceeds and related cost in profit or loss.

iii. Onerous Contracts - Cost of Fulfilling a Contract (Amendments to IAS 37)

The amendments clarify what costs a company should include as the cost of fulfilling a contract when assessing whether a contract is onerous.

b. Annual Improvements to IFRS Standards 2018 - 2020

i. Amendment to IFRS 1 First-time Adoption of International Financial Reporting Standards

The amendment simplifies the application of IFRS 1 by a subsidiary that becomes a first-time adopter after its parent in relation to the measurement of cumulative translation differences.

ii. Amendment to IFRS 9 Financial Instruments ("IFRS 9")

The amendment clarifies the fees a company includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability.

iii. Amendment to Illustrative Examples Accompanying IFRS 16 Leases

The amendment to Illustrative Example 13 accompanying IFRS 16 modifies the treatment of lease incentives relating to lessee's leasehold improvements.

The potential effects of adopting the standards or interpretations issued by IASB but not yet endorsed by FSC on the Company's financial statements in future periods are summarized as below:

c. IFRS 10 "Consolidated Financial Statements" ("IFRS 10") and IAS 28 "Investments in Associates and Joint Ventures" - Sale or Contribution of Assets between an Investor and its Associate or Joint Ventures (Amendment) ("IAS 28")
 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.

d. IFRS 17 "Insurance Contracts" ("IFRS 17")

IFRS 17 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects (including recognition, measurement, presentation and disclosure requirements). The core of IFRS 17 is the General (building block) Model, under this model, on initial recognition, an entity shall measure a group of insurance contracts at the total of the fulfillment cash flows and the contractual service margin. The carrying amount of a group of insurance contracts at the end of each reporting period shall be the sum of the liability for remaining coverage and the liability for incurred claims.

Other than the General Model, the standard also provides a specific adaptation for contracts with direct participation features (the Variable Fee Approach) and a simplified approach (Premium Allocation Approach) mainly for short-duration contracts.

IFRS 17 was issued in May 2017 and it was amended in June 2020. The amendments include deferral of the date of initial application of IFRS 17 by two years to annual beginning on or after 1 January 2023 (from the original effective date of 1 January 2021); provide additional transition reliefs; simplify some requirements to reduce the costs of applying IFRS 17 and revise some requirements to make the results easier to explain. IFRS 17 replaces an interim Standard – IFRS 4 Insurance Contracts – from annual reporting periods beginning on or after 1 January 2023.

The abovementioned standards and interpretations were issued by IASB and endorsed by FSC so that they are applicable for annual periods beginning on or after January 1, 2022. Apart from the impact of Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37) which is described below, the rest of the standards listed are not expected to have material impact on the Company's financial position and performance.

The Company expect to apply the amended IAS 37 to contracts which it has not yet fulfilled all its obligation at the beginning of the annual reporting period since 2022 (the date of initial application). The adoption of the amendments has no material impact on the Company. The cumulative effect of initially applying the amendments resulting from subsidiaries accounted for using equity method will be recognized as adjustments to investments accounted for using equity method and retained earnings, respectively at the date of initial application.

(3) Standards issued by IASB but not yet endorsed by FSC (the effective dates are to be determined by FSC) are listed below:

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 Ventures	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2023
Amendments to IAS 1 "Presentation of Financial Statements" – Classification of Liabilities as Current or Non-current	January 1, 2023
Amendments to IAS 1 "Presentation of Financial Statements" – Disclosure Initiative - Accounting Policies	January 1, 2023
Amendments to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" – Definition of Accounting Estimates	January 1, 2023
Amendment to IAS 12 "Income Taxes" – Deferred Tax related to Assets and Liabilities arising from a Single Transaction	January 1, 2023

- e. IAS 1 “Presentation of Financial Statements” (“IAS 1”) - Classification of Liabilities as Current or Non-current (Amendment)
These are the amendments to paragraphs 69-76 of IAS 1 presentation of financial statements and the amended paragraphs related to the classification of liabilities as current or non-current.
- f. IAS 1 “Presentation of Financial Statements” (“IAS 1”) - Disclosure Initiative - Accounting Policies (Amendment)
The amendments improve accounting policy disclosures that to provide more useful information to investors and other primary users of the financial statements.
- g. IAS 8 “Accounting Policies, Changes in Accounting Estimates and Errors” (“IAS 8”) - Definition of Accounting Estimates (Amendment)
The amendments introduce the definition of accounting estimates and included other amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors to help companies distinguish changes in accounting estimates from changes in accounting policies.
- h. IAS 12 “Income Taxes” (“IAS 12”) - Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendment)
The amendments narrow the scope of the recognition exemption in paragraphs 15 and 24 of IAS 12 so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences.
- The Company is currently evaluating the potential impact of the aforementioned standards and interpretations listed (c) - (h) to the Company’s financial position and performance, and the related impact will be disclosed when the evaluation is completed.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(1) Statement of Compliance

The Company’s parent company only financial statements were prepared in accordance with Regulations Governing the Preparation of Financial Reports by Securities Issuers (Regulations).

(2) Basis of Preparation

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

The Company prepared parent company only financial statements in accordance with Article 21 of the Regulations, which provided that the profit or loss and other comprehensive income for the period presented in the parent company only financial statements shall be the same as the profit or loss and other comprehensive income attributable to shareholders of the parent presented in the consolidated financial statements for the period, and the total equity presented in the parent company only financial statements shall be the same as the equity attributable to the parent company presented in the consolidated financial statements. Therefore, the Company accounted for its investments in subsidiaries using equity method and, accordingly, made necessary adjustments.

(3) Foreign Currency Transactions

The Company’s parent company only financial statements are presented in its functional currency, New Taiwan Dollars (NTD). Items included in the financial statements are measured using that functional currency.

Transactions in foreign currencies are initially recorded by the Company 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.

(4) 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.

(5) 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 an unconditional right to defer settlement of the liability for at least twelve months after the reporting date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

All other liabilities are classified as non-current.

(6) 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.

(7) Financial Instruments

Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument.

The Company determines the classification of its financial assets at initial recognition. In accordance with IFRS 9 and the Regulations, 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.

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

- 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 recognized initially at fair value and subsequently measured at fair value with changes in fair value 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.

The debt instruments are measured at fair value through other comprehensive income if both of the following conditions are met:

- (i) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets 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 changes in the fair value of such financial assets at fair value through other comprehensive income are recognized in other comprehensive income. Before derecognition, impairment gains or losses, interest revenue and foreign exchange gains and losses are recognized in profit or loss. When the financial assets are derecognized the cumulative gain or loss previously recognized in other comprehensive income is reclassified from other comprehensive income to profit or loss as a reclassification adjustment.

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.

(8) Hedge AccountingCash flow hedges

The Company manages exposures arising from foreign currency exchange risk. With the adoption of IFRS 9, the Company designates a hedging relationship between the hedging instrument and the hedged item with the existence of an economic relationship and determines the hedge ratio to meet the hedge effectiveness. The Company designates certain hedging instruments to partially hedge the foreign currency exchange rate risks associated with certain highly probable forecast transactions. The separate component of equity associated with the hedged item is adjusted to the lower of the following (in absolute amounts):

- a. the cumulative gain or loss on the hedging instrument from inception of the hedge; and
- b. the cumulative change in fair value (present value) of the expected future cash flows on the hedged item from inception of the hedge.

The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognized in other comprehensive income, whereas the ineffective portion of the change in the fair value of the hedging instrument is recognized directly in profit or loss. If a hedge of a forecast transaction subsequently results in the recognition of a non-financial asset or a non-financial liability, the associated gains or losses that were recognized in other comprehensive income are included in the initial cost of the asset or liability.

The Company prospectively discontinues hedge accounting only when the hedging relationship ceases to meet the qualifying criteria; for instance when the hedging instrument expires or is sold, terminated or exercised.

(9) 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.

(10) Investments Accounted For Under the Equity Method

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

a. Investment in subsidiaries

A subsidiary is an entity over which the Company has control.

Any difference between the acquisition cost and the Company's share of the net fair value of the identifiable assets and liabilities of subsidiaries are accounted for as follows:

- i. Any excess of the acquisition cost over the Company's share of the net fair value of the identifiable assets and liabilities of a subsidiary 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.
- ii. Any excess of the Company's share of the net fair value of the identifiable assets and liabilities of a subsidiary 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 investment in the subsidiary is 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 the subsidiary. The Company's share of changes in subsidiaries' profit or loss and other comprehensive income is recognized directly in the Company's profit or loss and other comprehensive income. Distributions received from a subsidiary reduce the carrying amount of the investment.

Unrealized profits and losses due to sales from the Company to subsidiaries are eliminated in the Company's parent company only financial statements. The profits and losses due to the sales from subsidiaries to the Company or the sales between subsidiaries are recognized in the parent company only financial statements to the extent of the shares of interests which are not owned by the Company.

Financial statements of subsidiaries 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.

When changes in the net assets of the subsidiary were not resulted from their profit or loss or other comprehensive income, and such changes do not affect the Company's ownership percentages, the Company recognizes its proportionate share of all related changes in equity. Changes in the Company's ownership interests in subsidiaries that do not result in the Company losing control over the subsidiaries are accounted for as equity transactions. Any difference between the carrying amount of investment in the subsidiary and the fair value of the consideration paid or received is recognized directly in equity.

The Company ceases to use the equity method upon loss of control and significant influence over the subsidiary. Any difference between the carrying amount of the investment in a subsidiary upon loss of control and the fair value of the retained investment plus proceeds from disposal will be recognized in profit or loss. If an investment in a subsidiary becomes an investment in an associate or a joint venture or an investment in an associate or a joint venture becomes an investment in a subsidiary, the Company continues to apply the equity method and remeasures the retained interest.

The Company determines at each reporting date whether there is any objective evidence that the investments in subsidiaries are impaired. An impairment loss, being the difference between the recoverable amount of the subsidiary 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.

b. Investment in associates

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.

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

- i. 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 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.
- ii. Any excess of the Company's share of the net fair value of the identifiable assets and liabilities of an associate 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 investment in the associate is 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 the associate. The Company's share of changes in associates' profit or loss and other comprehensive income is recognized directly in the Company's profit or loss and other comprehensive income. Distributions received from an associate reduce the carrying amount of the investment. Any unrealized gains and losses resulting from transactions between the Company and the associate are eliminated to the extent of the Company's interest in the associate.

Financial statements of associates 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, a proportionate share of the gain or loss previously recognized in other comprehensive income is reclassified to profit and loss or other appropriate account(s). Any remaining difference will be charged to additional paid-in capital. When a change in equity of an associate does not result from its profit or loss or other comprehensive income, and such changes do not affect the Company's ownership percentage, the Company recognizes its proportionate share of all related changes in equity. Accordingly, upon disposal of the associate, the Company reclassifies the aforementioned additional paid-in capital to profit or loss on a pro rata basis.

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.

(11) Property, Plant and Equipment

Property, plant and equipment are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any, and any borrowing costs incurred for long-term construction projects are capitalized if the recognition criteria are met. 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 estimated useful lives of the assets are as follows:

Buildings	20-56 years
Machinery and equipment	6 years
Transportation equipment	6 years
Furniture and fixtures	6 years

(12) 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.

(13) 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. Software is amortized over the contract term or estimated useful life (3 years) on a straight-line basis.
- b. 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 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.
- c. 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.

(14) 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.

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

(15) BondsConvertible bonds

The Company evaluates the terms of the convertible bonds issued to determine whether it contains both a liability and an equity component. Furthermore, the Company assesses if the economic characteristics and risks of the put and call options embedded in the convertible bonds are closely related to the economic characteristics and risk of the host contract before separating the equity element.

For the liability component excluding the derivatives, its fair value is determined based on the effective interest rate applied at that time by the market to instruments of comparable credit status. The liability component is classified as a financial liability measured at amortized cost using the effective interest method before the instrument is converted or settled. For the embedded derivative that is not closely related to the host contract, it is classified as a liability component and subsequently measured at fair value through profit or loss unless it qualifies as an equity component. The equity component is recognized initially at the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Its carrying amount is not remeasured in the subsequent accounting periods. If the convertible bond issued does not have an equity component, it is accounted for as a hybrid instrument in accordance with the requirements under IFRS 9.

If the convertible bondholders exercise their conversion right before maturity, the Company shall adjust the carrying amount of the liability component. The adjusted carrying amount of the liability component at conversion and the carrying amount of equity component are credited to common stock and additional paid-in capital-premiums. No gain or loss is recognized upon bond conversion.

In addition, the liability component of convertible bonds is classified as a current liability if within 12 months the bondholders may exercise the put right. After the put right expires, the liability component of the convertible bonds should be reclassified as a non-current liability if it meets the definition of a non-current liability in all other respects.

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.

The Company has issued exchangeable bonds where the bondholders may exchange the bonds into ordinary shares of certain public entities which the Company 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.

(16) 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.

(17) 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.

(18) Treasury Stock

The Company’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 the Company’s own equity instruments. Any difference between the carrying amount and the consideration is recognized in equity.

(19) Share-Based Payment TransactionsEquity-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.

(20) Revenue RecognitionRevenue 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.

Interest income

For financial assets measured at amortized cost and financial assets at fair value through other comprehensive income, interest income is recorded using the effective interest method and recognized in profit or loss.

Dividends

Revenue is recognized when the Company's right to receive the dividends is established, which is generally when shareholders approve the dividend.

(21) Income Tax

Income tax expense (benefit) is the aggregate amount of current income tax and deferred income tax included in the determination of 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.

The additional income tax for undistributed earnings is recognized as income tax expense in the subsequent year when the distribution proposal is approved by the shareholders' meeting.

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, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss;
- 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 carry forward 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, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss;
- 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.

(22) 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 of outstanding shares is adjusted retroactively for stock dividends and employee stock compensation issues.

5. SIGNIFICANT ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the Company’s parent company only 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 parent company only 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. Given the global economic climate and unforeseen effects from COVID-19 pandemic, the process of estimation has become more challenging. 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 12 for more details.

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.

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.

(2) Financial Assets at Fair Value through Profit or Loss

	As of December 31,	
	2021	2020
Financial assets mandatorily measured at fair value through profit or loss		
Common stocks	\$6,443,260	\$5,583,598
Preferred stocks	22,375	20,000
Funds	398,280	360,460
Forward contracts	-	2,384
Total	<u>\$6,863,915</u>	<u>\$5,966,442</u>
Current	\$761,320	\$1,051,718
Non-current	6,102,595	4,914,724
Total	<u>\$6,863,915</u>	<u>\$5,966,442</u>

(3) Financial Assets at Fair Value through Other Comprehensive Income

	As of December 31,	
	2021	2020
Equity instruments		
Common stocks	\$18,793,301	\$9,780,494
Preferred stocks	151,859	170,145
Total	<u>\$18,945,160</u>	<u>\$9,950,639</u>
Current	\$8,482,334	\$-
Non-current	10,462,826	9,950,639
Total	<u>\$18,945,160</u>	<u>\$9,950,639</u>

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. The Company exchanged shares with CHIPBOND on November 5, 2021, and obtained 53 million common shares newly issued by CHIPBOND for the strategic cooperation between the Company and CHIPBOND. Please refer to Note 6(18) for further information.

b. Dividend income recognized in profit or loss from equity instruments designated as fair value through other comprehensive income are listed below:

	For the years ended	
	December 31,	
	2021	2020
Held at end of period	\$436,279	\$255,295
Derecognized during the period	-	-
Total	<u>\$436,279</u>	<u>\$255,295</u>

(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(5). 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.

(3) Income Tax

Uncertainties exist with respect to the interpretation of complex tax regulations, changes in tax laws, and the amount and timing of future taxable income. The Company establishes provisions, based on reasonable estimates, for possible consequences of audits by the tax authority. The amount of such provisions is based on various factors, such as experience of previous tax audits and different interpretations of tax regulations made by the responsible tax authority.

Deferred tax assets are recognized for all carryforward of unused tax losses, tax credits and deductible temporary differences to the extent that it is probable that future taxable profit will be available or there are sufficient taxable temporary differences against which the unused tax losses, unused tax credits or deductible temporary differences can be utilized. The amount of deferred tax assets determined to be recognized is based upon the likely timing and the level of future taxable profits and taxable temporary differences. Please refer to Note 6(25) for more details on unrecognized deferred tax assets.

6. CONTENTS OF SIGNIFICANT ACCOUNTS

(1) Cash and Cash Equivalents

	As of December 31,	
	2021	2020
Cash on hand and petty cash	\$4,695	\$4,751
Checking and savings accounts	4,274,821	4,321,850
Time deposits	80,552,701	59,450,637
Repurchase agreements collateralized by government bonds and corporate notes	8,816,484	5,272,658
Total	<u>\$93,648,701</u>	<u>\$69,049,896</u>

c. In consideration of the Company's investment strategy, the Company disposed and derecognized certain investments designated as fair value through other comprehensive income. Details on derecognition of such investments are listed below:

	For the years ended	
	December 31,	
	2021	2020
Fair value on the date of disposal	\$-	\$9,012,450
Cumulative gains (losses) reclassified to retained earnings due to derecognition	\$-	\$1,825,365

Please refer to UNIMICRON in Note 6(6) for further information of 2020.

d. The Company 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 the Company 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) Accounts Receivable, Net

	As of December 31,	
	2021	2020
Accounts receivable	\$19,526,881	\$14,850,120
Less: loss allowance	(178,383)	(187,602)
Net	\$19,348,498	\$14,662,518

Aging analysis of accounts receivable:

	As of December 31,	
	2021	2020
Neither past due	\$16,501,919	\$12,239,586
Past due:		
≤ 30 days	2,361,178	1,947,803
31 to 60 days	94,847	50,226
61 to 90 days	528	7,165
91 to 120 days	-	12,045
≥ 121 days	568,409	593,295
Subtotal	3,024,962	2,610,534
Total	\$19,526,881	\$14,850,120

Movement of loss allowance for accounts receivable:

	For the years ended	
	December 31,	
	2021	2020
Beginning balance	\$187,602	\$663,686
Net reversal for the period	(9,219)	(476,084)
Ending balance	\$178,383	\$187,602

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, 2021 and 2020, the expected credit loss rates were not greater than 0.09% and 0.2%, respectively. 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.

(5) Inventories, Net

	As of December 31,	
	2021	2020
Raw materials	\$2,603,170	\$4,657,153
Supplies and spare parts	3,005,609	2,551,677
Work in process	9,853,320	9,173,522
Finished goods	310,151	455,910
Total	\$15,772,250	\$16,838,262

a. For the years ended December 31, 2021 and 2020, the Company recognized NT\$93,597 million and NT\$93,109 million, respectively, in operating costs, of which NT\$269 million and NT\$439 million were related to reversal of write-down of inventories.

b. None of the aforementioned inventories were pledged.

(6) 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,			
	2021		2020	
	Amount	Percentage of ownership or voting rights	Amount	Percentage of ownership or voting rights
Listed companies				
Investments in associates				
FARADAY TECHNOLOGY CORP. (FARADAY) (Note A)	\$1,779,618	13.78	\$1,589,448	13.78
UNIMICRON TECHNOLOGY CORP. (UNIMICRON) (Note B)	10,418,777	13.30	9,107,377	13.36
Subtotal	<u>12,198,395</u>		<u>10,696,825</u>	
Unlisted companies				
Investments in subsidiaries				
UMC GROUP (USA)	1,732,285	100.00	1,722,181	100.00
UNITED MICROELECTRONICS (EUROPE) B.V.	136,051	100.00	135,624	100.00
UMC CAPITAL CORP.	5,314,580	100.00	4,087,620	100.00
GREEN EARTH LIMITED	10,277,015	100.00	10,166,702	100.00
TLC CAPITAL CO., LTD.	4,648,384	100.00	4,566,933	100.00
UMC INVESTMENT (SAMOA) LIMITED	38,865	100.00	39,961	100.00
FORTUNE VENTURE CAPITAL CORP. (FORTUNE) (Note C)	7,498,124	100.00	5,400,821	100.00
UMC KOREA CO., LTD.	20,575	100.00	21,834	100.00
OMNI GLOBAL LIMITED	626,457	100.00	585,317	100.00
SINO PARAGON LIMITED	138,220	100.00	142,353	100.00
BEST ELITE INTERNATIONAL LIMITED	25,139,523	100.00	22,926,322	100.00
UNITED SEMICONDUCTOR JAPAN CO., LTD. (USJC)	18,222,094	100.00	17,668,765	100.00
WAVETEK MICROELECTRONICS CORPORATION	805,037	79.73	374,434	80.75
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD. (Note D)	1,325,146	-	145,913	-
Subtotal	<u>75,922,356</u>		<u>67,984,780</u>	
Investments in associates				
MTIC HOLDINGS PTE. LTD. (Note E)	-	45.44	26,966	45.44
UNITECH CAPITAL INC.	976,559	42.00	823,185	42.00
TRIKNIGHT CAPITAL CORPORATION	4,122,087	40.00	2,488,169	40.00
HSUN CHIEH INVESTMENT CO., LTD.	14,092,662	36.49	10,165,563	36.49
YANN YUAN INVESTMENT CO., LTD.	9,741,234	28.22	6,551,136	30.87
Subtotal	<u>28,932,542</u>		<u>20,055,019</u>	
Total	<u>\$117,053,293</u>		<u>\$98,736,624</u>	

Note A: Beginning from June 2015, the Company accounts for its investment in FARADAY as an associate given the fact that the Company obtained the ability to exercise significant influence over FARADAY through representation on its Board of Directors.

Note B: Beginning from June 2020, the Company accounts for its investment in UNIMICRON as an associate given the fact that the Company obtained the ability to exercise significant influence over UNIMICRON through representation on its Board of Directors. UNIMICRON was previously measured at fair value through other comprehensive income and reclassified as investments accounted for under the equity method. Cumulative fair value changes that was previously recognized in other comprehensive income up to reclassification date was reclassified to retained earnings in the current period.

Note C: As of December 31, 2021 and 2020, the costs of investment in FORTUNE were NT\$7,498 million and NT\$5,521 million, respectively. After deducting the Company's stock held by the subsidiary (treated as treasury stock by the Company) of nil and NT\$120 million as of December 31, 2021 and 2020, respectively, the residual book values were NT\$7,498 million and NT\$5,401 million as of December 31, 2021 and 2020, respectively.

Note D: Please refer to Note 9(5).

Note E: When the Company's share of losses of an associate or joint venture equals or exceeds its interest in that associate or joint venture, 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.

The carrying amount of investments accounted for using the equity method for which there are published price quotations amounted to NT\$12,198 million and NT\$10,697 million, as of December 31, 2021 and 2020, respectively. The fair value of these investments were NT\$53,491 million and NT\$18,885 million, as of December 31, 2021 and 2020, respectively.

Certain investments accounted for under the equity method were audited by other independent accountants. Shares of profit or loss of these subsidiaries, associates and joint ventures amounted to NT\$8,231 million and NT\$6,643 million for the years ended December 31, 2021 and 2020, respectively. Share of other comprehensive income (loss) of these subsidiaries, associates and joint ventures amounted to NT\$3,253 million and NT\$2,714 million for the years ended December 31, 2021 and 2020, respectively. The balances of investments accounted for under the equity method were NT\$39,351 million and NT\$29,135 million as of December 31, 2021 and 2020, respectively.

(8) Property, Plant and Equipment

2021

a. Assets Used by the Company:Cost:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2021	\$861,487	\$25,487,904	\$754,903,233	\$43,540	\$5,819,803	\$7,355,208	\$794,471,175
Additions	-	-	-	-	-	29,726,755	29,726,755
Disposals	-	(20,455)	(3,908,279)	(791)	(3,759)	(7,751)	(3,941,035)
Transfers and reclassifications	-	34,800	21,718,380	1,185	293,381	(17,508,168)	4,539,578
Exchange effect	-	(64,975)	(3,884,535)	(154)	(9,575)	(17,837)	(3,977,076)
As of December 31, 2021	\$861,487	\$25,437,274	\$768,828,799	\$43,780	\$6,099,850	\$19,548,207	\$820,819,397

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2021	\$-	\$17,181,784	\$707,387,272	\$34,825	\$5,065,881	\$-	\$729,669,762
Depreciation	-	842,772	23,042,668	3,577	357,955	-	24,246,972
Disposals	-	(20,455)	(3,901,321)	(791)	(3,759)	-	(3,926,326)
Transfers and reclassifications	-	-	125,413	-	-	-	125,413
Exchange effect	-	(39,100)	(3,646,254)	(65)	(8,731)	-	(3,694,150)
As of December 31, 2021	\$-	\$17,965,001	\$723,007,778	\$37,546	\$5,411,346	\$-	\$746,421,671
Net carrying amount:							
As of December 31, 2021	\$861,487	\$7,472,273	\$45,821,021	\$6,234	\$688,504	\$19,548,207	\$74,397,726

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 owns significant influence over the aforementioned associates.

None of the aforementioned investments accounted for using the equity method 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, 2021 and 2020 were NT\$(25) million and NT\$(44) 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,	
	2021	2020
Income (loss) from continuing operations	\$8,341,191	\$6,653,624
Other comprehensive income (loss)	3,367,714	2,912,770
Total comprehensive income (loss)	\$11,708,905	\$9,566,394

c. One of the Company's associates, HSUN CHIEH INVESTMENT CO., LTD., held 441 million shares of the Company's stock as of December 31, 2021 and 2020, respectively. Another associate, YANN YUAN INVESTMENT CO., LTD., held 160 million and 201 million shares of the Company's stock as of December 31, 2021 and 2020, respectively.

(7) Other current assets

	As of December 31,	
	2021	2020
Time deposits with original maturities of over three months to a year	\$26,204,535	\$13,043,995
Costs to fulfill a contract	474,970	439,405
Others	-	71,566
Total	\$26,679,505	\$13,554,966

b. Assets Subject to Operating Leases:

Cost:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2021	\$452,915	\$2,302,745	\$125,413	\$1,150,463	\$4,031,536
Transfers and reclassifications	-	-	(125,413)	-	(125,413)
Exchange effect	-	(7,620)	-	(1,603)	(9,223)
As of December 31, 2021	\$452,915	\$2,295,125	\$-	\$1,148,860	\$3,896,900

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2021	\$-	\$989,966	\$125,413	\$1,077,298	\$2,192,677
Depreciation	-	88,755	-	39,668	128,423
Transfers and reclassifications	-	-	(125,413)	-	(125,413)
Exchange effect	-	(4,610)	-	(1,536)	(6,146)
As of December 31, 2021	\$-	\$1,074,111	\$-	\$1,115,430	\$2,189,541

Net carrying amount:
As of December 31, 2021 \$452,915 \$1,221,014 \$- \$33,430 \$1,707,359

2020

a. Assets Used by the Company:

Cost:

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Construction in progress and equipment awaiting inspection	Total
As of January 1, 2020	\$861,487	\$25,585,702	\$754,792,029	\$48,060	\$5,694,787	\$3,353,190	\$790,335,255
Additions	-	-	-	-	-	15,151,893	15,151,893
Disposals	-	-	(4,150,613)	(4,216)	(14,666)	(12,938)	(4,182,433)
Transfers and reclassifications	-	36,558	11,883,684	-	159,338	(11,104,442)	975,138
Exchange effect	-	(134,356)	(7,621,867)	(304)	(19,656)	(32,495)	(7,808,678)
As of December 31, 2020	\$861,487	\$25,487,904	\$754,903,233	\$43,540	\$5,819,803	\$7,355,208	\$794,471,175

Accumulated Depreciation and Impairment:

Construction in progress and equipment awaiting inspection

	Land	Buildings	Machinery and equipment	Transportation equipment	Furniture and fixtures	Total
As of January 1, 2020	\$-	\$16,289,905	\$691,756,590	\$34,964	\$4,741,097	\$712,822,556
Depreciation	-	968,854	26,575,178	3,723	357,351	27,905,106
Disposals	-	-	(3,853,955)	(3,772)	(14,666)	(3,872,393)
Transfers and reclassifications	-	-	1,377	-	-	1,377
Exchange effect	-	(76,975)	(7,091,918)	(90)	(17,901)	(7,186,884)
As of December 31, 2020	\$-	\$17,181,784	\$707,387,272	\$34,825	\$5,065,881	\$729,669,762

Net carrying amount:
As of December 31, 2020 \$861,487 \$8,306,120 \$47,515,961 \$8,715 \$753,922 \$7,355,208 \$64,801,413

b. Assets Subject to Operating Leases:

Cost:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2020	\$452,915	\$2,311,235	\$125,413	\$1,152,248	\$4,041,811
Exchange effect	-	(8,490)	-	(1,785)	(10,275)
As of December 31, 2020	\$452,915	\$2,302,745	\$125,413	\$1,150,463	\$4,031,536

Accumulated Depreciation and Impairment:

	Land	Buildings	Machinery and equipment	Furniture and fixtures	Total
As of January 1, 2020	\$-	\$905,738	\$125,413	\$1,036,914	\$2,068,065
Depreciation	-	89,149	1,377	42,077	132,603
Transfers and reclassifications	-	-	(1,377)	-	(1,377)
Exchange effect	-	(4,921)	-	(1,693)	(6,614)
As of December 31, 2020	\$-	\$989,966	\$125,413	\$1,077,298	\$2,192,677

Net carrying amount:
As of December 31, 2020 \$452,915 \$1,312,779 \$- \$73,165 \$1,838,859

Property, plant and equipment were not pledged as collateral.

(9) Leases

The Company leases various properties, such as land, buildings, machinery and equipment, transportation equipment and other equipment with lease terms of 2 to 30 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,	
	2021	2020
Land	\$2,365,172	\$2,527,227
Buildings	10,971	16,970
Machinery and equipment	237,083	269,003
Transportation equipment	14,302	4,747
Other equipment	3,677	5,262
Net	\$2,631,205	\$2,823,209
	For the years ended	
	December 31,	
	2021	2020
<u>Depreciation</u>		
Land	\$237,632	\$233,761
Buildings	9,770	8,400
Machinery and equipment	42,754	42,558
Transportation equipment	6,872	6,127
Other equipment	2,163	2,186
Total	\$299,191	\$293,032

i. For the years ended December 31, 2021 and 2020, the Company's addition to right-of-use assets amounted to NT\$136 million and NT\$55 million, respectively.

ii. Right-of-use assets were not pledged as collateral.

(b) Lease Liabilities

	As of December 31,	
	2021	2020
Current	\$258,010	\$244,751
Non-current	2,408,740	2,586,813
Total	\$2,666,750	\$2,831,564

Please refer to Note 6(23) 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 Assets

2021	Patents and technology				Total
Cost:	Software	license fees	Others		
As of January 1, 2021	\$2,778,327	\$4,539,730	\$3,337,834	\$10,655,891	
Additions	1,149,247	46,780	316,829	1,512,856	
Disposals	(363,776)	-	(458,295)	(822,071)	
Reclassifications	(5,282)	-	-	(5,282)	
Exchange effect	(1,683)	(27,733)	-	(29,416)	
As of December 31, 2021	\$3,556,833	\$4,558,777	\$3,196,368	\$11,311,978	

Accumulated Amortization and Impairment:

	Patents and technology				Total
	Software	license fees	Others		
As of January 1, 2021	\$1,221,083	\$2,836,832	\$2,430,603	\$6,488,518	
Amortization	1,138,397	486,822	715,434	2,340,653	
Disposals	(363,776)	-	(458,295)	(822,071)	
Exchange effect	(551)	(18,566)	-	(19,117)	
As of December 31, 2021	\$1,995,153	\$3,305,088	\$2,687,742	\$7,987,983	
Net carrying amount:					
As of December 31, 2021	\$1,561,680	\$1,253,689	\$508,626	\$3,323,995	

2020

Cost:

	Patents and technology			Total
	Software	license fees	Others	
As of January 1, 2020	\$1,840,477	\$4,424,176	\$3,402,882	\$9,667,535
Additions	1,110,556	170,061	850,655	2,131,272
Disposals	(155,589)	-	(915,703)	(1,071,292)
Reclassifications	(15,210)	-	-	(15,210)
Exchange effect	(1,907)	(54,507)	-	(56,414)
As of December 31, 2020	\$2,778,327	\$4,539,730	\$3,337,834	\$10,655,891

Accumulated Amortization and Impairment:

	Patents and technology			Total
	Software	license fees	Others	
As of January 1, 2020	\$583,003	\$2,385,592	\$2,616,114	\$5,584,709
Amortization	794,547	483,494	730,192	2,008,233
Disposals	(155,589)	-	(915,703)	(1,071,292)
Exchange effect	(878)	(32,254)	-	(33,132)
As of December 31, 2020	\$1,221,083	\$2,836,832	\$2,430,603	\$6,488,518

Net carrying amount:
As of December 31, 2020 \$1,557,244 \$1,702,898 \$907,231 \$4,167,373

The amortization amounts of intangible assets were as follows:

	For the years ended	
	2021	2020
Operating costs	\$618,220	\$634,202
Operating expenses	\$1,722,433	\$1,374,031

(11) Short-Term Loans

	As of December 31,	
	2021	2020
Unsecured bank loans	\$277,200	\$1,283,850

For the years ended
December 31,

	2021	2020
Interest rates applied	0.35%-0.60%	0.53%-1.97%

The Company's unused short-term lines of credit amounted to NT\$29,610 million and NT\$27,835 million as of December 31, 2021 and 2020, respectively.

(12) Financial Liabilities at Fair Value through Profit or Loss, Current

	As of December 31,	
	2021	2020
Embedded derivatives in exchangeable bonds	\$2,380,599	\$-
Forward contracts	-	2,326
Total	\$2,380,599	\$2,326

(13) Bonds Payable

	As of December 31,	
	2021	2020
Unsecured domestic bonds payable	\$31,300,000	\$18,700,000
Unsecured exchangeable bonds payable	10,817,047	-
Less: Discounts on bonds payable	(1,580,389)	(9,616)
Total	40,536,658	18,690,384
Less: Current or exchangeable portion due within one year	(17,458,959)	(1,999,910)
Net	\$23,077,699	\$16,690,474

a. The Company issued domestic unsecured corporate bonds. The terms and conditions of the bonds are as follows:

Term	Issuance date	Issued amount	Coupon rate	Repayment
Seven-year	In mid-March 2013	NT\$2,500 million	1.50%	Interest was paid annually and the principal was fully repaid in March 2020.
Seven-year	In mid-June 2014	NT\$2,000 million	1.70%	Interest was paid annually and the principal was fully repaid in June 2021.
Ten-year	In mid-June 2014	NT\$3,000 million	1.95%	Interest will be paid annually and the principal will be repayable in June 2024 upon maturity.
Five-year	In late March 2017	NT\$6,200 million	1.15%	Interest will be paid annually and the principal will be repayable in March 2022 upon maturity.
Seven-year	In late March 2017	NT\$2,100 million	1.43%	Interest will be paid annually and the principal will be repayable in March 2024 upon maturity.
Five-year	In early October 2017	NT\$2,000 million	0.94%	Interest will be paid annually and the principal will be repayable in October 2022 upon maturity.
Seven-year	In early October 2017	NT\$3,400 million	1.13%	Interest will be paid annually and the principal will be repayable in October 2024 upon maturity.
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.

b. On May 18, 2015, the Company issued SGX-ST listed currency linked zero coupon convertible bonds. In accordance with IAS 32 “Financial Instruments Presentation”, the value of the conversion right of the convertible bonds was determined at issuance and recognized in additional paid-in capital-stock options amounting to NT\$1,894 million, after reduction of issuance costs amounting to NT\$9 million. The effective interest rate on the liability component of the convertible bonds was determined to be 2.03%. The terms and conditions of the bonds are as follows:

- i. Issue Amount: US\$600 million
- ii. Period: May 18, 2015 - May 18, 2020 (Maturity date)
- iii. Redemption:
 - (i) The Company may redeem the bonds, in whole or in part, after 3 years of the issuance and prior to the maturity date, at the principal amount of the bonds with an interest calculated at the rate of -0.25% per annum (the Early Redemption Amount) if the closing price of the ordinary shares of the Company on the TWSE, for a period of 20 out of 30 consecutive trading days, the last of which occurs not more than 5 days prior to the date upon which notice of such redemption is published, is at least 125% of the conversion price. The Early Redemption Price will be converted into NTD based on the Fixed Exchange Rate (NTD 30.708=USD 1.00), and this fixed NTD amount will be converted using the prevailing rate at the time of redemption for payment in USD.
 - (ii) The Company may redeem the bonds, in whole, but not in part, at the Early Redemption Amount if at least 90% in principal amount of the bonds has already been converted, redeemed or repurchased and cancelled.
 - (iii) The Company may redeem all, but not part, of the bonds, at the Early Redemption Amount at any time, in the event of certain changes in the R.O.C.’s tax rules which would require the Company to gross up for payments of principal, or to gross up for payments of interest or premium.
 - (iv) All or any portion of the bonds will be redeemable at Early Redemption Amount at the option of bondholders on May 18, 2018 at 99.25% of the principal amount.
 - (v) Bondholders have the right to require the Company to redeem all of the bonds at the Early Redemption Amount if the Company’s ordinary shares cease to be listed on the Taiwan Stock Exchange.
 - (vi) In the event that a change of control as defined in the indenture of the bonds occurs to the Company, the bondholders shall have the right to require the Company to redeem the bonds, in whole but not in part, at the Early Redemption Amount.

- iv. Terms of Conversion:
- (i) Underlying Securities: Ordinary shares of the Company
 - (ii) Conversion Period: The bonds are convertible at any time on or after June 28, 2015 and prior to May 8, 2020, into the Company ordinary shares; 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) Conversion Price and Adjustment: The conversion price was originally NT\$17.50 per share. The conversion price will be subject to adjustments upon the occurrence of certain events set out in the indenture.
- v. Conversion of Bonds:
- The last conversion date of the bonds was on March 31, 2020. As of the date, the outstanding principal amount of the convertible bonds totaling US\$231 million had been converted into 498 million shares.
- Upon the maturity date of May 18, 2020, the Company fully redeemed the remaining unconverted bonds at 98.76% of the principal amount. The principal amount of redemption amounted to US\$369 million. The Company reclassified cancelled convertible rights of NT\$1,166 million from additional paid in capital-stock options to additional paid in capital-others.
- c. On July 7, 2021, the Company 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: US\$400 million
 - ii. Period: July 7, 2021 - July 7, 2026 (Maturity Date)
- iii. Redemption:
- (i) The Company 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 Microelectronics Corporation ("Novatek") on the Taiwan Stock Exchange (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 at the time of redemption for payment in USD.
- (ii) The Company 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 the Company, the Company 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 the Company 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 the Company, each bondholder shall have the right to require the Company 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 the Company does not have sufficient Novatek common shares to deliver upon the exchange of any bond, then, the Company 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 the Company 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\$709.2 per Novatek common share on December 31, 2021.

v. Redemption on the Maturity Date:

The bonds will be redeemed with 96.92% principal amount on the maturity date unless:

- (i) The Company shall have redeemed the bonds at the option of the Company, 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 the Company and cancelled.

(14) Long-Term Loans

Details of long-term loans as of December 31, 2021 and 2020 were as follows:

Lenders	As of December 31,		Redemption
	2021	2020	
Unsecured Long-Term Loan from Bank of Taiwan (1)	\$500,000	\$2,000,000	Repayable quarterly from March 10, 2022 to December 10, 2024 with monthly interest payments.
Unsecured Long-Term Loan from Bank of Taiwan (2)	450,000	-	Repayable quarterly from March 24, 2023 to March 24, 2025 with monthly interest payments.
Unsecured Long-Term Loan from Taiwan Cooperative Bank	-	2,000,000	Repayable quarterly from May 5, 2023 to May 5, 2025 with monthly interest payments.
Unsecured Revolving Loan from Mega International Commercial Bank (Note A)	500,000	1,500,000	Repayable semi-annually from October 16, 2020 to April 16, 2022 with monthly interest payments.
Unsecured Revolving Loan from Taipei Fubon Bank (Note B)	200,000	700,000	Repayable annually from August 9, 2020 to August 9, 2023 with monthly interest payments.
Unsecured Revolving Loan from Chang Hwa Commercial Bank (Note C)	550,000	1,000,000	Repayable quarterly from January 27, 2021 to October 27, 2022 with monthly interest payments.
Unsecured Revolving Loan from KGI Bank (1) (Note D)	-	1,000,000	Repayable annually from December 11, 2021 to December 11, 2023 with monthly interest payments.
Unsecured Revolving Loan from KGI Bank (2) (Note D)	500,000	-	Repayable annually from August 10, 2023 to August 10, 2026 with monthly interest payments.

Lenders	As of December 31,		Redemption
	2021	2020	
Unsecured Revolving Loan from First Commercial Bank (1) (Note E)	\$-	\$300,000	Settlement due on May 15, 2025 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (2) (Note F)	300,000	-	Settlement due on February 25, 2026 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (3) (Note F)	300,000	-	Settlement due on March 15, 2026 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (4) (Note F)	200,000	-	Settlement due on June 15, 2026 with monthly interest payments.
Unsecured Revolving Loan from Yuanfa Commercial Bank (Note G)	1,000,000	-	Repayable annually from March 2, 2023 to March 2, 2026 with monthly interest payments.
Subtotal	4,500,000	8,500,000	
Less: Current portion	(1,216,667)	(1,000,000)	
Total	\$3,283,333	\$7,500,000	
	For the years ended		
	December 31,		
	2021	2020	
Interest rates applied	0.85%/~1.20%	0.84%/~1.20%	

Note A: The Company entered into a 5-year loan agreement with Mega International Commercial Bank, effective from October 17, 2016. The agreement offered the Company a revolving line of credit of NT\$3 billion. This line of credit will be reduced starting from the end of the two years and six months after the first use and every six months thereafter, with a total of six adjustments. The expiration date of the agreement is April 16, 2022. As of December 31, 2021 and 2020, the line of credit were fully utilized.

Note B: The Company entered into a 5-year loan agreement with Taipei Fubon Bank, effective from February 9, 2018. The agreement offered the Company a revolving line of credit of NT\$2 billion. This line of credit will be reduced starting from the end of the two years after the first use and every twelve months thereafter, with a total of four adjustments. The expiration date of the agreement is August 9, 2023. As of December 31, 2021 and 2020, the unused line of credit were both NT\$0.8 billion.

Note C: The Company entered into a 5-year loan agreement with Chang Hwa Commercial Bank, effective from November 2, 2016. The agreement offered the Company a revolving line of credit of NT\$3 billion. This line of credit will be reduced starting from the end of the third year after the first use and every three months thereafter, with a total of nine adjustments. The expiration date of the agreement is October 27, 2022. As of December 31, 2021 and 2020, the unused line of credit were NT\$0.8 billion and NT\$1.7 billion, respectively.

Note D: The Company entered into a 5-year loan agreement with KGI Commercial Bank, effective from September 11, 2018. The agreement offered the Company a revolving line of credit of NT\$2.5 billion which has been modified into NT\$3 billion as of May 10, 2021. 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 August 10, 2026. As of December 31, 2021 and 2020, the unused line of credit were NT\$2.5 billion and NT\$1 billion, respectively.

Note E: First Commercial Bank approved the 1-year credit loan on December 30, 2019, which has expired on December 30, 2020.

Note F: First Commercial Bank approved the 1-year credit loan on January 18, 2021, which offered the Company a revolving line of credit of NT\$2 billion starting from the approval date to January 17, 2022. As of December 31, 2021, the unused line of credit was NT\$1.2 billion.

Note G: The Company entered into a 5-year loan agreement with Yuanta Commercial Bank, effective from March 3, 2021. The agreement offered the Company 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, 2021, the unused line of credit was NT\$3 billion.

(15) Post-Employment Benefits

a. Defined contribution plan

The employee pension plan under the Labor Pension Act of the R.O.C. is a defined contribution plan. Pursuant to the plan, the Company makes 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 are provided in accordance with the local regulations. Total pension expenses of NT\$992 million and NT\$915 million were contributed by the Company for the years ended December 31, 2021 and 2020, respectively.

b. Defined benefit plan

i. The employee pension plan mandated by the Labor Standards Act of the 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. The Company 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 parent company only financial statements. For the years ended December 31, 2021 and 2020, total pension expenses of NT\$23 million and NT\$40 million, respectively, were recognized by the Company.

ii. Movements in present value of defined benefit obligation and fair value of plan assets were as follows:

Movements in present value of defined benefit obligation during the year:

	For the years ended	
	December 31, 2021	2020
Defined benefit obligation at beginning of year	\$ (5,561,999)	\$ (5,411,069)
Items recognized as profit or loss:		
Service cost	(11,009)	(13,090)
Interest cost	(16,130)	(36,254)
Subtotal	(27,139)	(49,344)
Remeasurements recognized in other comprehensive income (loss):		
Arising from changes in demographic assumptions	(4,537)	-
Arising from changes in financial assumptions	(123,140)	(173,615)
Experience adjustments	(91,268)	(70,461)
Subtotal	(218,945)	(244,076)
Benefits paid	349,750	142,490
Defined benefit obligation at end of year	\$ (5,458,333)	\$ (5,561,999)

Movements in fair value of plan assets during the year:

	For the years ended	
	December 31, 2021	2020
Beginning balance of fair value of plan assets	\$1,399,345	\$1,385,696
Items recognized as profit or loss:		
Interest income on plan assets	4,059	9,284
Contribution by employer	505,890	95,360
Benefits paid	(349,750)	(142,490)
Remeasurements recognized in other comprehensive income (loss):		
Return on plan assets, excluding amounts included in interest income	21,468	51,495
Fair value of plan assets at end of year	<u>\$1,581,012</u>	<u>\$1,399,345</u>

The actual returns on plan assets of the Company for the years ended December 31, 2021 and 2020 were NT\$26 million and NT\$61 million, respectively.

iii. The defined benefit plan recognized on the parent company only balance sheets were as follows:

	As of December 31,	
	2021	2020
Present value of the defined benefit obligation	<u>\$(5,458,333)</u>	<u>\$(5,561,999)</u>
Fair value of plan assets	1,581,012	1,399,345
Funded status	<u>(3,877,321)</u>	<u>(4,162,654)</u>
Net defined benefit liabilities, noncurrent recognized on the parent company only balance sheets	<u>\$(3,877,321)</u>	<u>\$(4,162,654)</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,	
	2021	2020
Cash	24%	16%
Equity instruments	43%	48%
Debt instruments	23%	25%
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,	
	2021	2020
Discount rate	0.62%	0.29%
Rate of future salary increase	4.25%	3.50%

vi. Expected future benefit payments are as follows:

Year	As of December 31, 2021
2022	\$373,879
2023	373,406
2024	397,426
2025	432,167
2026	435,179
2027 and thereafter	3,721,746
Total	<u>\$5,733,803</u>

The Company expects to make pension fund contribution of NT\$697 million in 2022. The weighted-average durations of the defined benefit obligation were 8 years and 9 years as of December 31, 2021 and 2020, respectively.

vii. Sensitivity analysis:

	As of December 31, 2021	
	Discount rate	Rate of future salary increase
Decrease (increase) in defined benefit obligation	0.5% increase	0.5% increase
	0.5% decrease	0.5% decrease
	\$207,999	\$(220,561)
		\$176,567

(18) Equity

a. Capital stock:

- i. The Company had 26,000 million common shares authorized to be issued as of December 31, 2021 and 2020, of which 12,483 million shares and 12,422 million shares were issued as of December 31, 2021 and 2020, respectively, each at a par value of NT\$10.
- ii. The Company had 149 million and 127 million ADSs, which were traded on the NYSE as of December 31, 2021 and 2020, respectively. The total number of common shares of the Company represented by all issued ADSs were 746 million shares and 636 million shares as of December 31, 2021 and 2020, respectively. One ADS represents five common shares.
- iii. Please refer to Note 6(13) for the Company's conversion of unsecured convertible bonds into ordinary shares of the Company for the year ended December 31, 2020.
- iv. On June 9, 2021 and September 1, 2020, the Company issued restricted stocks for its employees in a total of 1 million shares and 200 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(19) for the information of restricted stocks.
- v. As of December 31, 2021, the Company has recalled and cancelled 2 million shares of 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.
- vi. On September 3, 2021, the Board of Directors' meeting approved the share exchange transaction with CHIPBOND. The Company issued 61 million common shares with a par value of NT\$10 and obtained 53 million common shares newly issued by CHIPBOND. The aforementioned issuance of new shares was approved by the competent authority and the change in share registration was completed. The share exchanged date was November 5, 2021. Please refer to Note 6(3) for further information.

As of December 31, 2020	
Discount rate	Rate of future salary increase
0.5%	0.5%
increase	increase
decrease	decrease
Decrease (increase) in defined benefit obligation	\$226,798 \$- \$(204,390) \$195,078

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,	
	2021	2020
Beginning balance	\$206,099	\$193,543
Arising during the period	45,657	356,810
Recorded in profit or loss:		
Other operating income	(108,831)	(330,027)
Exchange effect	(4,415)	(14,227)
Ending balance	\$138,510	\$206,099
Current (classified under other current liabilities)	\$47,898	\$98,368
Non-current (classified under other non-current liabilities-others)	90,612	107,731
Total	\$138,510	\$206,099

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,	
	2021	2020
Refund liabilities	\$678,260	\$1,203,896

b. Treasury stock:

- i. The Company carried out a treasury stock program and repurchased its shares from the centralized securities exchange market. The purpose for the repurchase and changes in treasury stock during the years ended December 31, 2021 and 2020 were as follows:

For the year ended December 31, 2021: None.

For the year ended December 31, 2020
(In thousands of shares)

Purpose	As of	
	January 1, 2020	December 31, 2020
For transfer to employees	-	105,000
	-	-

- ii. According to the Securities and Exchange Law of the R.O.C., the total shares of treasury stock shall not exceed 10% of the Company's issued stock, and the total purchase amount shall not exceed the sum of the retained earnings, additional paid-in capital-premiums and realized additional paid-in capital. As such, the number of shares of treasury stock that the Company held as of December 31, 2021 and 2020, did not exceed the limit.
- iii. In compliance with Securities and Exchange Law of the R.O.C., treasury stock held by the Company should not be pledged, nor should it be entitled to voting rights or receiving dividends. Stock held by subsidiaries is treated as treasury stock. These subsidiaries have the same rights as other shareholders except for subscription to new stock issuance and voting rights.
- iv. The Company's subsidiary, FORTUNE VENTURE CAPITAL CORP., held shares of the Company's stock through acquiring shares of UNITED SILICON INC. in 1997, and these shares were converted to the Company's stock in 2000 as a result of the Company's 5 in 1 merger. As of December 31, 2020, FORTUNE VENTURE CAPITAL CORP. held 16 million shares of the Company's stock and the closing price on December 31, 2020, was NT\$47.15. On September 3, 2021, the share exchange transaction with CHIPBOND was approved by FORTUNE's Board of Directors meeting. The 16 million shares of UMC held by FORTUNE were exchanged for 14 million common shares newly issued by CHIPBOND.

c. Retained earnings and dividend policies:

According to the Company'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 the Company's paid-in capital.
- iv. Appropriating or reversing special reserve by government officials or other regulations.
- v. The remaining, if applicable, may be distributed preferentially as preferred shares dividends for the current year, and if there is still a remaining balance, 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 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 the Company'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 FSC, the Company 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 earnings distribution or offsetting accumulated deficits.

The appropriation of earnings for 2020 was approved by the shareholders' meeting held on July 7, 2021, while the appropriation of earnings for 2021 was proposed by the Board of Directors' meeting on February 24, 2022. The details of distribution were as follows:

	Appropriation of earnings (in thousand NT dollars)		Cash dividend per share (NT dollars)	
	2021	2020	2021	2020
Legal reserve	\$5,832,570	\$3,197,890		
Special reserve	(3,250,434)	(2,857,666)		
Cash dividends	-	19,875,842	\$-	\$1.60

In addition, the Board of Directors' meeting held on February 24, 2022 proposed to distribute cash from additional paid-in capital of NT\$37,446 million, at approximately NT\$3.00 per share.

The aforementioned 2020 appropriation approved by shareholders' meeting was consistent with the resolutions of the Board of Directors' meeting held on February 24, 2021.

The cash dividend per share for 2020 was adjusted to NT\$1.5998820 per share. The adjustment was due to the net increase of outstanding common shares from cancellation and issuance of the restricted stocks.

The appropriation of 2021 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(21) for information on the employees and directors' compensation.

(19) Share-Based Payment

a. Treasury stock plan for employees

In August 2018, the Company executed a compensation plan to offer 200 million shares of treasury stock to qualified employees of the Company. The compensation cost for the share-based payment was measured at fair value, having recognized in expense the difference between the closing quoted market price of the shares at the grant date and the cash received from employees. The closing quoted market price of the Company's shares on the grant date was NT\$16.95 per share. For the stocks vested on the date of grant, the Company recognized the entire compensation cost once granted, whereas for the stocks with requisite service conditions to vest at the end of one or two years from the date of grant, the Company recognizes the compensation cost over the vesting period in which the services conditions are fulfilled, together with a corresponding increase in equity. The compensation plan had expired in September 2020. For the year ended December 31, 2020, the compensation cost of NT\$107 million was recognized in expenses by the Company.

In September 2020, the Company executed a compensation plan to offer 105 million shares of treasury stock to qualified employees of the Company. The compensation cost for the share-based payment was measured at fair value, having recognized in expense the difference between the closing quoted market price of the shares at the grant date and the cash received from employees. The closing quoted market price of the Company's shares on the grant date was NT\$21.45 per share. For the stocks vested on the date of grant, the Company recognized the entire compensation cost once granted, whereas for the stocks with requisite service conditions to vest at the end of one year from the date of grant, the Company recognizes the compensation cost over the period in which the services conditions are fulfilled, together with a corresponding increase in equity. The compensation plan had expired in September 2021. For the years ended December 31, 2021 and 2020, the compensation costs of NT\$226 million and NT\$348 million, respectively, were recognized in expenses by the Company.

b. Restricted stock plan for employees

On June 10, 2020, the shareholders approved a compensation plan in their meeting to issue restricted stocks to qualified employees of the Company without consideration. The maximum shares to be issued are 233 million common shares. The Company is authorized to issue restricted stocks in one tranche or in installments, under the custody of trust institution, within one year from the date of receiving the effective registration from the competent authority.

The issuance plan was authorized for effective registration by the Securities and Futures Bureau of the FSC and accordingly, 1 million shares and 200 million shares of restricted stock for employees were issued without consideration on June 9, 2021 and September 1, 2020, respectively. 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 restricted stocks at certain percentage and time frame. For those employees who fail to fulfill the vesting conditions, the Company will recall and cancel their stocks without consideration. During the vesting period, the restricted stock holders are entitled the same rights as those of common stock holders including the right to receive dividends, but are restricted to sell, pledge, set guarantee, transfer, grant, or dispose 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 aforementioned compensation costs for the equity-settled share-based payment were measured at fair value based on the closing quoted market price of the shares on the grant date, NT\$53.0 and NT\$21.8 per share, respectively. 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, 2021 and 2020, the compensation costs of NT\$1,520 million and NT\$504 million, respectively, were recognized in expenses by the Company.

c. Stock appreciation right plan for employees

In September 2020, the Company executed a compensation plan to grant 3 million units of cash-settled stock appreciation right to qualified employees of the Company without consideration. One unit of stock appreciation right to employees represents a right to the intrinsic value of one common share of the Company. 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 the Company.

The compensation cost for the cash-settled share-based payment was measured at fair value on the grant date by using Black-Scholes Option Pricing Model and will be remeasured at the end of each reporting period until settlement. As of December 31, 2021, the assumptions used are as below:

Share price of measurement date (NT\$/ per share)	Granted in September 2020
Expected volatility	\$65.00
Expected life	40.11%-42.88%
Expected dividend yield	0.67-2.67 years
Risk-free interest rate	5.27%
	0.32%-0.46%

For the years ended December 31, 2021 and 2020, the compensation costs of NT\$32 million and NT\$11 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-others amounted to NT\$43 million and NT\$11 million as of December 31, 2021 and 2020, respectively. The intrinsic value for the liabilities of vested rights were both nil.

(20) Operating Revenues

a. Disaggregation of revenue

i. By Product

	For the years ended December 31,	
	2021	2020
Wafer	\$152,566,022	\$129,573,432
Others	6,656,812	5,706,971
Total	\$159,222,834	\$135,280,403

ii. By the timing of revenue recognition

	For the years ended December 31,	
	2021	2020
At a point in time	\$158,259,774	\$133,814,180
Over time	963,060	1,466,223
Total	\$159,222,834	\$135,280,403

b. Contract balances

i. Contract assets, current

	As of December 31,	
	2021	2020
Sales of goods and services	\$494,741	\$440,748
Less: Loss allowance	(320,254)	(329,654)
Net	\$174,487	\$111,094

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(6).

ii. Contract liabilities

	As of December 31,	
	2021	2020
Sales of goods and services	\$1,303,404	\$1,179,526
Current	\$880,674	\$723,046
Non-current	422,730	456,480
Total	\$1,303,404	\$1,179,526

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\$51 million and NT\$350 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, 2021 and 2020.

c. The Company's transaction price allocated to unsatisfied performance obligations amounted to NT\$167 million and NT\$2,759 million as of December 31, 2021 and 2020, 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. As of the report date, partial contract was due in May 2021. 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, 2021 and 2020, the Company recognized costs to fulfill engineering service contracts eligible for capitalization as other current assets which amounted to NT\$475 million and NT\$439 million, respectively. Subsequently, the Company will expense from costs to fulfill a contract to operating costs when the related obligations are satisfied.

(21) Operating Costs and Expenses

a. The Company's employee benefit, depreciation and amortization expenses are summarized as follows:

	For the years ended December 31,					
	2021		2020			
	Operating costs	Operating expenses	Operating costs	Operating expenses		
Employee benefit expenses						
Salaries	\$18,754,654	\$9,144,899	\$27,899,553	\$16,049,294	\$6,917,081	\$22,966,375
Labor and health insurance	927,634	316,437	1,244,071	822,935	285,675	1,108,610
Pension	775,842	239,049	1,014,891	723,862	231,534	955,396
Remuneration to directors	-	31,054	31,054	-	42,169	42,169
Other employee benefit expenses	244,266	90,240	334,506	186,935	60,876	247,811
Depreciation	23,201,714	1,316,776	24,518,490	26,830,084	1,340,622	28,170,706
Amortization	644,471	1,727,563	2,372,034	650,997	1,378,394	2,029,391

b. The Company's policy for compensation of directors, managers and employees is as follows:

The Company set the policy for directors and employees' compensation in the Company's Articles of Incorporation and established the Remuneration Committee to evaluate and monitor the Company's remuneration system for its directors and executive officers. The Company shall assess the performance of directors and executive officers according to the Rules for Performance Assessment of the Board of Directors and the Performance Appraisal for employees of the Company, in order to determine their compensation. An adequate compensation scheme will be calculated by referencing the Company's operation results, future risks, corporate strategies, industry trends and also individual contribution.

The Company developed a comprehensive employee welfare system in accordance with laws, government regulations and regional needs to provide employees with competitive salary and welfare conditions. Employees' compensation includes monthly salary, bonus based on operation performance, and the compensation based on the Company's earnings performance and regulated by the articles. The Company conducts a performance evaluation of all employees every year to understand their job performance and uses such information as a reference for promotions, training and distributing compensation.

According to the Company's Articles of Incorporation, the employees and directors' compensation shall be distributed in the following order: 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.

(22) Net Other Operating Income and Expenses

	For the years ended December 31,	
	2021	2020
Net rental loss from property	\$(131,790)	\$(130,130)
Government grants	173,632	716,046
Gain on disposal of property, plant and equipment	250,900	249,572
Others	106,033	99,846
Total	\$398,775	\$935,334

(23) Non-Operating Income and Expenses

a. Other gains and losses

	For the years ended December 31,	
	2021	2020
Gain on valuation of financial assets and liabilities at fair value through profit or loss	\$1,195,142	\$828,003
Gain (loss) on disposal of investments	(776)	499
Others	(2,001,042)	(1,944,746)
Total	\$(806,676)	\$(1,116,244)

Others included the one-time payment to MICRON TECHNOLOGY, INC (MICRON) due to the worldwide settle agreement between the Company and MICRON (Please refer to Note 9(6)) and the losses of financial instrument transaction recognized in 2021, and the losses for the settlement approved by the U.S. Department of Justice regarding allegation of conspiracy to engage in theft of trade secrets recognized in 2020, respectively.

b. Finance costs

	For the years ended December 31,	
	2021	2020
Interest expenses	\$437,055	\$377,193
Bonds payable	47,492	122,849
Bank loans	63,317	61,854
Lease liabilities	124	186
Others	70,963	47,438
Financial expenses	\$618,951	\$609,520
Total		

The Company recognizes the employees and directors' compensation in the profit or loss during the periods when earned for the years ended December 31, 2021 and 2020. 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 2020 were reported to the shareholders' meeting on July 7, 2021, while the distributions of employees and directors' compensation for 2021 were approved through the Board of Directors' meeting on February 24, 2022. The details of distribution were as follows:

	2021	2020
Employees' compensation – Cash	\$4,770,909	\$2,581,675
Directors' compensation	25,264	32,369

The aforementioned employees and directors' compensation for 2020 reported during the shareholders' meeting were consistent with the resolutions of the Board of Directors' meeting held on February 24, 2021.

Information relevant to the aforementioned employees and directors' compensation can be obtained from the "Market Observation Post System" on the website of the TWSE.

c. The number of the Company's employees were 14,578 and 14,313, including 6 and 5 non-employee directors for the years ended December 31, 2021 and 2020, respectively.

d. The Company's average employee benefit expenses for the years ended December 31, 2021 and 2020 were NT\$2 million and NT\$2 million, respectively. The Company's average salary expenses for the years ended December 31, 2021 and 2020 were NT\$2 million and NT\$2 million, respectively. The Company's average salary expense adjustment for the year ended December 31, 2021 increased by 19.3%.

e. The Company has established the Audit Committee in replace of supervisors and therefore the supervisors' remuneration for the years ended December 31, 2021 and 2020 were both nil.

(24) Components of Other Comprehensive Income (Loss)

For the year ended December 31, 2021

	For the year ended December 31, 2021			
	Arising during the period	Reclassification adjustments during the period	Other comprehensive income (loss), before tax	Other comprehensive income (loss), net of tax
Items that will not be reclassified subsequently to profit or loss:				
Remeasurements of defined benefit pension plans	\$(197,477)	\$-	\$(197,477)	\$(157,982)
Unrealized gains or losses from equity instruments	5,496,342	-	5,496,342	5,352,204
Investments measured at fair value through other comprehensive income	3,676,023	-	3,676,023	-
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which will not be reclassified subsequently to profit or loss	(1,827,851)	-	(1,827,851)	(1,827,851)
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translation of foreign operations	(2,936,135)	(394)	(2,936,529)	(2,910,820)
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which may be reclassified subsequently to profit or loss				
Total other comprehensive income (loss)	\$4,210,902	\$(394)	\$4,210,508	\$4,131,574

For the year ended December 31, 2020

	For the year ended December 31, 2020			
	Arising during the period	Reclassification adjustments during the period	Other comprehensive income (loss), before tax	Other comprehensive income (loss), net of tax
Items that will not be reclassified subsequently to profit or loss:				
Remeasurements of defined benefit pension plans	\$(192,581)	\$-	\$(192,581)	\$(154,065)
Unrealized gains or losses from equity instruments	4,574,491	-	4,574,491	4,590,296
Investments measured at fair value through other comprehensive income	3,065,086	-	3,065,086	3,065,189
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which will not be reclassified subsequently to profit or loss	(2,919,741)	(432)	(2,920,173)	(2,920,173)
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translation of foreign operations	(64,619)	(67)	(64,686)	(22,366)
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which may be reclassified subsequently to profit or loss				
Total other comprehensive income (loss)	\$4,462,636	\$(499)	\$4,462,137	\$4,558,881

(25) Income Tax

a. The major components of income tax expense (benefit) for the years ended December 31, 2021 and 2020 were as follows:

	For the years ended December 31,	
	2021	2020
i. Income tax expense (benefit) recorded in profit or loss		
Current income tax expense (benefit):		
Current income tax charge	\$4,110,403	\$639,110
Adjustments in respect of current income tax of prior periods	(35,676)	(846,238)
Deferred income tax expense (benefit):		
Deferred income tax related to origination and reversal of temporary differences	494,792	238,712
Deferred income tax related to recognition and derecognition of tax losses and unused tax credits	447,372	748,837
Adjustment of prior year's deferred income tax	(116,198)	(135,238)
Income tax expense recorded in profit or loss	\$4,900,693	\$645,183

ii. Deferred income tax related to components of other comprehensive income (loss)

	For the years ended December 31,	
	2021	2020
(i) Items that will not be reclassified subsequently to profit or loss:		
Remeasurements of defined benefit pension plans	\$39,495	\$38,516
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	(144,138)	15,805
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which will not be reclassified subsequently to profit or loss	-	103
Income tax related to items that will not be reclassified subsequently to profit or loss	\$(104,643)	\$54,424

(ii) Items that may be reclassified subsequently to profit or loss:

	For the years ended December 31,	
	2021	2020
Share of other comprehensive income (loss) of subsidiaries, associates and joint ventures which may be reclassified subsequently to profit or loss	\$25,709	\$42,320
iii. Deferred income tax charged directly to equity		
Recognize (reversal) of temporary difference arising from initial recognition of the equity component of the compound financial instrument	\$-	\$3,691

b. A reconciliation between income tax expense (benefit) and income before tax at the Company's applicable tax rate were as follows:

	For the years ended December 31,	
	2021	2020
Income before tax	\$60,680,948	\$29,834,672
At statutory income tax rate	12,136,190	5,966,934
Adjustments in respect of current income tax of prior periods	(35,676)	(846,238)
Net changes in loss carry-forward and investment tax credits	(517,930)	(468,013)
Adjustment of deferred tax assets/liabilities for write-downs/reversals and different jurisdictional tax rates	(117,998)	(442,391)
Tax effect of non-taxable income and non-deductible expenses:		
Tax exempt income	(2,995,452)	(2,382,622)
Investment gain	(3,656,172)	(1,653,898)
Dividend income	(143,823)	(106,486)
Others	82,516	70,051
Taxes withheld in other jurisdictions	24,868	25,337
Others	124,170	482,509
Income tax expense recorded in profit or loss	\$4,900,693	\$645,183

c. Significant components of deferred income tax assets and liabilities were as follows:

	As of December 31,	
	2021	2020
Deferred income tax assets		
Depreciation	\$988,934	\$998,836
Pension	767,822	824,888
Refund liabilities	140,861	240,165
Allowance for inventory valuation losses	360,872	449,139
Investment loss	111,379	101,384
Unrealized profit on intercompany sales	1,125,370	1,348,202
Investment tax credits	-	331,174
Others	157,701	128,222
Total deferred income tax assets	3,652,939	4,422,010
Deferred income tax liabilities		
Unrealized exchange gain	(580,191)	(559,334)
Depreciation	-	(66,827)
Investment gain	(730,127)	(551,747)
Bonds	(6,353)	-
Others	-	(687)
Total deferred income tax liabilities	(1,316,671)	(1,178,595)
Net deferred income tax assets	\$2,336,268	\$3,243,415

d. Movement of deferred tax

	For the years ended December 31,	
	2021	2020
Balance as of January 1	\$3,243,415	\$3,989,061
Amounts recognized in profit or loss during the period	(825,966)	(852,311)
Amounts recognized in other comprehensive income (loss)	(78,934)	96,744
Amounts recognized in equity	-	3,691
Exchange adjustments	(2,247)	6,230
Balance as of December 31	\$2,336,268	\$3,243,415

e. The Company is subject to taxation in Taiwan and other foreign jurisdictions. As of December 31, 2021, the Company's income tax returns for all the fiscal years up to 2018 have been assessed and approved by the R.O.C. Tax Authority. Income tax returns of Singapore branch has been completed the examination by the tax authorities through 2015. There is an uncertain tax position that the outcome of the income tax returns of the Company may not be accepted by the tax authorities of the respective countries of operations. For the recognition and measurement of deferred income tax and current income tax which involved significant accounting judgments, estimates and assumptions, please refer to Note 5(3).

f. The Company was granted income tax exemption for several periods with respect to income derived from the expansion of operations. The income tax exemption had expired on December 31, 2020.

g. Singapore branch 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.

h. As of December 31, 2021 and 2020, the taxable temporary differences of unrecognized deferred tax liabilities associated with investments in subsidiaries amounted to NT\$14,904 million and NT\$11,463 million, respectively.

(26) Earnings Per Share

a. Earnings per share-basic

	For the years ended December 31,	
	2021	2020
Net income	\$55,780,255	\$29,189,489
Weighted-average number of ordinary shares for basic earnings per share (thousand shares)	12,218,347	12,072,969
Earnings per share-basic (NTD)	\$4.57	\$2.42

b. Earnings per share-diluted

	For the years ended December 31,	
	2021	2020
Net income	\$55,780,255	\$29,189,489
Effect of dilution		
Unsecured convertible bonds	-	69,019
Income attributable to the Company's shareholders	\$55,780,255	\$29,258,508
Weighted-average number of ordinary shares for basic earnings per share (thousand shares)	12,218,347	12,072,969
Effect of dilution		
Restricted stocks for employees	159,478	30,911
Employees' compensation	80,243	65,657
Unsecured convertible bonds	-	303,630
Weighted-average number of ordinary shares after dilution (thousand shares)	12,458,068	12,473,167
Earnings per share-diluted (NTD)	\$4.48	\$2.35

(27) Reconciliation of Liabilities Arising from Financing Activities

For the year ended December 31, 2021:

Items	As of		Non-cash changes		As of	
	January 1, 2021	Cash Flows	Foreign exchange	Others (Note A)	December 31, 2021	December 31, 2021
Short-term loans	\$1,283,850	\$(978,500)	\$(28,150)	\$-	\$277,200	\$277,200
Long-term loans (current portion included)	8,500,000	(4,000,000)	-	-	4,500,000	4,500,000
Bonds payable (current portion included)	18,690,384	23,703,692	-	(1,857,418) (Note B)	40,536,658	40,536,658
Guarantee deposits (current portion included)	162,973	12,315,652	(73,165)	-	12,405,460 (Note E)	12,405,460
Lease liabilities	2,831,564	(317,301)	(33,411)	185,898	2,666,750	2,666,750
Other financial liabilities	20,746,624	-	(163,387)	382,972	20,966,209	20,966,209

For the year ended December 31, 2020:

Items	As of		Non-cash changes		As of	
	January 1, 2020	Cash Flows	Foreign exchange	Others (Note A)	December 31, 2020	December 31, 2020
Short-term loans	\$1,355,850	\$5,865	\$(77,865)	\$-	\$1,283,850	\$1,283,850
Long-term loans (current portion included)	4,400,000	4,100,000	-	-	8,500,000	8,500,000
Bonds payable (current portion included)	38,781,416	(13,702,875)	-	(6,388,157) (Note C)	18,690,384	18,690,384
Guarantee deposits (current portion included)	194,711	(30,268)	(1,470)	-	162,973 (Note E)	162,973
Lease liabilities	3,237,102	(323,743)	(29,680)	(52,115)	2,831,564	2,831,564
Other financial liabilities	20,093,441	-	281,219	371,964	20,746,624	20,746,624

Note A: Other non-cash changes mainly consisted of discount amortization measured by the effective interest method.

Note B: Please refer to Note 6(13) for the Company's exchangeable bonds.

Note C: Please refer to Note 6(13) for the Company's convertible bonds.

Note D: Please refer to Note 9(5) for more details on other financial liabilities.

Note E: Guarantee deposits mainly consisted of deposits of capacity reservation.

7. RELATED PARTY TRANSACTIONS

The following is a summary of transactions between the Company and related parties during the financial reporting periods:

(1) Name and Relationship of Related Parties	Name of related parties	Relationship with the Company
	UMC GROUP (USA) (UMC-USA)	Subsidiary
	UNITED MICROELECTRONICS (EUROPE) B.V.	Subsidiary
	UNITED SEMICONDUCTOR JAPAN CO., LTD.	Subsidiary
	WAVETEK MICROELECTRONICS CORPORATION	Subsidiary
	UMC GROUP JAPAN(Note)	Subsidiary
	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	Subsidiary
	UNITEDDS SEMICONDUCTOR (SHANDONG) CO., LTD.	Subsidiary
	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Subsidiary
	FARADAY TECHNOLOGY CORP. and its Subsidiaries	Associate
	UNIMICRON TECHNOLOGY CORP.	Associate
	SILICON INTEGRATED SYSTEMS CORP.	The Company's director
	PHOTONICS DNP MASK CORPORATION	Other related parties
	UNITEDVISION SEMICONDUCTOR CO., LTD.	Other related parties
	UPI SEMICONDUCTOR CORP.	Other related parties

Note: As of November 1, 2020, UMC GROUP JAPAN was merged with USJC and USJC is the surviving company.

(2) Significant Related Party Transactions

a. Operating transactions

Operating revenues

	For the years ended	
	December 31,	2020
UMC-USA	\$48,440,369	\$49,357,981
Subsidiaries	1,481,020	2,501,607
Associates	2,070,236	1,240,161
Others	38,797	25,159
Total	\$52,030,422	\$53,124,908

Accounts receivable, net

	As of December 31,	
	2021	2020
UMC-USA	\$6,298,464	\$5,402,792
Subsidiaries	70,202	35,567
Associates	331,258	117,063
Others	11,284	6,119
Total	6,711,208	5,561,541
Less: Loss allowance	(12,333)	(14,802)
Net	\$6,698,875	\$5,546,739

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 or net 30-60 days.

Refund liabilities (classified under other current liabilities)

	As of December 31,	
	2021	2020
UMC-USA	\$49,448	\$259,191
Subsidiaries	79	26
Associates	1,442	1,059
Others	27	36
Total	\$50,996	\$260,312

b. Significant asset transactions

Disposal of property, plant and equipment

	For the year ended December 31, 2021	
	Disposal amount	Disposal/Deferred gain
Subsidiaries		
Disposal of property, plant and equipment	\$84,112	\$79,615
Others		
Disposal of property, plant and equipment	5,650	5,650
	\$89,762	\$85,265
	For the year ended December 31, 2020	
	Disposal amount	Disposal/Deferred gain
Subsidiaries		
Disposal of property, plant and equipment	\$478,270	\$184,153

Acquisition of intangible assets

	Purchase price	
	2021	2020
For the years ended December 31,		
Associates	\$181,254	\$335,425

Acquisition of investments accounted for under the equity method

Please refer to Major Accounting Item 10.

c. Others

Mask expenditure

	For the years ended December 31,	
	2021	2020
Others	\$1,781,017	\$1,754,657

Other payables of mask expenditure

	As of December 31,	
	2021	2020
Others	\$540,781	\$522,329

d. Financing provided to others and Endorsement/Guarantee provided to others

Please refer to Attachment 1 and Attachment 2.

e. Key management personnel compensation

	For the years ended December 31,	
	2021	2020
Short-term employee benefits	\$426,866	\$307,779
Post-employment benefits	2,322	2,255
Share-based payment	884,294	323,317
Total	\$1,313,482	\$633,351

8. ASSETS PLEDGED AS COLLATERAL

The following table lists assets of the Company pledged as collateral:

As of December 31, 2021 and 2020

Items	Carrying Amount		Party to which asset(s) was pledged	Purpose of pledge
	2021	2020		
Refundable Deposits (Time deposit)	\$811,660	\$811,072	Customs	Customs duty guarantee
Refundable Deposits (Time deposit)	216,140	217,530	Science Park Bureau	Collateral for land lease
Refundable Deposits (Time deposit)	20,619	18,215	Science Park Bureau	Collateral for dormitory lease
Refundable Deposits (Time deposit)	26,026	41,785	Liquefied Natural Gas Business Division, CPC Corporation, Taiwan	Energy resources guarantee
Refundable Deposits (Time deposit)	1,000,000	1,000,000	Bank of China	Bank performance guarantee
Total	<u>\$2,074,445</u>	<u>\$2,088,602</u>		

9. SIGNIFICANT CONTINGENCIES AND UNRECOGNIZED CONTRACT COMMITMENTS

- As of December 31, 2021, the Company entrusted financial institutes to open performance guarantee, mainly related to the litigations and customs tax guarantee, amounting to NT\$1.1 billion.
- The Company entered into several patent license agreements and development contracts of intellectual property for a total contract amount of approximately NT\$2.7 billion. As of December 31, 2021, the portion of royalties and development fees not yet recognized was NT\$0.8 billion.
- The Company entered into several construction contracts for the expansion of its operations. As of December 31, 2021, these construction contracts amounted to approximately NT\$18.1 billion and the portion of the contracts not yet recognized was approximately NT\$13.7 billion.

(4) The Company entered into several wafer-processing contracts with its customers. According to the contracts, the Company shall provide agreed production capacity with the customers.

(5) The Board of Directors of the Company resolved in October 2014 to participate in a 3-way agreement with Xiamen Municipal People's Government and FUJIAN ELECTRONIC & INFORMATION GROUP to form a company which will focus on 12" wafer foundry services. The Company and subsidiaries obtained R.O.C. government authority's approval for the investment and invested RMB 8.3 billion in USCXM in instalments from January 2015 to September 2018, according to the agreement that the Company obtained the ability to exercise control. Furthermore, based on the agreement, the Company recognized a financial liability in other financial liabilities, current and other noncurrent liabilities-others, respectively for the purchase from the other investors of their investments in USCXM at their original investment cost plus interest totally amounting to RMB 4.9 billion, beginning from the seventh year (2022) following the last instalment payment made by the other investors.

(6) On August 31, 2017, the Taichung District Prosecutors Office indicted the Company based on the Trade Secret Act of R.O.C., alleging that employees of the Company misappropriated the trade secrets of MICRON TECHNOLOGY, INC. ("MICRON"). On June 12, 2020, an adverse ruling issued by the District Court of Taichung in a suit alleged that the Company, two of its current employees and a former employee engaged in the misappropriation of trade secrets. The Company appealed against the sentence. On November 26, 2021, the Company 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 the Company was sentenced to a fine of NT\$20 million, subject to a two-year term of probation.

On December 5, 2017, MICRON filed a civil action with similar cause against the Company 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 the Company 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.

12. OTHERS

 (1) Categories of financial instruments

	As of December 31,	
	2021	2020
Financial Assets		
Financial assets at fair value through profit or loss	\$6,863,915	\$5,966,442
Financial assets at fair value through other comprehensive income	18,945,160	9,950,639
Financial assets measured at amortized cost		
Cash and cash equivalents (cash on hand excluded)	93,644,006	69,045,145
Receivables	26,625,888	21,299,687
Refundable deposits	2,112,174	2,253,285
Other financial assets	26,213,321	13,124,347
Total	\$174,404,464	\$121,639,545

	As of December 31,	
	2021	2020
Financial Liabilities		
Financial liabilities at fair value through profit or loss	\$2,380,599	\$2,326
Financial liabilities measured at amortized cost		
Short-term loans	277,200	1,283,850
Payables	28,726,170	22,219,635
Guarantee deposits (current portion included)	12,405,460	162,973
Bonds payable (current portion included)	40,536,658	18,690,384
Long-term loans (current portion included)	4,500,000	8,500,000
Lease liabilities	2,666,750	2,831,564
Other financial liabilities	20,966,209	20,746,624
Total	\$112,459,046	\$74,437,356

 (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.

On January 12, 2018, the Company 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 also 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 the Company. 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, the Company submitted a motion to withdraw the case, and the motion is currently pending.

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

(7) On March 14, 2019, a putative class action complaint was filed in the United States District Court for the Southern District of New York against the Company and certain of its officers and/or directors, alleging violations of Section 10(b) of the Securities Exchange Act and Rule 10b-5 thereunder, arising out of an alleged scheme to misappropriate trade secrets. On May 3, 2021, the court approved the settlement reached between the plaintiffs and the defendants and the Company paid a settlement amount of US\$3 million to be allocated to the class plaintiffs and reimbursement of legal fees of class plaintiffs. The settlement has been recorded in non-operating other losses and has no material financial and operational effect on the Company's business.

 10. SIGNIFICANT DISASTER LOSS

None.

 11. SIGNIFICANT SUBSEQUENT EVENTS

On January 27, 2022, Intellectual Property and Commercial Court issued a ruling for a suit alleging the Company misappropriated trade secrets. Please refer to Note 9(6) for further information.

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, 2021 and 2020 to decrease/increase by NT\$5 million and NT\$10 million, respectively.

Equity price risk

The Company's listed and unlisted equity securities 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, while 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.

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, 2021 and 2020 by NT\$241 million and NT\$193 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 for the years ended December 31, 2021 and 2020 by NT\$867 million and NT\$453 million, respectively.

Please refer to Note 12(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.

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/weakens against USD by 10%, the profit for the years ended December 31, 2021 and 2020 decreases/increases by NT\$930 million and NT\$883 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), 6(13) and 6(14) for the range of interest rates of the Company's bonds and bank loans.

As of December 31, 2021 and 2020, accounts receivable from the top ten customers represent 78% and 81% 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, 2021				Total
	Less than	2 to 3	4 to 5	> 5 years	
	1 year	years	years	years	
Non-derivative financial liabilities					
Short-term loans	\$278,538	\$-	\$-	\$-	\$278,538
Payables	28,559,864	-	-	-	28,559,864
Guarantee deposits	108,124	1,756,860	-	10,540,476	12,405,460
Bonds payable	8,612,255	8,869,431	10,656,506	4,178,008	32,316,200
(Note)					
Long-term loans	1,264,055	900,730	2,500,291	-	4,665,076
Lease liabilities	315,684	571,275	523,081	1,606,883	3,016,923
Other financial liabilities	12,738,246	8,492,466	-	-	21,230,712
Total	\$51,876,766	\$20,590,762	\$13,679,878	\$16,325,367	\$102,472,773

Note : The Company 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 the Company 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 was NT\$8,482 million as of December 31, 2021. 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.

As of December 31, 2020

	Less than	2 to 3	4 to 5	> 5 years	Total
	1 year	years	years	years	
	years	years	years	years	
Non-derivative financial liabilities					
Short-term loans	\$1,300,497	\$-	\$-	\$-	\$1,300,497
Payables	22,073,362	-	-	-	22,073,362
Guarantee deposits	-	162,973	-	-	162,973
Bonds payable	2,374,587	8,484,393	8,563,021	-	19,422,001
Long-term loans	1,090,481	5,352,775	2,346,851	-	8,790,107
Lease liabilities	308,258	599,100	523,572	1,815,393	3,246,323
Other financial liabilities	-	17,120,418	4,280,333	-	21,400,751
Total	\$27,147,185	\$31,719,659	\$15,713,777	\$1,815,393	\$76,396,014
Derivative financial liabilities					
Forward exchange contracts					
Gross settlement					
Inflow	\$393,442	\$-	\$-	\$-	\$393,442
Outflow	(395,768)	-	-	-	(395,768)
Net	\$(2,326)	\$-	\$-	\$-	\$(2,326)

(6) Foreign currency risk management

The Company 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 the Company are summarized as follows:

As of December 31, 2021

None.

As of December 31, 2020

Type	Notional Amount	Contract Period
Forward exchange contracts	Sell USD 82 million	December 11, 2020-February 5, 2021

(7) Fair value of financial instruments

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, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss, current	\$761,320	\$-	\$-	\$761,320
Financial assets at fair value through profit or loss, noncurrent	4,234,209	22,375	1,846,011	6,102,595
Financial assets at fair value through other comprehensive income, current	8,482,334	-	-	8,482,334
Financial assets at fair value through other comprehensive income, noncurrent	8,849,869	-	1,612,957	10,462,826
Financial liabilities:				
Financial liabilities at fair value through profit or loss, current	-	-	2,380,599	2,380,599
As of December 31, 2020				
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss, current	\$1,049,334	\$2,384	\$-	\$1,051,718
Financial assets at fair value through profit or loss, noncurrent	2,981,083	20,000	1,913,641	4,914,724
Financial assets at fair value through other comprehensive income, noncurrent	9,058,372	-	892,267	9,950,639
Financial liabilities:				
Financial liabilities at fair value through profit or loss, current	-	2,326	-	2,326

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 years ended December 31, 2021 and 2020, there were no significant 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		Total
	Common stock	Preferred stock	Common stock	Preferred stock	
As of January 1, 2021	\$1,913,641	\$722,122	\$170,145	\$892,267	
Recognized in profit (loss)	186,181	-	-	-	
Recognized in other comprehensive income (loss)	-	738,976	(18,286)	720,690	
Disposal	(253,811)	-	-	-	
As of December 31, 2021	\$1,846,011	\$1,461,098	\$151,859	\$1,612,957	

Financial liabilities at fair value through profit or loss

	Derivatives
As of January 1, 2021	\$-
Recognized in profit (loss)	360,494
Issuance	2,020,105
As of December 31, 2021	\$2,380,599

Financial assets at fair value through profit or loss

	Common stock	Preferred stock	Total
As of January 1, 2020	\$1,608,991	\$175,494	\$971,289
Recognized in profit (loss)	304,650	-	-
Recognized in other comprehensive income (loss)	-	(73,673)	(79,022)
As of December 31, 2020	\$1,913,641	\$722,122	\$170,145
			\$892,267

The total profit of NT\$84 million and NT\$305 million for the years ended December 31, 2021 and 2020, 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 loss of NT\$360 million and nil for the years ended December 31, 2021 and 2020, 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, 2021			
Category	Valuation technique	Significant unobservable inputs	Sensitivity analysis of interrelationship between inputs and fair value
Unlisted stock	Market Approach	Discount for lack of marketability	Quantitative information: 20%-30% 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) and other comprehensive income (loss) for the year ended December 31, 2021 by NT\$95 million and NT\$97 million, respectively.
Embedded derivatives in exchangeable bonds	Binomial tree valuation model	Volatility	45.84% 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, 2021 by NT\$283 million and NT\$278 million, respectively.

As of December 31, 2020			
Category	Valuation technique	Significant unobservable inputs	Sensitivity analysis of interrelationship between inputs and fair value
Unlisted stock	Market Approach	Discount for lack of marketability	Quantitative information: 20%-30% 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) and other comprehensive income (loss) for the year ended December 31, 2020 by NT\$96 million and NT\$48 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, volatility, credit spread and risk-free interest 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 short-term financial instruments including cash and cash equivalents, receivables, refundable deposits, other financial assets, short-term loans, payables and guarantee deposits approximate their carrying amount due to their maturities within one year.

As of December 31, 2021

Items	Fair value	Fair value measurements during reporting period using			Carrying amount
		Level 1	Level 2	Level 3	
Bonds payables (current portion included)	\$41,947,014	\$31,442,469	\$10,504,545	\$-	\$40,536,658
Long-term loans (current portion included)	4,500,000	-	4,500,000	-	4,500,000

As of December 31, 2020

Items	Fair value	Fair value measurements during reporting period using			Carrying amount
		Level 1	Level 2	Level 3	
Bonds payables (current portion included)	\$18,861,597	\$18,861,597	\$-	\$-	\$18,690,384
Long-term loans (current portion included)	8,500,000	-	8,500,000	-	8,500,000

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 balance sheets minus cash and cash equivalents. The total capital consists of total equity (including capital, additional paid-in capital, retained earnings and other components of equity) 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, 2021 and 2020 were as follows:

	As of December 31,	
	2021	2020
Total liabilities	\$123,372,178	\$83,238,320
Less: Cash and cash equivalents	(93,648,701)	(69,049,896)
Net debt	29,723,477	14,188,424
Total equity	280,979,703	235,659,746
Total capital	\$310,703,180	\$249,848,170
Debt to capital ratios	9.57%	5.68%

13. ADDITIONAL DISCLOSURES

- (1) The following are additional disclosures for the Company and its affiliates as required by the R.O.C. Securities and Futures Bureau:
 - a. Financing provided to others for the year ended December 31, 2021: Please refer to Attachment 1.
 - b. Endorsement/Guarantee provided to others for the year ended December 31, 2021: Please refer to Attachment 2.
 - c. Securities held as of December 31, 2021 (excluding subsidiaries, associates and joint venture): Please refer to Attachment 3.
 - d. Individual securities acquired or disposed of with accumulated amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 4.

(8) Significant financial assets and liabilities denominated in foreign currencies

The following information was summarized by the foreign currencies other than the functional currency of the Company. The exchange rates disclosed were used to translate the foreign currencies into the functional currency. The significant financial assets and liabilities denominated in foreign currencies were as follows:

	As of December 31,					
	2021			2020		
	Foreign Currency (thousand)	Exchange Rate	NTD (thousand)	Foreign Currency (thousand)	Exchange Rate	NTD (thousand)
<u>Financial Assets</u>						
<u>Monetary items</u>						
USD:NTD	\$882,176	27.62	\$24,365,697	\$629,508	28.43	\$17,896,912
SGD:USD	61,404	0.7375	1,250,787	48,101	0.7559	1,033,694
<u>Non-Monetary items</u>						
USD:NTD	73,929	27.62	2,041,923	47,868	28.43	1,360,874
<u>Financial Liabilities</u>						
<u>Monetary items</u>						
USD:NTD	543,658	27.72	15,070,204	235,896	28.53	6,730,102
SGD:USD	102,625	0.7413	2,108,815	87,190	0.7596	1,893,220
RMB:NTD (Note C)	4,798,085	4.370	20,967,632	4,710,181	4.405	20,748,348

Note A : The foreign currency transactions mentioned above are expressed in terms of the amount before elimination.

Note B : Please refer to the parent company only statements of comprehensive income for the total of realized and unrealized foreign exchange gain and loss. Since there were varieties of foreign currency transactions and functional currencies within the subsidiaries of the Company, the Company was unable to disclose foreign exchange gain (loss) towards each foreign currency with significant impact.

Note C : Please refer to Note 9(5) for more details on other financial liabilities.

(9) 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.

- e. Acquisition of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 5.
 - f. Disposal of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 6.
 - g. Related party transactions for purchases and sales amounts exceeding the lower of NT\$100 million or 20 percent of the capital stock for the year ended December 31, 2021: Please refer to Attachment 7.
 - h. Receivables from related parties with amounts exceeding the lower of NT\$100 million or 20 percent of capital stock as of December 31, 2021: Please refer to Attachment 8.
 - i. Names, locations and related information of investees as of December 31, 2021 (excluding investment in Mainland China): Please refer to Attachment 9.
 - j. Financial instruments and derivative transactions: Please refer to Note 12.
- (2) Investment in Mainland China
- a. Investee company name, main businesses and products, total amount of capital, method of investment, accumulated inflow and outflow of investments from Taiwan, net income (loss) of investee company, percentage of ownership, investment income (loss), carrying amount of investments, cumulated inward remittance of earnings and limits on investment in Mainland China: Please refer to Attachment 10.
 - b. Directly or indirectly significant transactions through third regions with the investees in Mainland China, including price, payment terms, unrealized gain or loss, and other events with significant effects on the operating results and financial condition: Please refer to Attachment 1, 2, 7 and 8.
- (3) Information of major shareholders as of December 31, 2021: Please refer to Attachment 11.

14. OPERATING SEGMENT INFORMATION

In accordance with Article 22 of the Regulations, the Company is not required to prepare operating segment information for the parent company only financial statements. Please refer to the consolidated financial statements of United Microelectronics Corporation and subsidiaries for operating segment information.

ATTACHMENT 1 (Financing provided to others for the year ended December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

No. (Note 1)	Lender	Counter-party	Financial statement account	Related Party	Maximum balance for the period	Ending balance	Actual amount provided	Interest rate	Nature of financing	Amount of sales to (purchases from) counter-party	Reason for financing	Loss allowance	Collateral		Limit of total financing amount (Note2)
													Item	Value	
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Other receivables - related parties	Yes	\$ 10,219,400	\$-	\$-	-	The need for short-term financing	\$-	Business turnover	\$-	None	\$-	\$28,097,970
0	UNITED MICROELECTRONICS CORPORATION	WAVETEK MICROELECTRONICS CORPORATION	Other receivables - related parties	Yes	500,000	500,000	-	1.20%	The need for short-term financing	-	Business turnover	-	None	28,097,970	112,391,881

Note 1: The parent company and its subsidiaries are coded as follows:

(i) The parent company is coded "0".

(ii) The subsidiaries are coded consecutively beginning from "1" in the order presented in the table above.

Note 2: Limit of financing amount for individual counter-party shall not exceed 10% of the lender's net assets value as of the period.

Limit of total financing amount shall not exceed 40% of the Company's net asset value.

ATTACHMENT 2 (Endorsement/Guarantee provided to others for the year ended December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

No. (Note 1)	Endorser/Guarantor	Receiving party	Relationship (Note 2)	Limit of guarantee/endorsement amount for receiving party (Note 3)	Maximum balance for the period	Ending balance (Note 5)	Actual amount provided (Note 5)	Amount of collateral guarantee/endorsement (Note 5)	Percentage of accumulated guarantee amount to net assets value from the latest financial statement	Limit of total guarantee/endorsement amount (Note 4)
0	UNITED MICROELECTRONICS CORPORATION	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	2	\$126,440,866	\$18,753,100	\$16,865,800	\$14,566,258	\$-	6.00%	\$126,440,866

HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.

No. (Note 1)	Endorser/Guarantor	Receiving party	Relationship (Note 2)	Limit of guarantee/endorsement amount for receiving party (Note 6)	Maximum balance for the period	Ending balance	Actual amount provided	Amount of collateral guarantee/endorsement (Note 6)	Percentage of accumulated guarantee amount to net assets value from the latest financial statement	Limit of total guarantee/endorsement amount (Note 6)
1	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	6	\$11,050,851	\$7,450,073	\$6,998,970	\$6,438,276	\$-	28.50%	\$11,050,851

Note 1: The parent company and its subsidiaries are coded as follows:

- The parent company is coded "0".
- The subsidiaries are coded consecutively beginning from "1" in the order presented in the table above.
- According to the "Guidelines Governing the Preparation of Financial Reports by Securities Issuers" issued by the R.O.C. Securities and Futures Bureau, receiving parties should be disclosed as one of the following:
 - A company with which it does business.
 - A company in which the public company directly and indirectly holds more than 50% of the voting shares.
 - A company that directly and indirectly holds more than 50% of the voting shares in the public company.
 - A company in which the public company holds, directly or indirectly, 90% or more of the voting shares.
 - A company that fulfills its contractual obligations by providing mutual endorsements/guarantees for another company in the same industry or for joint builders for purposes of undertaking a construction project.
 - A company that all capital contributing shareholders make endorsements/ guarantees for their jointly invested company in proportion to their shareholding percentages.
 - Companies in the same industry provide among themselves joint and several security for a performance guarantee of a sales contract for pre-construction homes pursuant to the Consumer Protection Act for each other.

Note 3: The amount of endorsements/guarantees shall not exceed 45% of the net worth of endorser/guarantor; and the ceilings on the amount of endorsements/guarantees for any single entity are as follows:

- The amount of endorsements/guarantees for any single entity shall not exceed 45% of net worth of endorser/guarantor.
- The amount of endorsements/guarantees for a company which endorser/guarantor does business with, except the ceiling rules abovementioned shall not exceed the needed amounts arising from business dealings which is the higher amount of total sales or purchase transactions between endorser/guarantor and the receiving party.

The aggregate amount of endorsements/guarantees that the Company as a whole is permitted to make shall not exceed 45% of the Company's net worth, and the aggregate amount of endorsements/guarantees for any single entity shall not exceed 45% of the Company's net worth.

Note 4: Limit of total guarantee/endorsement amount shall not exceed 45% of UMC's net assets value as of December 31, 2021.

Note 5: Total endorsement amount is up to USD 290 million and CNY 2.05 billion. As of December 31, 2021, actual amount provided was NT\$14.57 billion.

Note 6: Limit of total endorsed/guaranteed amount shall not exceed 45% of HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.'s net assets value as of December 31, 2021.

The amount of endorsements/guarantees for any single entity shall not exceed 45% of net worth of HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.'s net assets value as of December 31, 2021.

The aggregate amount of endorsements/guarantees that the Company as a whole is permitted to make shall not exceed 45% of the Company's net worth, and the aggregate amount of endorsements/guarantees for any single entity shall not exceed 45% of the Company's net worth.

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Fund	MILLERFUL NO.1 REAL ESTATE INVESTMENT TRUST	-	Financial assets at fair value through profit or loss, current	\$231,598	1.35	\$231,598	None
Stock	PIXART IMAGING, INC.	-	Financial assets at fair value through profit or loss, current	1,600	1.12	243,200	None
Stock	KING YUAN ELECTRONICS CO., LTD.	-	Financial assets at fair value through profit or loss, current	2,675	0.22	119,840	None
Fund	RED ARC GLOBAL INVESTMENTS (IRELAND) ICAV TERM LIQUIDITY FUND	-	Financial assets at fair value through profit or loss, current	57	0.15	166,682	None
Stock	PIXTECH, INC.	-	Financial assets at fair value through profit or loss, noncurrent	9,883	17.63	-	None
Stock	UNITED FU SHEN CHEN TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	17,511	15.75	-	None
Stock	HOLTEK SEMICONDUCTOR INC.	-	Financial assets at fair value through profit or loss, noncurrent	22,144	9.79	2,491,229	None
Stock	UNITED INDUSTRIAL GASES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	16,680	7.66	1,431,868	None
Stock	OCTASIA INVESTMENT HOLDING INC.	-	Financial assets at fair value through profit or loss, noncurrent	4,530	6.29	414,143	None
Stock	AMIC TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,412	4.71	-	None
Stock	SUBTRON TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	12,521	4.23	414,436	None
Stock	KING YUAN ELECTRONICS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	20,483	1.68	917,624	None
Stock	ENNOSTAR INC.	-	Financial assets at fair value through profit or loss, noncurrent	5,357	0.78	410,920	None
Stock	PROMOS TECHNOLOGIES INC.	-	Financial assets at fair value through profit or loss, noncurrent	324	0.72	-	None
Stock-Preferred stock	TONBU, INC.	-	Financial assets at fair value through profit or loss, noncurrent	938	-	-	None
Stock-Preferred stock	AETAS TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,166	-	-	None
Stock-Preferred stock	TA SHEE GOLF & COUNTRY CLUB	-	Financial assets at fair value through profit or loss, noncurrent	0	-	22,375	None
Stock	NOVATEK MICROELECTRONICS CORP.	-	Financial assets at fair value through other comprehensive income, current	15,737	2.59	8,482,334	None
Stock	SILICON INTEGRATED SYSTEMS CORP.	The Company's director	Financial assets at fair value through other comprehensive income, noncurrent	129,577	19.02	3,407,886	None
Stock	UNIMICRON HOLDING LIMITED	Associate	Financial assets at fair value through other comprehensive income, noncurrent	20,000	12.15	1,461,098	None
Stock	ITE TECH. INC.	-	Financial assets at fair value through other comprehensive income, noncurrent	13,960	8.67	1,514,658	None
Stock	CHIPBOND TECHNOLOGY CORPORATION	-	Financial assets at fair value through other comprehensive income, noncurrent	53,164	7.20	3,546,027	None
Stock	NOVATEK MICROELECTRONICS CORP.	-	Financial assets at fair value through other comprehensive income, noncurrent	708	0.11	381,298	None
Stock-Preferred stock	MTIC HOLDINGS PTE. LTD.	Associate	Financial assets at fair value through other comprehensive income, noncurrent	12,000	-	151,859	None

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount \$20,000	Percentage of ownership (%)	
Bonds	CRYSTAL WISE TECHNOLOGY INC.	-	Financial assets measured at amortized cost, current	20	\$20,000	-	N/A
Convertible bonds	GEAR RADIO LTD.	-	Financial assets at fair value through profit or loss, current	-	27,620	-	27,620
Stock	DARCHUN VENTURE CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,514	2,423	19.65	2,423
Stock	SOLARGATE TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	957	-	15.94	-
Fund	TRENDFORCE CAPITAL FUND SPC-TRENDFORCE CAPITAL FUND I SP	-	Financial assets at fair value through profit or loss, noncurrent	15	86,913	15.06	86,913
Stock	TRONC-E CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,800	-	14.49	-
Stock	EVERGLORY RESOURCE TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,500	17,575	10.23	17,575
Stock	CENTERA PHOTONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	3,750	25,950	10.07	25,950
Stock	ADVANCE MATERIALS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	10,719	131,305	9.12	131,305
Stock	MONTJADE ENGINEERING CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,800	13,626	8.18	13,626
Stock	EXCELSIUS MEDICAL CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,500	16,365	7.50	16,365
Stock	TAIWAN REDEYE BIOMEDIAL INC.	-	Financial assets at fair value through profit or loss, noncurrent	743	9,992	7.43	9,992
Stock	WIN WIN PRECISION TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,150	45,896	6.93	45,896
Stock	RISELINK VENTURE CAPITAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	11	729	6.67	729
Stock	HYE TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,200	36,000	5.45	36,000
Stock	LICO TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	6,609	-	5.32	-
Stock	AMPAK TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	3,050	361,425	5.06	361,425
Stock	EMPASS TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	330	5,650	4.50	5,650
Stock	ACT GENOMICS HOLDINGS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	4,600	59,714	4.24	59,714
Stock	MERIDIGEN BIOTECH CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,838	-	4.20	-
Stock	TAIWAN AULISA MEDICAL DEVICES TECHNOLOGIES, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,114	7,109	4.01	7,109
Stock	EXCELLENCE OPTOELECTRONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	6,374	175,919	3.49	175,919
Stock	SUBTRON TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	10,059	332,946	3.40	332,946
Stock	SOLID STATE SYSTEM CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,400	74,040	3.21	74,040
Stock	TOPPOINT TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	4,416	186,582	3.11	186,582
Fund	TRANSLINK CAPITAL PARTNERS IV, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	214,515	2.96	214,515

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021		Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Percentage of ownership (%)	
Stock	BRIGHT SHELAND INTERNATIONAL CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,200	2.87	None
Stock	TAIWAN SEMICONDUCTOR CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	6,741	2.54	None
Stock	CHITEC TECHNOLOGY CORP., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	640	2.15	None
Stock	FORMOSA PHARMACEUTICALS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	2,100	2.12	None
Fund	VERTEX V (C.I.) FUND L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	2.07	None
Stock	TERASILIC CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	600	2.05	None
Stock	CHIPBOND TECHNOLOGY CORPORATION	-	Financial assets at fair value through profit or loss, noncurrent	13,989	1.89	None
Fund	VERTEX VI FUND L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	1.65	None
Stock	ACER E-ENABLING SERVICE BUSINESS INC.	-	Financial assets at fair value through profit or loss, noncurrent	550	1.51	None
Stock	YUEN FOONG YU CONSUMER PRODUCTS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	4,000	1.50	None
Stock	M3 TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	440	1.20	None
Stock	LINTES TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	615	1.08	None
Stock	CRYSTAL WISE TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	888	1.01	None
Stock	UNICRON TECHNOLOGIES CORP.	-	Financial assets at fair value through profit or loss, noncurrent	474	0.99	None
Stock	CUBTEK INC.	-	Financial assets at fair value through profit or loss, noncurrent	850	0.93	None
Stock	POWERTEC ELECTROCHEMICAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	9,930	0.70	None
Stock	TAIWAN PHARMACEUTICALS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	514	0.68	None
Stock	ROARING SUCCESS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	317	0.64	None
Stock	CLIENTRON CORP.	-	Financial assets at fair value through profit or loss, noncurrent	363	0.57	None
Stock	EVERGREEN AVIATION TECHNOLOGIES CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,600	0.45	None
Stock	FITPOWER INTEGRATED TECHNOLOGY INC.	-	Financial assets at fair value through profit or loss, noncurrent	500	0.27	None
Stock	SOLAR APPLIED MATERIALS TECHNOLOGY CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,173	0.20	None
Stock	RAYDIUM SEMICONDUCTOR CORP.	-	Financial assets at fair value through profit or loss, noncurrent	120	0.18	None
Stock	CHANG WAH ELECTROMATERIALS INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,055	0.15	None
Stock	WAFER WORKS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	800	0.15	None
Stock	TIGERAIR TAIWAN CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	598	0.15	None

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount \$63	Percentage of ownership (%)	
Stock	WALTOP INTERNATIONAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	13	\$63	0.15	None
Stock	FORTEMEDIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	21	27	0.02	27
Stock	YANG MING MARINE TRANSPORT CORP.	-	Financial assets at fair value through profit or loss, noncurrent	224	27,104	0.01	27,104
Stock-Preferred Stock	EIOULE INTERNATIONAL LIMITED	-	Financial assets at fair value through profit or loss, noncurrent	23,909	124,335	-	124,335
Stock-Preferred Stock	FLOADJA CORP.	-	Financial assets at fair value through profit or loss, noncurrent	2	-	-	-
Stock-Preferred Stock	FORTEMEDIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	311	2,165	-	2,165
Stock-Preferred Stock	ACEPODIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	2,055	68,868	-	68,868
Stock-Preferred Stock	BRAVOTEK CORP.	-	Financial assets at fair value through profit or loss, noncurrent	2,250	66,870	-	66,870
Stock-Preferred Stock	GEAR RADIO LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,400	57,652	-	57,652
Stock-Preferred Stock	SONATUS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	249	27,620	-	27,620
Stock-Preferred Stock	HAHOW INC.	-	Financial assets at fair value through profit or loss, noncurrent	151,217	110,480	-	110,480
Stock-Preferred Stock	CENTERA PHOTONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	526	15,782	-	15,782
Convertible bonds	YEONG GUAN ENERGY TECHNOLOGY GROUP CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	100	9,850	-	9,850
Convertible bonds	BRIGHT SHELAND INTERNATIONAL CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	250	25,310	-	25,310
Convertible bonds	MERCURIES & ASSOCIATES HOLDING, LTD.	-	Financial assets at fair value through profit or loss, noncurrent	250	28,525	-	28,525
Convertible bonds	CHANG WAH TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	750	105,375	-	105,375
Convertible bonds	LOTES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	300	41,775	-	41,775
Convertible bonds	TA LIANG TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	60	7,653	-	7,653
Convertible bonds	PHISON ELECTRONICS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,900	234,175	-	234,175
Convertible bonds	ULTRA CHIP, INC.	-	Financial assets at fair value through profit or loss, noncurrent	30	3,704	-	3,704
Stock	SHIN-ETSU HANDOTAI TAIWAN CO., LTD.	-	Financial assets at fair value through other comprehensive income, noncurrent	10,500	890,505	7.00	890,505
Convertible bonds	ZHONG YANG TECHNOLOGY CO., LTD.	-	Prepayments for investments	50	5,025	-	N/A

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency/denomination in NTD or in foreign currencies)

TLC CAPITAL CO., LTD.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)	
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)		Fair value/ Net assets value
Convertible bonds	EIOULE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, current	-	\$150,833	-	\$150,833	None
Fund	EVERY CAPITAL ASIA FUND, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	198,055	18.18	198,055	None
Stock	BEAUTY ESSENTIALS INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	150,500	116,391	13.99	116,391	None
Fund	OAK HILL OPPORTUNITIES FUND, SEGREGATED PORTFOLIO	-	Financial assets at fair value through profit or loss, noncurrent	13	334,339	13.00	334,339	None
Stock	WINKING ENTERTAINMENT LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,606	138,583	10.23	138,583	None
Stock	ARTERY TECHNOLOGY CORPORATION	Associate	Financial assets at fair value through profit or loss, noncurrent	5,112	141,193	9.99	141,193	None
Fund	EVERY CAPITAL ASIA FUND II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	137,272	7.14	137,272	None
Stock	EVERGLORY RESOURCE TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,200	8,436	4.91	8,436	None
Fund	TRANSLINK CAPITAL PARTNERS III, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	171,420	4.24	171,420	None
Stock	SUNDIA MEDITECH GROUP	-	Financial assets at fair value through profit or loss, noncurrent	78	-	3.20	-	None
Stock	WELLYSUN INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,000	15,890	2.34	15,890	None
Stock	EXCELLENCE OPTOELECTRONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	3,183	87,854	1.74	87,854	None
Stock	PLAYNITRIDE INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,693	180,789	1.68	180,789	None
Stock	ADVANCE MATERIALS CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,899	23,260	1.62	23,260	None
Stock	HANDA PHARMACEUTICALS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,000	69,200	0.82	69,200	None
Stock	SIMPLO TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,422	467,286	0.77	467,286	None
Stock	TXC CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,978	208,678	0.64	208,678	None
Stock	LINTES TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	365	44,895	0.64	44,895	None
Stock	POWTEC ELECTROCHEMICAL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	6,470	-	0.46	-	None
Stock	YUEN FOONG YU CONSUMER PRODUCTS CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,000	50,200	0.37	50,200	None
Stock	EVERGREEN STEEL CORP.	-	Financial assets at fair value through profit or loss, noncurrent	1,000	55,000	0.24	55,000	None
Stock	ALLIED SUPREME CORP.	-	Financial assets at fair value through profit or loss, noncurrent	87	25,273	0.11	25,273	None
Stock	VALUE VALVES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	40	3,600	0.10	3,600	None
Stock	CHANG WAH ELECTROMATERIALS INC.	-	Financial assets at fair value through profit or loss, noncurrent	506	19,696	0.07	19,696	None
Stock	ADVANCED ENERGY SOLUTION HOLDING CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1	1,872	-	1,872	None
Capital-Preferred stock	GUANGXI CHIPBETTER MICROELECTRONICS INC.	-	Financial assets at fair value through profit or loss, noncurrent	672	59,939	-	59,939	None
Capital-Preferred stock	CANAANTEK CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	190	39,832	-	39,832	None

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

TLC CAPITAL CO., LTD.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Capital-Preferred stock	HEFEI TBSTEST TECHNOLOGIES CO., LTD	-	Financial assets at fair value through profit or loss, noncurrent	168	\$24,809	-	\$24,809
Capital-Preferred stock	LINSI MICROELECTRONICS (SHENZHEN) CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	459	25,920	-	25,920
Capital-Preferred stock	WUHAN JIMU INTELLIGENT TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	41	26,470	-	26,470
Stock-Preferred stock	YOUJIA GROUP LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,685	1,222	-	1,222
Stock-Preferred stock	ALO7 LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,377	-	-	-
Stock-Preferred stock	ADWO MEDIA HOLDINGS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	5,332	-	-	-
Stock-Preferred stock	IMO, INC.	-	Financial assets at fair value through profit or loss, noncurrent	8,519	-	-	-
Stock-Preferred stock	GAME VIDEO LTD.	-	Financial assets at fair value through profit or loss, noncurrent	279	-	-	-
Stock-Preferred stock	EFOULE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	35,863	186,502	-	186,502
Stock-Preferred stock	TURNING POINT LASERS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,000	64,861	-	64,861
Stock-Preferred stock	JSAB HOLDING LTD.	-	Financial assets at fair value through profit or loss, noncurrent	1,817	34,674	-	34,674
Stock-Preferred stock	SILC TECHNOLOGIES, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,697	75,955	-	75,955
Stock-Preferred stock	SINO APPLIED TECHNOLOGY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	855	12,429	-	12,429
Stock-Preferred stock	RAMON SPACE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	249	55,240	-	55,240
Stock-Preferred stock	XMEMS LABS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	2,990	55,240	-	55,240

UMC CAPITAL CORP.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Convertible bonds	CLOUDWORDS, INC.	-	Financial assets at fair value through profit or loss, current	-	USD 190	-	USD 190
Capital	TRANSLINK MANAGEMENT III, L.L.C.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 1,370	14.33	USD 1,370
Fund	TRANSLINK CAPITAL PARTNERS III, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 16,780	11.47	USD 16,780
Fund	TRANSLINK CAPITAL PARTNERS IV, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 23,300	8.87	USD 23,300
Stock	OCTTASIA INVESTMENT HOLDING INC.	-	Financial assets at fair value through profit or loss, noncurrent	5,594	USD 18,516	7.76	USD 18,516
Stock	ALL-STARS SP IV LTD.	-	Financial assets at fair value through profit or loss, noncurrent	7	USD 6,854	5.03	USD 6,854
Fund	TRANSLINK CAPITAL PARTNERS II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 4,387	4.53	USD 4,387
Stock	CNEX LABS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	454	-	4.43	-
Fund	GROVE VENTURES II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	USD 2,063	3.25	USD 2,063

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UMC CAPITAL CORP.

Type of securities Fund	Name of securities	Relationship	Financial statement account	December 31, 2021		Shares as collateral (thousand)			
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount		Percentage of ownership (%)	Fair value/ Net assets value (thousand)	
	SIERRA VENTURES XI, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	12,427	1,76	USD	12,427	None
Fund	STORM VENTURES FUND V, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	7,600	1,69	USD	7,600	None
Fund	SIERRA VENTURES XII, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	2,689	1,38	USD	2,689	None
Stock	NEUROBLADE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	37 USD	1,398	0,90	USD	1,398	None
Stock	ACHIEVE MADE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	80 USD	5	0,46	USD	5	None
Stock	APIER GROUP INC.	-	Financial assets at fair value through profit or loss, noncurrent	320 USD	3,686	0,32	USD	3,686	None
Stock-Preferred stock	ACHIEVE MADE INTERNATIONAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,644 USD	1,042	-	USD	1,042	None
Stock-Preferred stock	GLYMPSE, INC.	-	Financial assets at fair value through profit or loss, noncurrent	1,349 USD	2,691	-	USD	2,691	None
Stock-Preferred stock	A TSCALE, INC.	-	Financial assets at fair value through profit or loss, noncurrent	8,520 USD	6,072	-	USD	6,072	None
Stock-Preferred stock	SENSIFREE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	614 USD	1,014	-	USD	1,014	None
Stock-Preferred stock	DCARD HOLDINGS LTD.	-	Financial assets at fair value through profit or loss, noncurrent	30,075 USD	7,522	-	USD	7,522	None
Stock-Preferred stock	GCT SEMICONDUCTOR, INC.	-	Financial assets at fair value through profit or loss, noncurrent	175 USD	111	-	USD	111	None
Stock-Preferred stock	FORTEMEDIA, INC.	-	Financial assets at fair value through profit or loss, noncurrent	12,241 USD	6,762	-	USD	6,762	None
Stock-Preferred stock	SIFOTONICS TECHNOLOGIES CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	3,500 USD	9,204	-	USD	9,204	None
Stock-Preferred stock	NEVO ENERGY, INC.	-	Financial assets at fair value through profit or loss, noncurrent	4,980	-	-	-	-	None
Stock-Preferred stock	NEXENTA SYSTEMS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	6,555	-	-	-	-	None
Stock-Preferred stock	CLOUDWORDS, INC.	-	Financial assets at fair value through profit or loss, noncurrent	9,461 USD	5,401	-	USD	5,401	None
Stock-Preferred stock	EAST VISION TECHNOLOGY LTD.	-	Financial assets at fair value through profit or loss, noncurrent	2,770	-	-	-	-	None
Stock-Preferred stock	BLUESPACE AI, INC.	-	Financial assets at fair value through profit or loss, noncurrent	533 USD	1,768	-	USD	1,768	None
Stock-Preferred stock	REED SEMICONDUCTOR CORP.	-	Financial assets at fair value through profit or loss, noncurrent	3,864 USD	2,327	-	USD	2,327	None
Stock-Preferred stock	A.A.A TARANIS VISUAL LTD.	-	Financial assets at fair value through profit or loss, noncurrent	400 USD	4,544	-	USD	4,544	None
Stock-Preferred stock	NEUROBLADE LTD.	-	Financial assets at fair value through profit or loss, noncurrent	33 USD	2,000	-	USD	2,000	None
Stock-Preferred stock	HYPERLIGHT CORP.	-	Financial assets at fair value through profit or loss, noncurrent	117 USD	800	-	USD	800	None
Stock-Preferred stock	AMMAX BIO, INC.	-	Financial assets at fair value through profit or loss, noncurrent	493 USD	1,000	-	USD	1,000	None
Convertible bonds	GLYMPSE, INC.	-	Financial assets at fair value through profit or loss, noncurrent	- USD	1,855	-	USD	1,855	None

ATTACHMENT 3 (Securities held as of December 31, 2021) (Excluding subsidiaries, associates and joint ventures)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

TERA ENERGY DEVELOPMENT CO., LTD.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Stock	TIAN TAI PHOTOELECTRICITY CO., LTD.	-	Financial assets at fair value through profit or loss, noncurrent	357	\$5,171	1.18	\$5,171 None

SINO PARAGON LIMITED

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Fund	SPARKLABS GLOBAL VENTURES FUND I, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	\$95,549	11.13	\$95,549 None
Fund	SPARKLABS KOREA FUND II, L.P.	-	Financial assets at fair value through profit or loss, noncurrent	-	40,124	5.00	40,124 None

UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.

Type of securities	Name of securities	Relationship	Financial statement account	December 31, 2021			Shares as collateral (thousand)
				Units (thousand)/ bonds/ shares (thousand)	Carrying amount	Percentage of ownership (%)	
Fund	Lanbor Fund	-	Financial assets at fair value through profit or loss, noncurrent	-	RMB 26,988	9.71	RMB 26,988 None

ATTACHMENT 4 (Individual securities acquired or disposed of with accumulated amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021)
(Amount in thousand, Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Type of securities	Name of the securities	Financial statement account	Counter-party	Relationship	Beginning balance		Addition		Disposal		Ending balance	
					Units (thousand)/bonds/shares (thousand)	Amount	Units (thousand)/bonds/shares (thousand)	Amount	Units (thousand)/bonds/shares (thousand)	Amount	Units (thousand)/bonds/shares (thousand)	Amount
Stock	CHIPBOND TECHNOLOGY CORPORATION	Financial assets at fair value through other comprehensive income, noncurrent	CHIPBOND TECHNOLOGY CORPORATION		-	\$-	53,164	\$3,498,179	-	\$-	-	\$3,546,027

FORTUNE VENTURE CAPITAL CORP.

Type of securities	Name of the securities	Financial statement account	Counter-party	Relationship	Beginning balance		Addition		Disposal		Ending balance	
					Units (thousand)/bonds/shares (thousand)	Amount (Note 1)	Units (thousand)/bonds/shares (thousand)	Amount	Units (thousand)/bonds/shares (thousand)	Amount	Units (thousand)/bonds/shares (thousand)	Amount
Stock	UNITED MICROELECTRONICS CORP.	Financial assets at fair value through other comprehensive income, noncurrent	CHIPBOND TECHNOLOGY CORPORATION		16,079	\$758,112	-	-	16,079	\$920,443	-	\$-
Stock	CHIPBOND TECHNOLOGY CORPORATION	Financial assets at fair value through profit or loss, noncurrent	CHIPBOND TECHNOLOGY CORPORATION		-	-	13,989	920,443	-	-	-	933,033

ATTACHMENT 5 (Acquisition of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

Where counter-party is a related party, details of prior transactions

Name of properties	Transaction date	Transaction amount	Payment status	Counter-party	Relationship	Former holder of property	Relationship between former holder and acquirer of property	Date of transaction	Transaction amount	Price reference	Date of acquisition and status of utilization	Other commitments
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None

ATTACHMENT 6 (Disposal of individual real estate with amount exceeding the lower of NT\$300 million or 20 percent of the capital stock for the year ended December 31, 2021)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

Names of properties	Transaction date	Date of original acquisition	Carrying amount	Transaction amount	Status of proceeds collection	Gain (Loss) from disposal	Counter-party	Relationship	Reason of disposal	Price reference	Other commitments
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None

ATTACHMENT 7 (Related party transactions for purchases and sales amounts exceeding the lower of NT\$100 million or 20 percent of capital stock for the year ended December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Subsidiary	Sales	\$48,440,369	30 %	Net 60 days	N/A	N/A	\$6,286,428	24 %	
FARADAY TECHNOLOGY CORPORATION	Associate	Sales	1,969,746	1 %	Month-end 60 days	N/A	N/A	271,158	1 %	
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Subsidiary	Sales	1,222,320	1 %	Net 30 days	N/A	N/A	29,012	0 %	
UNITED SEMICONDUCTOR (SHANDONG) CO., LTD.	Subsidiary	Sales	178,331	0 %	Net 30 days	N/A	N/A	18,818	0 %	

UMC GROUP (USA)

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UNITED MICROELECTRONICS CORPORATION	Parent company	Purchases	1,662,118	90 %	Net 60 days	N/A	N/A	228,390	88 %	
UNITED SEMICONDUCTOR JAPAN CO., LTD.	Associate	Purchases	98,856	5 %	Net 60 days	N/A	N/A	15,615	6 %	
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Associate	Purchases	50,581	3 %	Net 60 days	N/A	N/A	8,047	3 %	
WAVE/TEK MICROELECTRONICS CORPORATION	Associate	Purchases	19,007	1 %	Net 60 days	N/A	N/A	4,583	2 %	
HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	Associate	Purchases	13,055	1 %	Net 60 days	N/A	N/A	2,184	1 %	

UNITED SEMICONDUCTOR JAPAN CO., LTD.

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	11,452,092	17 %	Net 60 days	N/A	N/A	1,796,073	11 %	

UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	332,658	8 %	Net 60 days	N/A	N/A	51,244	7 %	
FARADAY TECHNOLOGY CORPORATION	Associate	Sales	120,610	3 %	Net 60 days	N/A	N/A	48,160	7 %	

WAVE/TEK MICROELECTRONICS CORPORATION

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	\$545,785	18 %	Net 60 days	N/A	N/A	\$126,380	25 %	
UNITED MICROELECTRONICS CORPORATION	Parent company	Sales	110,620	4 %	Month-end 30 days	N/A	N/A	-	-	

HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.

Counter-party	Relationship	Transactions			Details of non-arm's length transaction			Notes and accounts receivable (payable)		
		Purchases (Sales)	Amount	Percentage of total purchases (sales)	Term	Unit price	Term	Balance	Percentage of total receivables (payable)	Note
UMC GROUP (USA)	Associate	Sales	84,497	3 %	Net 60 days	N/A	N/A	13,923	3 %	

ATTACHMENT 8 (Receivables from related parties with amounts exceeding the lower of NT\$100 million or 20 percent of capital stock as of December 31, 2021)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

UNITED MICROELECTRONICS CORPORATION

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Subsidiary	\$-	\$6,286,428	\$9,679	8.30	\$5	Collection in subsequent period	\$6,308,151	\$12,044
FARADAY TECHNOLOGY CORP.	Associate	-	271,158	-	10.16	-	-	271,439	235

UNITED SEMICONDUCTOR JAPAN CO., LTD.

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Associate	JPY -	1,796,073	JPY -	6.62	JPY -	-	1,796,073	JPY -

UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Associate	RMB -	51,244	RMB -	6.12	RMB -	-	25,272	RMB 60
FARADAY TECHNOLOGY CORP.	Associate	RMB -	48,160	RMB -	4.51	RMB -	-	29,372	RMB 57

WAVE/TEK MICROELECTRONICS CORPORATION

Counter-party	Relationship	Ending balance			Turnover rate (times)	Overdue receivables			
		Notes receivable	Accounts receivable	Other receivables		Amount	Collection status	Amount received in subsequent period	Loss allowance
UMC GROUP (USA)	Associate	\$-	\$126,580	\$-	4.31	\$-	-	\$126,580	\$-

ATTACHMENT 9 (Names, locations and related information of investee companies as of December 31, 2021) (Not including investment in Mainland China)
(Amount in thousand; Currency denomination in NTD or in foreign currencies)

Investee company	Address	Main businesses and products	Initial Investment		Investment as of December 31, 2021				Investment income (loss) recognized	Note
			Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
UMC GROUP (USA)	USA	IC Sales	USD 16,438	USD 16,438	16,438	100.00	\$1,732,285	\$64,742	\$64,742	
UNITED MICROELECTRONICS (EUROPE) B.V.	The Netherlands	Marketing support activities	USD 5,421	USD 5,421	9	100.00	136,051	4,151	4,151	
UMC CAPITAL CORP.	Cayman Islands	Investment holding	USD 81,500	USD 81,500	71,663	100.00	5,314,580	1,362,690	1,362,690	
GREEN EARTH LIMITED	Samoa	Investment holding	USD 977,000	USD 977,000	977,000	100.00	10,277,015	(1,124,730)	(1,124,730)	
TLC CAPITAL CO., LTD.	Taipei City, Taiwan	Venture capital	USD 4,610,000	USD 4,610,000	421,983	100.00	4,648,384	132,881	132,881	
UMC INVESTMENT (SAMOA) LIMITED	Samoa	Investment holding	USD 1,520	USD 1,520	1,520	100.00	38,865	(1,096)	(1,096)	
FORTUNE VENTURE CAPITAL CORP.	Taipei City, Taiwan	Consulting and planning for venture capital	USD 3,440,053	USD 3,440,053	444,752	100.00	7,498,124	942,304	916,579	
UMC KOREA CO., LTD.	Korea	Marketing support activities	KRW 550,000	KRW 550,000	110	100.00	20,575	1,161	1,161	
OMNI GLOBAL LIMITED	Samoa	Investment holding	USD 4,300	USD 4,300	4,300	100.00	626,457	56,705	56,705	
SINO PARAGON LIMITED	Samoa	Investment holding	USD 2,600	USD 2,600	2,600	100.00	138,220	(4,133)	(4,133)	
BEST ELITE INTERNATIONAL LIMITED	British Virgin Islands	Investment holding	USD 309,102	USD 309,102	664,966	100.00	25,139,523	4,633,937	4,633,937	
UNITED SEMICONDUCTOR JAPAN CO., LTD.	Japan	Sales and manufacturing of integrated circuits	JPY 64,421,068	JPY 64,421,068	116,247	100.00	18,222,094	3,088,751	3,088,751	
WAVETEK MICROELECTRONICS CORPORATION	Hsinchu County, Taiwan	Sales and manufacturing of integrated circuits	USD 1,903,741	USD 1,903,741	148,112	79.73	805,037	504,288	403,565	
MTIC HOLDINGS PTE. LTD.	Singapore	Investment holding	SGD 12,000	SGD 12,000	12,000	45.44	-	(236,980)	(26,295)	
UNITECH CAPITAL INC.	British Virgin Islands	Investment holding	USD 21,000	USD 21,000	21,000	42.00	976,559	707,036	296,955	
TRIKNIGHT CAPITAL CORPORATION	Taipei City, Taiwan	Investment holding	USD 2,342,800	USD 2,342,800	234,280	40.00	4,122,087	5,377,442	2,150,977	
HSUN CHIEH INVESTMENT CO., LTD.	Taipei City, Taiwan	Investment holding	USD 336,241	USD 336,241	858,851	36.49	14,092,662	11,488,620	4,191,965	
YANN YUAN INVESTMENT CO., LTD.	Taipei City, Taiwan	Investment holding	USD 2,300,000	USD 2,300,000	46,000	28.22	9,741,234	373,486	105,867	
FARADAY TECHNOLOGY CORPORATION	Hsinchu City, Taiwan	Design of application-specific integrated circuit	USD 38,918	USD 38,918	34,240	13.78	1,779,618	990,347	136,430	
UNIMICRON TECHNOLOGY CORP.	Taoyuan City, Taiwan	Manufacturing of PCB	USD 2,438,565	USD 2,438,565	196,136	13.30	10,418,777	11,155,055	1,485,292	

ATTACHMENT 9 (Names, locations, and related information of investee companies as of December 31, 2021) (Not including investment in Mainland China)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

FORTUNE VENTURE CAPITAL CORP.

Investee company	Address	Main businesses and products	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
			Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
TERA ENERGY DEVELOPMENT CO., LTD.	Hsinchu City, Taiwan	Energy Technical Services	\$100,752	\$100,752	7,800	100.00	\$88,952	\$26,632		
PURIUMFIL INC.	Hsinchu City, Taiwan	Chemicals and filtration products & Microcontamination control service	10,000	10,000	1,000	44.45	7,253	2,355	1,047	
UNITED LED CORPORATION HONG KONG LIMITED	Hongkong	Investment holding	USD 22,500	USD 22,500	22,500	25.14	98,954	14,434	3,629	
WAVETEK MICROELECTRONICS CORPORATION	Hsinchu County, Taiwan	Sales and manufacturing of integrated circuits	8,856	8,856	1,194	0.64	7,295	504,288	3,252	

TLC CAPITAL CO., LTD.

Investee company	Address	Main businesses and products	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
			Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
SOARING CAPITAL CORP.	Samoa	Investment holding	USD 900	USD 900	900	100.00	\$7,182	\$904	\$904	
HSUN CHIEH CAPITAL CORP.	Samoa	Investment holding	USD 8,000	USD 8,000	8,000	40.00	229,598	98,440	39,376	
VSENSE CO., LTD.	Taipei City, Taiwan	Medical devices, measuring equipment, reagents and consumables	95,916	95,916	4,251	23.98	-	(20,978)	(961)	

UMC CAPITAL CORP.

Investee company	Address	Main businesses and products	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
			Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
TRANSLINK CAPITAL PARTNERS I, L.P.	Cayman Islands	Investment holding	USD 3,934	USD 4,036	-	10.38	USD 8,159	USD 44,221	USD 3,954	

TERA ENERGY DEVELOPMENT CO., LTD.

Investee company	Address	Main businesses and products	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
			Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
EVERRICH ENERGY INVESTMENT (HK) LIMITED	Hongkong	Investment holding	USD 750	USD 750	750	100.00	\$43,023	\$2,036	\$2,036	

WAVETEK MICROELECTRONICS CORPORATION

Investee company	Address	Main businesses and products	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
			Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
WAVETEK MICROELECTRONICS INVESTMENT (SAMOA) LIMITED	Samoa	Investment holding	USD 1,650	USD 1,650	1,650	100.00	\$2,690	\$258	\$258	

ATTACHMENT 9 (Names, locations and related information of investee companies as of December 31, 2021) (Not including investment in Mainland China)
(Amount in thousand; Currency denomination in USD or in foreign currencies)

WAYTEK MICROELECTRONICS INVESTMENT (SAMOA) LIMITED

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
WAYTEK MICROELECTRONICS CORPORATION (USA)	USA	USD	60	USD	60	100.00	\$2,657	\$(43)	\$(43)

BEST ELITE INTERNATIONAL LIMITED

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
INFOSHINE TECHNOLOGY LIMITED	British Virgin Islands	USD	354,000	USD	354,000	100.00	\$25,218,528	\$4,640,155	\$4,640,155

INFOSHINE TECHNOLOGY LIMITED

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
OAKWOOD ASSOCIATES LIMITED	British Virgin Islands	USD	354,000	USD	354,000	100.00	\$25,218,528	\$4,640,155	\$4,640,155

OMNI GLOBAL LIMITED

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
UNITED MICROT TECHNOLOGY CORPORATION (CALIFORNIA)	USA	USD	1,000	USD	1,000	100.00	\$35,116	\$1,469	\$1,469
ECP VITA PTE. LTD.	Singapore	USD	9,000	USD	9,000	100.00	575,076	50,180	50,180
UMC TECHNOLOGY JAPAN CO., LTD.	Japan	- JPY	35,000	-	-	-	-	(182)	(182)

Note: UMC TECHNOLOGY JAPAN CO., LTD. was dissolved and liquidated on March 29, 2021.

GREEN EARTH LIMITED

Investee company	Address	Initial Investment			Investment as of December 31, 2021			Investment income (loss) recognized	Note
		Ending balance	Beginning balance	Number of shares (thousand)	Percentage of ownership (%)	Carrying amount	Net income (loss) of investee company		
UNITED MICROCHIP CORPORATION	Cayman	USD	974,050	USD	974,050	100.00	\$102,252,341	\$(1,124,020)	\$(1,124,020)

ATTACHMENT 10 (Investment in Mainland China as of December 31, 2021)
 (Amount in thousand; Currency denomination in NTD or in foreign currencies)

Investee company	Main businesses and products	Total amount of paid-in capital	Method of investment (Note 1)	Accumulated outflow of investment from Taiwan as of January 1, 2021	Investment flows		Net income (loss) of investee company	Percentage of ownership	Investment income (loss) recognized (Note 2)	Carrying amount as of December 31, 2021	Accumulated inward remittance of earnings as of December 31, 2021
					Outflow	Inflow					
					Outflow	Inflow					
UNITRUTH ADVISOR (SHANGHAI) CO., LTD.	Research, manufacturing and products investment Holding and advisory	\$22,096 (USD 800)	(i) SOARING CAPITAL CORP.	\$22,096 (USD 800)	\$-	\$-	\$865 (ii)	100.00%	\$865 (ii)	\$7,050	\$-
EVERRICH (SHANDONG) ENERGY CO., LTD.	Solar engineering integrated design services	20,715 (USD 750)	(ii) EVERRICH ENERGY INVESTMENT (HK) LIMITED	20,715 (USD 750)	-	2,083 (USD 750)	2,083 (ii)	100.00%	2,083 (ii)	42,631 (USD 4,392)	121,307 (USD 4,392)
UNITED LED CORPORATION	Research, manufacturing and sales in LED epitaxial wafers	2,320,080 (USD 84,000)	(ii) UNITED LED CORPORATION HONG KONG LIMITED	559,305 (USD 20,250)	-	14,908 (RMB 3,451)	14,908 (RMB 3,451)	25.14%	3,745 (RMB 867) (ii)	95,995 (RMB 22,221)	-
HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	Sales and manufacturing of integrated circuits	13,587,670 (RMB 3,145,294)	(iii) OAKWOOD ASSOCIATES LIMITED	8,537,397 (USD 309,102)	-	4,636,816 (RMB 1,073,337)	4,636,816 (RMB 1,073,337)	99.9985%	4,636,747 (RMB 1,073,321) (ii)	24,557,075 (RMB 5,684,508)	-
UNITED SEMICONDUCTOR (SHANDONG) CO., LTD.	Design support of integrated circuits	129,600 (RMB 30,000)	(ii) HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	-	-	126,412 (RMB 29,262)	126,412 (RMB 29,262)	99.9985%	126,408 (RMB 29,261) (ii)	416,664 (RMB 96,450)	-
UNITED SEMICONDUCTOR (XIAMEN) CO., LTD.	Sales and manufacturing of integrated circuits	63,494,470 (RMB 14,697,794)	(ii) UNITED MICROCHIP CORPORATION and (iii) HEJIAN TECHNOLOGY (SUZHOU) CO., LTD.	26,652,361 (USD 964,966) (Notes)	-	(2,368,401) (RMB (548,241))	(2,368,401) (RMB (548,241))	69.95%	(1,606,703) (RMB (371,922)) (ii)	16,306,851 (RMB 3,774,734)	-
Investment amounts authorized by Investment Commission, MOEA				Upper limit on investment	\$168,587,822 (USD 2,127,718)						

Note 1 : The methods for engaging in investment in Mainland China include the following:

- (i) Direct investment in Mainland China.
- (ii) Indirectly investment in Mainland China through companies registered in a third region (Please specify the name of the company in third region).
- (iii) Other methods.

Note 2 : The investment income (loss) recognized in current period, the investment income (loss) were determined based on the following basis:

- (i) The financial statements were audited by an international certified public accounting firm in cooperation with an R.O.C. accounting firm.
- (ii) The financial statements were audited by the auditors of the parent company.
- (iii) Others.

Note 3 : Initial investment amounts denominated in foreign currencies are translated into New Taiwan Dollars using the spot rates at the financial report date.

Note 4 : The Company indirectly invested in HEJIAN TECHNOLOGY (SUZHOU) CO., LTD. via investment in BEST ELITE INTERNATIONAL LIMITED, an equity investee. The investment has been approved by the Investment Commission, MOEA in the total amount of USD 383,569 thousand. As of December 31, 2021, the amount of investment has been all remitted.

Note 5 : The investment to UNITED SEMICONDUCTOR (XIAMEN) CO., LTD. (USCXM) from HEJIAN TECHNOLOGY (SUZHOU) CO., LTD. and indirectly invested in USCXM via investment in GREEN EARTH LIMITED.

The consent to invest in USCXM's investment has been approved by the Investment Commission, MOEA in the total amount of USD 1,722,349 thousand. As of December 31, 2021, the amount of investment USD 214,283 thousand has not yet been remitted.

ATTACHMENT 11 (Information of major shareholders as of December 31, 2021)

UNITED MICROELECTRONICS CORPORATION

Name	Number of shares	Percentage of ownership (%)
JPMorgan Chase Bank, N.A. acting in its capacity as depositary and representative to the holders of ADRs	746,370,855	5.97

UMC and its Affiliated Enterprises have Not Faced Financial Difficulties during Recent Years up to the Annual Report Printing Date

United Microelectronics Corporation

Representative: Stan Hung



Stan Hung

UMC