Stock Code: 2337

MACRONIX INTERNATIONAL CO., LTD.

Year 2021
Annual Report

Printed on March 29, 2022

This Annual Report is available at the following Websites:

Taiwan Stock Exchange Market Observation Post System: http://mops.twse.com.tw

Corporate Website: http://www.macronix.com

I. Company Spokesperson and Deputy

Spokesperson: Miin Wu
Title: Chairman and CEO
Tel: 03-5786688
E-mail: ir@mxic.com.tw
Deputy Spokesperson: Paul Yeh
Title: Vice President
Tel: 03-5786688
E-mail: ir@mxic.com.tw

II. Headquarters and Factories

Headquarters and FAB 2: No. 16, Li-Hsin Road, Science Park, Hsin-chu, Taiwan, R.O.C.
Tel: 03-5786688
FAB 5: No. 19, Li-Hsin Road, Science Park, Hsin-chu, Taiwan, R.O.C.
Tel: 03-6668999
Test Building: No. 8, Creation Road IV, Science Park, Hsin-chu, Taiwan, R.O.C.
Tel: 03-5783333
Taipei Office: 19F, No. 4, Min-Chuan E. Road, Sec. 3, Taipei, Taiwan, R.O.C.
Tel: 02-25093300

III. Stock Transfer Agency

Investor Relations Office
Address: 2F, No. 162-1, Songjiang Road, Zhongshan Dist., Taipei, Taiwan, R.O.C.
Website: http://www.macronix.com
Tel: 02-25638128

IV. Auditors

Accounting Firm: Deloitte & Touche
Accountant: Tung-Hui Yeh, Kuo-Tyan Hong
Address: 6F, No. 2, Zhanye 1st Rd., Science Park, Hsin-chu, Taiwan, R.O.C.
Website: http://www.deloitte.com.tw
Tel: 03-5780899

V. Overseas Securities Exchanges: None

VI. Company Website: http://www.macronix.com

Macronix’s Philosophy

“Honesty”

Macronix’s Values

“Innovation, Quality, Efficiency, Service, Team Work”

Table of Contents

Chapter I. Letter to Shareholders

The impact of COVID-19 on the global economy has not subsided in 2021, but it has accelerated the progress of digitalization and created strong demand in fields of application, such as 5G, data centers, and automotive electronics, which has driven continued price hikes of high quality and high-capacity products. Thanks to the collective efforts of all employees, Macronix has become the market leader with its advanced process technology and highest quality, and it has achieved excellent revenue, gross profit, and EPS growth in 2021. Our NOR and NAND Flash revenue increased over 50% compared with 2020, and it drove consolidated revenue to a record high in 2021. We successfully increased our profit margin through strategic adjustments of production capacity and optimization of product portfolio while operating at full capacity. Furthermore, the successful disposal of our 6-inch wafer fab and equipment increased non-operating income, and further improved our profit performance for the year.

The operating performance of 2021 is as follows: consolidated net operating revenue for the year was NT$50.573 billion; annual consolidated gross profit was NT$21.05 billion, while annual gross margin increased 7.9% compared with 2020 to 41.6%; net income after tax was NT$11.963 billion; earnings per share jumped to NT$6.48; cash generated from operating activities was NT$16.116 billion; cash expenditures for investment activities was NT$2.623 billion, with NT$18.565 billion in cash at the end of the period; debt ratio was 39.1%; book value per share rose to NT$25.2; return on equity increased to 29%. The steady growth of our cash flow and book value will continue to increase company value and strengthen our financial position.

Macronix has continuously made improvements through R&D and innovation since it was established, and has secured a crucial position in the world with its outstanding R&D capabilities and patents, while playing a key role in the non-volatile memory market. Our research results were once again recognized by the world and our paper was honored by the International Solid-State Circuits Conference (ISSCC) in 2021. As for patents, in 2021, we have obtained a total of 334 patents in various countries, and by the end of 2021, Macronix has accumulated a total of 8,654 patents worldwide, the amount of patents that Macronix obtained is growing steadily, which provides Macronix with a strong fortress of intellectual property rights and reinforce its leading position in the global non-volatile memory market. Furthermore, we continue to collaborate with major international tech companies to develop advanced memory and analog artificial intelligence technologies and actively developing advanced non-volatile memory technologies and applications, in hopes of providing people with better digital lifestyles.

With regard to process and product development, ROM bit shipments grew quarterly in 2021 and accounted for 27% of our overall revenue that year. As for NOR Flash, our 55nm process continues to account for an increasing percentage and accounted for 58% of density shipment in the fourth quarter of 2021; we will develop the 45nm process and advanced NOR product applications. High-density products of 256Mb and above are accounting for an increasing percentage of NOR Flash revenue each year and has reached 42% as of 2021. Macronix has transitioned to applications that are less affected by cyclical fluctuations so as to reduce the impact of cyclical fluctuations in end demand on overall operations. Our revenue from industry grade, medical, and aerospace high quality applications doubled compared with 2020, showing that high quality and high-capacity applications will become the main source of Macronix's business growth. With regard to NAND Flash, 19nm SLC NAND Flash products accounted for 59% of overall density shipment in the fourth quarter of 2021. New products and new applications are now entering the verification phase and will gradually make Macronix one of the main suppliers of SLC NAND Flash. As for 3D NAND Flash, our 48-layer products have reached high-quality standards and obtained certification from our customers. Mass production of 48-layer 3D NAND Flash products began in the third quarter of 2021 and is expected to contribute to revenue in 2022. We will continue to develop 192-layer stacking technology to meet customers' need and anticipation for high-capacity products.

Artificial intelligence activated the next industrial revolution, and new applications are driving the continued growth of demand on memory. In the future, we will focus on expanding automotive, medical, industrial, 5G, and server applications, which will become the main source of our business growth. Big data and artificial intelligence are highly dependent on data extraction and processing, so the bandwidth of memory storage will become a major challenge. In the future, memory will transform from simple data storage to a part of the calculating function and form a new memory-centric processing framework. This new solution could even combine with logic chips for more diverse applications and thoroughly transform memory from a supporting role to a leading role. Hence, Macronix's development strategy will also transition from memory alone to system applications and from 2D to 3D structures as we actively develop the next generation of memory products. Macronix has always been widely recognized in the industry for its excellent product stability, reliability and for focusing on the development of high quality and large capacity memory with low power consumption. For example, Macronix NOR Flash products have been employed in Low Earth orbit satellites because they can meet the strict temperature requirements of space. We also launched 1.2V NOR Flash products with low power consumption, which conforms to the trend of low carbon applications. Our new generation internet security solution ArmorFlash™ has been employed in new generation automated driving platforms and has been honored with the Taiwan Excellence Award–Gold Award. These achievements show that Macronix has captured the market's attention with its excellent innovation capabilities and is thus able to secure a place in the highly competitive memory market.

As the world turning its attention on ESG (environmental, social, and governance) issues, being the world's leading manufacturer of non-volatile memory, Macronix not only focuses on its business operations, but also sets sustainable development as a target and establishes management procedures and puts this target into practice gradually. Macronix continued to maintain excellent performance in the domestic Corporate Governance Evaluation in 2021 and won the National Occupational Safety and Health Award–the Enterprise Benchmarking Award from the Ministry of Labor, which shows that Macronix has achieved excellent performance in safety and health management, friendly workplace, and corporate social responsibility. With regard to talent cultivation, Macronix actively contributes to society through Macronix Education Foundation, a foundation focuses on science education and fostering scientific innovation capabilities in the younger generation in Taiwan, which was awarded the Social Education Contribution Award from the Ministry of Education. Furthermore, School of Computing, which was donated and established by Macronix, helps the long-term cultivation of interdisciplinary and AI talent in Taiwan then will foster and consolidate the human capital for technological development.

We uphold the business philosophy of "honesty" and resolutely pursue innovation and quality, which enabled us to successfully develop the 3D generation and once again fulfill our commitment to provide customers with the highest quality products and service support. Looking to the future, 3D NAND and advanced NOR production capacity will be important support for Macronix's business growth. Hence, the management team will adopt a stable strategy with a cautious attitude when implementing the 12-inch wafer fab capacity expansion project launched in 2021. We hope that all employees could work together to accelerate the development of next generation key technologies and memory products also actively expand new customers and fields for high-end applications, to allow us to reach new heights and share the achievements of our efforts with employees, shareholders, and customers!

Chairman: Miin Wu

President: C. Y. Lu

Chapter II. Company Overview

I. Date of Establishment

Macronix International Co., Ltd. was founded on December 9, 1989.

II. Company History

(I) Overview

Macronix was founded in Hsinchu Science Park, Taiwan, in 1989, and was the first company to be listed as a Category C technology stock in Taiwan in 1995. Macronix is a leading integrated device manufacturer of non-volatile memory (NVM) in the global market that provides a full range of NOR flash, NAND flash, and ROM products.

With its world-class R&D and manufacturing capabilities, Macronix continues to provide customers with the highest-quality, innovative, and high-performance products for fields of consumption, communication, computing, automotive electronics, networking, and so on. Also, Macronix provides high-end application clients with superior -quality products.

Macronix currently owns one 12-inch wafer fab (FAB 5) and one 8-inch wafer fab (FAB 2). FAB 5 and FAB 2 are for Macronix's own-brand non-volatile memory products. Macronix will carry on developing more technologies and accelerating the implementation of the competitive advantage of its own-brand products, moreover, it will continue to develop new products and strengthen its technologies, quality and service; Macronix strives for its sustainable management and the global competitiveness of Taiwan. Please refer to Milestone of Macronix website (URL: http://www.macronix.com).

(II) Mergers and Acquisitions, Reinvestment in Affiliated Companies, and Reorganization of the Company

1. Implementation of Major Mergers and Acquisitions: None.
2. Reinvestment in Affiliated Companies: Please refer to page 138 to 142 of this annual report for "Summary of Affiliated Companies".
3. Reorganization: None.

(III) Mass Transfer of Equity Which Made or Changed by Directors, Supervisors, or Major Shareholders Who are Holding More than 10% of Outstanding Shares:

None.

(IV) Major Changes of Ownership, Business Management or Operation: None.

(V) Other Major Matters Could Affect Shareholders' Equity and its Impact on the Company: None.

(VI) Milestones

Month/Year	Milestones
Dec. 1989	• Establishment of Macronix International Co., Ltd.
Dec. 1990	• Joint development of Mask ROM with NKK Corporation, Japan
Jan. 1991 Dec.	• Successfully developed the 256Kb and 512Kb EPROM • Revenue exceeded NT$100 million for the first time
May. 1992 Jun. Oct.	• Macronix's Flat Cell patent was granted by USPTO • Successful mass production of FAB 1: monthly production exceeded 5,000 wafers • Launched the first 4Mb Flash Memory in the world
Jun. 1993 Oct.	• Process technology migrated to 0.6um • Signed manufacturing cooperation agreement with TSMC
Jan. 1994 Feb.	• Announced the new product of R3000 RISC CPU • Grand opening of the Creation Building
Mar. 1995 Dec.	• First listed High-Tech company under Category C in Taiwan Stock Exchange ("TSE) • Grand opening of the Testing Plant and Recreation Hall
Mar. 1996 May. Dec.	• Completion of the world first 10/100M bps Ethernet and high-speed Ethernet BRIDGE CONTROLLER development • First Taiwanese company listed in Nasdaq, USA • Yearly revenue exceeded NT$10 billion
Feb. 1997 Mar. May. Sep. Oct.	• Issued the first ECB for approximately US$210 million • Mass production of FAB 2 • Company shares listed at TSE changed from Category C to Category A • Establishment of Investor Relations Office • Signed cooperation memorandum with Matsushita Electric Co., Ltd., Japan
Aug. 1998 Dec.	• Signed joint development agreement of 16Mb XA microcontroller with Philips Semiconductors • Completion of new organization structure for Y2000 challenges
Mar. 1999	• Grand opening of the new Headquarters Building
Feb. 2000 Aug. Dec.	• Jointly developing the world's first single chip solution for 32Mbyte Mask ROM with Infineon • Cooperated with Mitsubishi in mobile memory IC manufacturing • Strategic alliance with Tower Semiconductor Ltd., Israel
Aug. 2001 Dec.	• Establishment of Macronix Education Foundation • NT$300 million donation to National Tsing Hua University for its construction of "Learning Resource Center Building"
Jul. 2002 Oct.	• Grand opening of FAB 3. • Grand opening of Employee Dormitory with Recreation Facilities
May 2003	• Ruling in favor of Macronix against Atmel's US 4419747 patent
Apr. 2004 Jul.	• US$170 million GDR offering listed at Luxembourg • Joint development of the Phase Change Memory Technology with IBM
Mar. 2005 Jun. Nov.	• Mr. Miin Wu was elected as the Chairman of Macronix • Mass production of 150nm 3V Serial Flash products • Capital reduction resolved by the provisional shareholders meeting
Jan. 2006 May. Dec.	• FAB 3 Disposal documents signed • New shares listed at TSE after capital reduction • Five technical papers selected by 2006 International Electron Devices Meeting (IEDM), among which the paper with IBM and Qimonda AG regarding Phase Change Memory was highlighted by IEDM and ISSCC • Mass production of 100nm XtraROM®

Month/Year	Milestones
Jan. 2007	• Spun off four subsidiaries
Jul.	• Dr. C. Y. Lu was appointed as the President of Macronix
Aug.	• Mass production of 75nm XtraROM®
	• Mass production of 130nm 3V Serial Flash products
Oct.	• Macronix's ADR delisted from Nasdaq
	• Frost & Sullivan awarded Macronix with its 2007 Excellence in Research of the Year Award in the Asia Pacific Phase Change Memory Technologies Market
Oct. 2008	• Foundation-Laying Ceremony of Macronix's affiliated company in SuZhou Industrial Park, China was held
	• Mass production of 65nm XtraROM®
May. 2009	• Mass production of 110nm 3V Serial Flash products
Dec.	• Macronix was awarded of National Industrial Safety& Health Awards
Apr. 2010	• Acquisition of FAB 5
Jun.	• Two technical papers were selected by the Symposium on VLSI Technology, and among those the paper regarding 3D VG NAND Flash was selected as one of the 8 highlighted papers
Nov.	• Mass production of 75nm 3V Parallel Flash products
Dec.	• The unveiling ceremony of FAB 5
Feb. 2011	• Mass production of 110nm 1.8V Parallel Flash products
Mar.	• Mr. Miin Wu, Chairman & CEO of Macronix, was awarded with Honorary Doctorate by National Tsing Hua University
July.	• Mr. C. Y. Lu, President of Macronix, was awarded with the 2012 IEEE Frederik Philips Award
Sep.	• Macronix honored with the 2011 National Invention and Creation Award
Nov.	• Macronix was 1st in the ranking of patent strength in Taiwan's semiconductor industry and 18th in the world
Dec.	• Mass production of 75nm 1.8V Serial Flash products
	• Mass production of 75nm 3V NAND Flash products
Jan. 2012	• Mr. C. Y. Lu, President of Macronix was awarded with Special Distinguished Award of Physical Society of Republic of China
	• Mass production of 45 nm XtraROM®
Feb.	• Mass production of 75 nm 1.8V Parallel Flash products
Sep.	• Mass production of 75 nm 3V Serial Flash products
Oct.	• Macronix Received the 13th National Standardization Forward-looking Contribution Award
Apr. 2013	• Opening ceremony of the Macronix Building at National Tsing Hua University
	• Mr. C. Y. Lu, President of Macronix was awarded with Honorary Doctorate by National Chiao Tung University
Jul.	• Mr. C. Y. Lu, President of Macronix was awarded with ITRI Laureate
Dec.	• Mr. C. Y. Lu, President of Macronix was awarded with Presidential Science Prize
	• Macronix Education Foundation was awarded by the Ministry of Education with Outstanding Educational Foundation Award
Feb. 2014	• Mass production of 55 nm 3V Parallel Flash products
May.	• Mass production of 55 nm 3V Serial Flash products
	• Mass production of 36 nm 1.8V/3V NAND Flash products
Jun.	• Mass production of 32 nm XtraROM® products

Month/Year	Milestones
Jun. 2015 Sep. Nov.	• Macronix ranked among the top 5% excellent companies in the first corporate governance evaluation of Listed Companies • 55 nm 1.8V Serial Flash products delivered samples • Mr. C. Y. Lu, President of Macronix was awarded with The World Academy of Sciences (TWAS) Prize in Engineering Sciences
Feb. 2016 Dec.	• Mass production of 55 nm 1.8V Serial Flash products • Mr. Miin Wu, Chairman & CEO of Macronix was awarded with Honorary Doctorate by National Cheng Kung University
May. 2017 Dec.	• Capital reduction plan resolved by the annual shareholders meeting • Mr. C. Y. Lu, President of Macronix, was awarded with the 19th "Outstanding Performance Award in the Field of Management of Technology" of Chinese Society for Management of Technology • Mr. Miin Wu, Chairman & CEO of Macronix, was awarded of Social Education Contribution Awards of the Ministry of Education
Apr. 2018 Jul. Nov.	• Mr. C. Y. Lu, President of Macronix was elected as Fellow of the US National Academy of Inventors • Mr. C. Y. Lu, President of Macronix was elected as Academician of Academia Sinica • Mr. C. Y. Lu, President of Macronix was awarded with Materials Technology Contribution Award of Materials Research Society Taiwan • Mr. Miin Wu, Chairman & CEO of Macronix was awarded with "Country Winner" and "Business Paradigm Entrepreneur" of EY Entrepreneur Of The Year
Feb. 2019 Mar. Dec.	• Mass production of 19 nm 3V NAND Flash products • Donation of NT$420 million to National Cheng Kung University for its construction of "Cheng Kung Innovation Center-MACRONIX Hall" • Mr. C. Y. Lu, President of Macronix was elected as Fellow of The World Academy of Sciences (TWAS) of 2020
May. 2020 Jun. Aug. Nov.	• Mr. Miin Wu, Chairman & CEO of Macronix was awarded with Honorary Doctorate by National Chiao Tung University • Donation of NT$100 million to National Cheng Kung University per year for the next ten years to establish the "School of Computing" • Sample delivery of 75 nm 1.2V Serial Flash products • Sample delivery of 19 nm 1.8V NAND Flash products
May. 2021 June. Jul. Aug. Sep. Oct. Nov.	• Mass production of 75nm 1.2V Serial Flash products • Mass production of 19nm 1.8V NAND Flash products • Donation of NT$30 million to National Yang Ming Chiao Tung University for the establishment of “Ding-Hua Hu Chair Professor” • Donation of NT$30 million to National Tsing Hua University for the establishment of “Chung-Laung Liu Chair Professor” • FAB 1 Asset Transaction Agreement signed • Mass production of 48-Layer 3D NAND Flash products • Mr. Miin Wu, Chairman & CEO of Macronix, was awarded of 2021 Harvard Business Review "Digital Transforming Leader" of Ding-Ge Digital Transformation Award • Mr. Miin Wu, Chairman & CEO of Macronix, was awarded of Professional Medal of Military Service Administration for proactively supporting the Research and Development Substitute Services • Mr. Miin Wu, Chairman & CEO of Macronix, was awarded of the 10th Industrial Technology Research Institute (ITRI) Laureate • Macronix’s ArmorFlash was awarded of 2021 EEAWARDS ASIA Product Awards - Best Memory IC of the Year, and Macronix was awarded of 2021 EEAWARDS ASIA Company Awards - Featured IoV Solution Provider

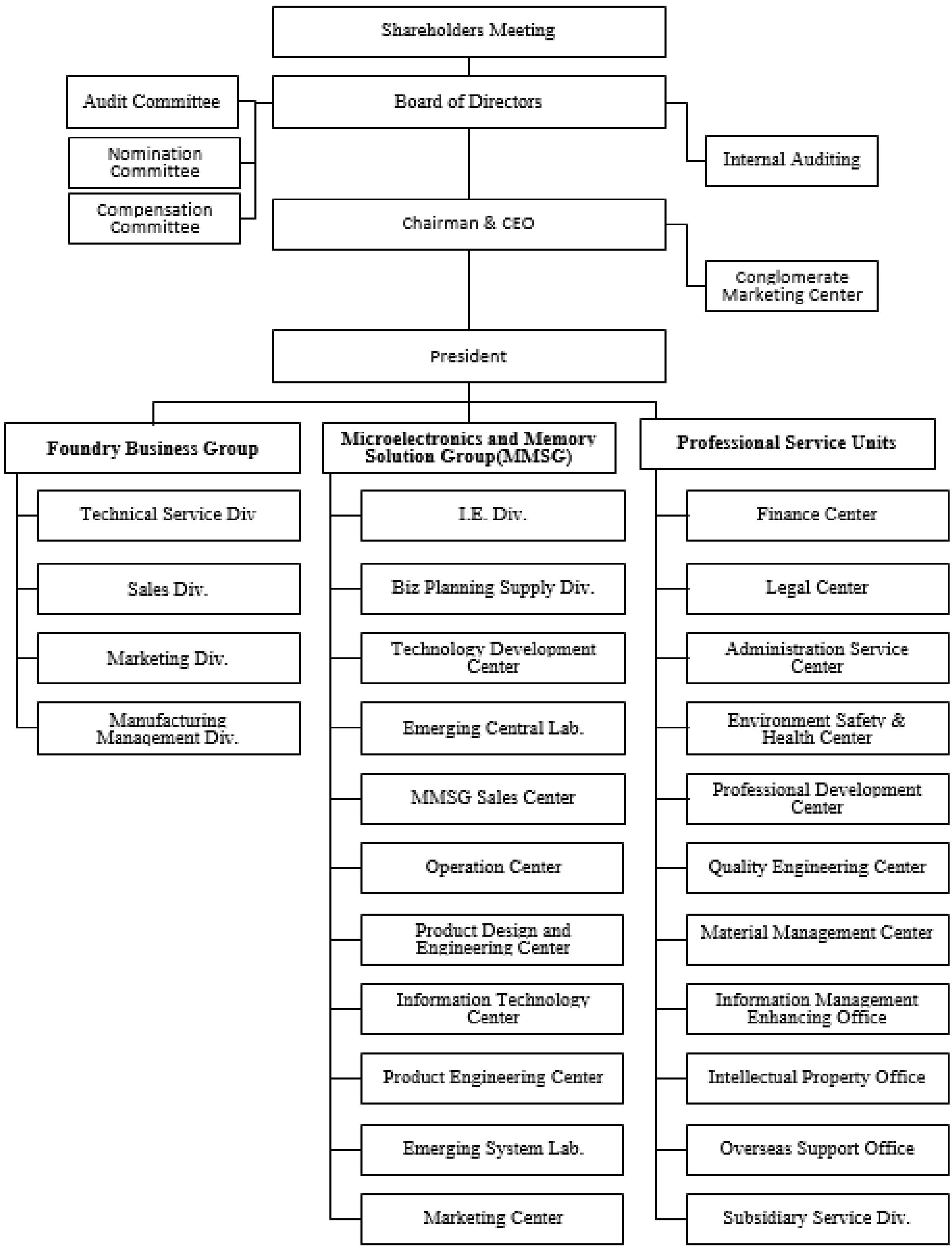
Month/Year	Milestones
Dec.	・Macronix was awarded of 2021 National Occupational Safety and Health Enterprise Benchmarking Award from the Occupational Safety and Health Administration of the Ministry of Labor ・Macronix ArmorFlash Secure Flash Memory was awarded of 2022 Taiwan Excellence Gold Award ・Mr. Miin Wu, Chairman & CEO of Macronix was awarded of "Lifetime Achievement Award" of 19th Global Views Leaders Forum in 2021 ・Macronix Education Foundation was awarded of Social Education Contribution Awards of the Ministry of Education ・Macronix's ArmorFlash Secure Flash Memory was awarded of 2021 Hsinchu Science Park Innovative Product Awards

(VII) CSR Milestones and Other Awards: Please refer to page 64 of this annual report.

Chapter III. Corporate Governance Report

I. Organization

(I) Organizational Structure



(II) Responsibilities and Functions of Major Departments

Unit	Functions
Internal Auditing	Audit in accordance with the annual audit plan and responsible for integrating internal control assessments and recommendations.
Conglomerate Marketing Center	Responsible for developing and planning marketing strategies for Macronix and its affiliated companies.
Microelectronics and Memory Solution Group (MMSG)	Responsible for the market analysis and planning for memory and microelectronics in line with the Macronix's development strategy, as well as the planning and leading related products' operation. It's also responsible for developing and/or control critical advanced technologies for the manufacture of high-quality products to be provided to Macronix's customers.
Foundry Business Group (FBG)	A business unit with marketing, manufacturing, and sales capacity to provide professional wafer foundry services to Macronix or third party.
Professional Service Units	Responsible for finance, legal, administration, environmental safety & health, human resource, quality engineering and/or procurement as well as related services.

II. Profile of Directors, Supervisors, the President, Vice Presidents, Assistant Managers, and Department Directors

(I) Directors and Supervisors

1. Profile of Directors and Supervisors

March 29, 2022

Title	Nationality or Place of registration	Name	Gender/Age	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected: Shares	Shareholding When Elected: %	Shares currently held: Shares	Shares currently held: %	Shares held by spouse and underage children: Shares	Shares held by spouse and underage children: %	Education/ work experience	Other positions at the Company or elsewhere
Chairman	R.O.C	Miin Wu (Note 1)	Male / 73	2019.06.18	3	1989.11.25	12,371,859	0.67%	13,200,809	0.71%	None	None	M.S. degree in Material Science and Engineering from Stanford University	Chairman & CEO of Macronix International Co., Ltd. Director of Macronix America, Inc. Director of Macronix (BVI) Co., Ltd. Representative (Director) of Hui Ying Investment Ltd. Representative (Director) of Run Hong Investment Ltd. Chairman of Mxtran Inc. Director of Feng Huang Can Innovation and Venture Capital (Shares) Co. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd. Executive Director of Macronix Microelectronics (Suzhou) Co., Ltd. Director of Macronix (Asia) Limited Managing Director of Eastern Electronics Co., Ltd.
Director	R.O.C	Chien Hsu Investment Corporation (Note 2)	-	2019.06.18	3	2016.06.16	811,421	0.04%	811,421	0.04%	None	None	None	Director of ZOWIE Technology Corporation Director / supervisor of Homey Consulting Corp.
	R.O.C	Representative: Ching-Yun Li	Female / 79	Omitted	Omitted	2019.07.26	Omitted	Omitted	1,441,799	0.08%	None	None	Public relations from Shih Hsin School of Journalism	Chairman of Champion Investment Corporation Chairman of Chien Hsu Investment Corporation Representative (Chairman) of Homey Consulting Corp.
Director	R.O.C	C. Y. Lu	Male / 71	2019.06.18	3	2003.04.18	2,300,395	0.12%	2,815,766	0.15%	None	None	Ph.D. degree in Physics from Columbia University	President of Macronix International Co., Ltd. Chairman of Macronix America, Inc. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd. Chairman & CEO of Ardentec Corporation Director of Ardentec Korea Co., Ltd. Director of Ardentec Singapore Pte. Ltd. Representative (Chairman) of Sheng Tang Investment Co., Ltd. Representative (Chairman) of Ardentec Semiconductor Co. Ltd. Representative (Chairman) of Giga Solution Tech. Co., Ltd. Independent Director of Hong Tai Electric Industrial Co. Ltd. Director of ValuTest Incorporated Director of Valucom Investment Inc. Director of Feng Chia University
Director	R.O.C	Shun Yin Investment Ltd. (Note 3)	-	2019.06.18	3	2004.06.18	22,587,265	1.22%	22,587,265	1.22%	None	None	None	None
	Japan	Former Representative: Shigeki Matsuoka	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
		Representative: Ikuo Yamaguchi	Male / 54	2021.06.30	3	2021.06.30	None	None	None	None	None	None	BS in electronics engineering from Kogakuin University	Director of MegaChips Corporation and Head of the 1st Business Division of ASIC

Title	Nationality or Place of registration	Name	Gender/Age	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected		Shares currently held		Shares held by spouse and underage children		Education/ work experience	Other positions at the Company or elsewhere
							Shares	%	Shares	%	Shares	%		
Director	R.O.C	Cheng-Yi Fang	Male / 80	2019.06.18	3	2001.04.19	353,026	0.02%	353,026	0.02%	129,047	0.01%	B.B.A. degree in Business Administration Department from National Taiwan University	None
Director	R.O.C	Achi Capital Limited (Note4)	-	2019.06.18	3	2010.06.09	902,456	0.05%	902,456	0.05%	None	None	None	Director of Mxtran Inc.
	R.O.C	Representative: Stacey Lee	Female / 62	Omitted	Omitted	2007.06.29	Omitted	Omitted	19,446	0.00%	None	None	Ph.D. degree in Law, University of the Pacific	Representative (Director) of Mxtran Inc. Adjunct Professor of National Chiao Tung University Adjunct Associate Professor of Soochow University
Director	R.O.C	Che-Ho Wei	Male / 75	2019.06.18	3	2016.06.16	None	None	None	None	None	None	Ph. D. degree in electronic engineering from the University of Washington, Seattle, USA.	Director of Taipei Medical University Director of Arcadyan Technology Corporation Director of Unizyx Holding Corporation Independent Director of Sunplus Technology Co., Ltd. Independent Director of Genesis Photonics Inc.
Director	R.O.C	Tom Yiu	Male / 69	2019.06.18	3	1995.06.05	6,557,048	0.35%	6,657,322	0.36%	1,272,084	0.07%	M.S. degree in Electronic Engineering from University of California, Berkeley	Senior V.P. & Chief Marketing Officer of Macronix International Co., Ltd. Director of Macronix America, Inc. Representative (Director) of Mxtran Inc. Director of SiTime Corporation Independent Director of Chipbond Technology Corporation
Director	R.O.C	F. L. Ni	Male / 63	2019.06.18	3	2007.06.29	1,647,732	0.09%	1,983,933	0.11%	340,333	0.02%	M.S. degree in Electronic Engineering from University of Michigan	Vice President of Macronix International Co., Ltd. Chairman of Macronix Europe N.V. Director of Macronix Pte Ltd. Director of Macronix (Hong Kong) Co., Ltd. Director of Wolley Inc.
Director	R.O.C	Hui Ying Investment Ltd. (Note5)	-	2019.06.18	3	2001.04.19	1,956,619	0.11%	1,956,619	0.11%	None	None	None	None
	R.O.C	Representative: Paul Yeh	Male / 65	Omitted	Omitted	2007.07.18	Omitted	Omitted	2,676,174	0.14%	4,985	0.00%	MBA, degree in Business Administration,of National Chengchi University	Vice President of Macronix International Co., Ltd. Director of New Trend Technology Inc. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd. Representative (supervisor) of Mxtran Inc.
Independent Director	R.O.C	Tyzz-Jiun Duh	Male / 62	2019.06.18	3	2019.06.18	None	None	None	No/ne	None	None	Ph.D., Institute of Forestry, National Taiwan University	Independent Director of USI Corporation Independent Director of CHINA DEVELOPMENT FINANCIAL HOLDING CORP. Independent Director of CDIB Capital Group Director of Shinfox Energy Co., Ltd.
Independent Director	R.O.C	Chiang Kao	Male / 69	2019.06.18	3	2007.06.29	None	None	None	None	None	None	Ph.D. degree in Forest Management from Oregon State University	Chair Professor of Department of Industrial and Information Management of National Cheng Kung University
Independent Director	R.O.C	Yan-Kuin Su	Male / 73	2019.06.18	3	2007.06.29	None	None	None	None	None	None	Ph.D. degree in electrical engineering from National Cheng Kung University	Independent Director of Himax Technologies, Inc Independent Director of Epileds Technologies.Inc Independent Director of Universal Cement Corporation Honorary Professor of National Cheng Kung University Professor of Kun Shan University Chief Director of Kun Shan University Green Energy Technology Research Center

Title	Nationality or Place of registration	Name	Gender/Age	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected		Shares currently held		Shares held by spouse and underage children		Education/ work experience	Other positions at the Company or elsewhere
							Shares	%	Shares	%	Shares	%		
Independent Director	R.O.C	John C.F. Chen	Male / 83	2019.06.18	3	2007.06.29	None	None	None	None	None	None	B.S. degree in Accounting & Statistics from National Cheng Kung University	Chairman of Chen Chow Investment Inc. Representative (Director) of Chan Chun Investment Inc. Director of Diwan Investment Inc.

Note 1: Where the chairman and president or equivalent position (the highest-level managerial officer) is the same person, the reasonableness, necessity, and response measures must be disclosed:
Mr. Miin Wu founded Macronix in 1989 and served as its President, who has been elected as the Chairman since 2005 and successfully had Macronix become the global leader in non-volatile memory (NVM)with his breadth of vision and innovative business strategy. In 2019, he was elected as the chairman and CEO of the 11th term of the Board of Directors. Considering that Macronix has four independent directors, and more than half of its directors are non-employees nor managers of Macronix, the independence of the Board of Directors can be ensured. Also, to continue the forward-looking and innovative business philosophy, and to maintain Macronix's worldwide reputation, image, and competitiveness, it is reasonable and necessary to have Chairman Miin Wu continue to serve concurrently as Macronix's highest level manager (CEO) to improve the operational efficiency and decision-making, and further enhance its value.

Note 2: Chien Hsu Investment Co., Ltd. appointed Ms. Ching-Yun Li on July 26, 2019, to attend the 11th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 3: Mr. Ikuo Yamaguchi was reassigned as representative on June 30, 2021 by Shun Yin Investment Ltd.

Note 4: Ms. Stacey Lee was appointed to represent it to attend the 11th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 5: Mr. Paul Yeh was appointed to represent it to attend the 11th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 6: Directors held shares by nominee arrangement: None.

Note 7: Managers or Directors who are spouses or within second-degree relative of consanguinity to the directors: None.

Major Shareholders of Institutional Shareholders

March 29, 2022

Name of institutional shareholder	Major shareholders of institutional shareholders
Chien Hsu Investment Corporation	Ching-Yun Li (46.08%) Champion Investment Corporation (16.56%) Jui-Wen Hu (13.34%) Ting-Chen Hu (13.34%) Chih-To Lee (4.04%) Pao-Yueh Chang (1.94%) Chih-Te Yeh (1.83%) Guang-Hui Chu (1.75%) Hsiu-Chu Lin (0.60%) Mei-Chih Chen (0.52%)
Shun Yin Investment Ltd.	MegaChips Corporation (Japan) (100%)
Achi Capital Limited	Top Harvest Investment Ltd. (Samoa) (100%)
Hui Ying Investment Ltd.	Macronix International Co., Ltd. (100%)

Major Shareholders Who are Institutional Investors and Their Major Shareholders

March 29, 2022

Name of institutional shareholder	Major shareholders of institutional shareholders
Champion Investment Corporation	Ching-Yun Li (21.48%) Jui-Wen Hu (13.09%) Ting-Chen Hu (13.09%) Lin-Fang Li Hu (9.77%) Tsung-Tsan Su (5.98%) Bands Technology Co., Ltd. (5.67%) Hsiu-Tzu Chen (4.71%) Tsung-Shen Chen (4.71%) Chiu-Hua Tsai (4.12%) Chih-Hua Li (2.85%)
MegaChips Corporation (Japan)	The Master Trust Bank of Japan, Ltd. (Trust Account) (11.65%) Shindo Co., Ltd. (6.13%) Shindo and Associates (6.13%) The Bank of New York Mellon 140051 (4.67%) The Bank of New York 133652 (3.65%) Custody Bank of Japan, Ltd. (Trust Account) (3.12%) Masahiro Shindo (2.69%) Ritsuko Shindo (2.65%) Noriko Matsui (2.51%) Mika Aoki (2.44%)
Top Harvest Investment Ltd. (Samoa)	Guemin Lee (100%)
Macronix International Co., Ltd.	Syue-Rong Shen (2.78%) J.P. Morgan Securities Plc (2.16%) Mitsubishi UFJ Morgan Stanley Securities Co. Ltd.-Equity Trading Division (Proprietary Trading Desk) For Tri-Party SBL Trading (1.73%) Cathay Life Insurance (1.56%) Vanguard Emerging Markets Stock Index Fund A Series of Vanguard International Equity Index Funds (1.40%) JPMorgan Chase Bank N.A. Taipei Branch in Custody for Vanguard Total International Stock Index Fund A Series of Vanguard Star Funds (1.25%) The New Labor Pension Fund (1.24%) Shun Yin Investment Ltd. (1.22%) Robeco Capital Growth Funds (1.03%) Nomura International Plc (1.01%)

2. Disclosure of the Professional Qualifications of Directors and Supervisors and the Independence of Independent Directors

Criteria / Name	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Miin Wu	Chairman Miin Wu is the founder of Macronix, Before that, Mr. Wu served in several semiconductor companies, such as VLSI Technology Inc., Intel Corp., Rockwell International, and Siliconix Inc. He is currently the chairman and CEO of Macronix and the chairman of Mxtran Inc., a subsidiary of Macronix. He possesses over 30-year experience in the field of semiconductors and backgrounds in industry technology and marketing. Mr. Miin Wu graduated with an MS in Material Science and Engineering from Stanford University, and has received many honors, such as an honorary doctorate from National Chiao Tung University, an honorary doctorate from National Cheng Kung University, an honorary doctorate from National Tsing Hua University, Outstanding Alumni Awards from Taichung Municipal Taichung First Senior High School and National Cheng Kung University, the Golden Merchants Award from the General Chamber of Commerce of R.O.C., the Technology Management Award from the Chinese Society for Management of Technology, the Professor Wen-Zen Shen Memorial Award from Taiwan IC Design Society, the Society Education Contribution Award from the Ministry of Education, the EY Entrepreneur of the Year Award and the Business Paradigm Entrepreneur of the Year from EY Entrepreneur of the Year, the Leader of Digital Transformation from Harvard Business Review, the ITRI Laureate, the Life Achievement Award from Global Views Leaders Forum.	1. Concurrently serves as the CEO of Macronix and a director with managerial status. 2. Concurrently serves as directors of the subsidiaries of Macronix. 3. Serves as directors of companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraphs 5 and 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 4. Except for 1, 2, and 3, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies."	0

Criteria / Name	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Chien Hsu Investment Corporation (Note 1) Representative: Ching-Yun Li	Director Ching-Yun Li graduated from the Department of Public Relations, Shih Hsin University. She is currently the chairman and the appointed representative of Chien Hsu Investment Corporation. She also serves as the chairman of Champion Investment Corporation, and the appointed representative of Homey Consulting Corp., who specializes in public relations.	1. Serves as appointed representative of the legal entity elected as the juridical persons that are director of Macronix. 2. Serves as director of companies that have a specific relationship with Macronix, according to Article 3, Paragraph 1, Subparagraph 5 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 3. Except for 1 and 2, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies."	0

Name / Criteria	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
C. Y. Lu	Director C. Y. Lu has a Ph.D. degree in Physics from Columbia University, and was previously the president of Vanguard International Semiconductor Corporation; who has backgrounds in industry technology, education, and marketing. Mr. Lu has worked as a professor at National Chiao Tung University and participating in research of the Bell Labs. He has also served as the deputy director of the Electronics Research & Service Organization (ERSO), Industrial Technology Research Institute (ITRI) and was responsible for the Submicron Project of the Ministry of Economic Affairs, in which successfully developed the first 8-inch high density DRAM/SRAM manufacturing technology in Taiwan. He is currently the president of Macronix and the chairman and CEO of Ardentec Technology Inc. Mr. Lu has been fellows of the Institute of Electrical and Electronics Engineers (IEEE), the American Physical Society (APS), and the Chinese Society for Management of Technology. Mr. Lu has received many honors, such as the 2012 IEEE Frederik Philips Award, the IEEE Millennium Medal, the National Science and Technology Medal from the Executive Yuan, the Outstanding Research Award from Pan Wen Yuan Foundation, the Special Contribution Award from the Physical Society of Taiwan, the Golden Merchants Award from the General Chamber of Commerce of R.O.C., the Outstanding Alumni Award from National Taiwan University, an honorary Doctorate from National Chiao Tung University, the ITRI Laureate, the Presidential Science Prize from the Ministry of Science and Technology, and the Engineering Sciences Award from the World Academy of Sciences (TWAS), the Technology Management Award from the Chinese Society for Management of Technology, a fellow of the National Academy of Inventors, an academician of Academia Sinica, the Materials Technology Contribution Award from the Materials Research Society-Taiwan (MRS-T), and a Fellow of the World Academy of Sciences (TWAS).	1.Serves as the president of Macronix and a director with the status of a managerial officer. 2.Concurrently serves as directors of the subsidiaries of Macronix. 3.Serves as directors of companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 4.Except for 1, 2, and 3, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	1

Criteria / Name	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Shun Yin Investment Ltd. (Note 2) Former Representative: Shigeki Matsuoka	Omitted	Omitted	Omitted
Representative: Ikuo Yamaguchi	Director Ikuo Yamaguchi graduated with a BS in Electronics Engineering from Kogakuin University and has a background in industry technology. Mr. Yamaguchi is currently the appointed representative of Shun Yin Investment Ltd., the elected director of Macronix and invested by MegaChips Corporation. He is also a director of MegaChips Corporation and the head of the 1st Business Division of ASIC.	1. A corporate shareholder who holds more than 1% of Macronix's outstanding shares, and is one of the top ten major shareholders. 2. Serves as the representative appointed by the corporate director of Macronix. 3. Serves as directors of companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 5 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 4. Except for 1, 2, and 3, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	0
Cheng-Yi Fang	Director Cheng-Yi Fang graduated with a BBA from National Taiwan University and has backgrounds in industry technology, financial accounting, and marketing. Mr. Fang has been the deputy chairman of Mercuries & Associates Holding, Ltd. and the president of the Taiwan branch of Avnet Asia Pte Ltd.	Meets the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	0

Name \ Criteria	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Achi Capital Limited (Note 3) Representative: Stacey Lee	Director Stacey Lee graduated with a JD from University of the Pacific and has received attorney licenses by passing Bar Examinations in Taiwan and California respectively; she possesses over 40-year experience in the practice of law and qualifications of a patent attorney and an arbitrator. Mrs. Lee also serve as the consultant of Straits Exchange Foundation, a commissioner of the Trade Commission of the Chinese National Federation of Industries, a consultant to the Domain Name Review Committee of the Institute for Information Industry, Lecturer of the Judicial Officer Training Workshop, legal consultant to the Institute for Information Industry, and consultant to many institutions, including the Taiwan Invention Association, the he VDU Office of the Ministry of Economic Affairs. She also served as the chairlady of the North Area Fellowship and the director of the Council for Industrial and Commercial Development, the chairlady of the Cross-Strait Affair Committee and a committed member of the Board of Council of the Taiwan Patent Attorneys Association. Furthermore, Mrs. Lee served as an associate professor at Tamkang University and Central Police University, and was an international senior partner of Baker McKenzie. Mrs. Lee has almost 30-year teaching experience as a professor or adjunct professor at National Chiao Tung University and an adjunct professor at Soochow University, and specialized in cross border transactions, intellectual property, venture capital, incorporation, corporate financing, securities, mergers and acquisitions, licensing and negotiation, international dispute, as well as financing. Mrs. Lee has been a commentor to TV shows, and has solid backgrounds in industry technology, law, education, and public relations.	1. Serves as appointed representatives of the entity directors of Macronix. 2. Serves as a representative of the companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies”. 3. Except for 1 and 2, the rest all meet the independence requirements in “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies”.	0

Criteria / Name	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Che-Ho Wei	Director Che-Ho Wei graduated with a PhD in electronic engineering from the University of Washington and possesses backgrounds in industry technology and education. He has been the vice president of National Chiao Tung University and is currently the director of Arcadyan Technology Corporation.	1. Serves as directors of a companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 2. Except for 1, the rest all meet the independence requirements set in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	2
Tom Yiu	Director Tom Yiu graduated with an MS in Electrical Engineering from the University of California, Berkeley, and was previously the Company's COO. He is currently the Company's senior vice president and chief marketing officer, and is the representative of the Company's legal entity director and subsidiary Mxtran Inc. Before joining Macronix, Mr. Yiu has worked in many IC design companies in the United States, such as VLSI Technology Inc, and founded Dynasty Technology Inc. As a result, he has acquired vast experience in memory R&D, and design, and marketing, with nearly 100 patents in the United States, Europe, Japan, and Taiwan, etc., and possesses a background in industrial technology and marketing.	1. Serves as the senior vice president and the chief marketing officer of Macronix and a director with the status of a managerial officer. 2. Concurrently serves as directors of the subsidiaries of Macronix. 3. Serves as a director of a company that has a specific relationship with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 4. Except for 1, 2, and 3, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	1

Criteria / Name	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
F. L. Ni	Director F. L. Ni graduated with an MS in Electrical Engineering from the University of Michigan and has a background in industry technology. Mr. Ni is currently the vice president of the Microelectronics and Memory Solution Group of Macronix and the director of Macronix (Hong Kong) Co., Ltd., a subsidiary of Macronix.	1. Serves as the vice president of Macronix and a director with the status of a managerial officer. 2. Concurrently serves as directors of the subsidiaries of Macronix. 3. Serves as directors of companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 4. Except for 1, 2, and 3, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	0

Criteria / Name	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Hui Ying Investment Ltd. (Note 4) Representative: Paul Yeh	Director Paul Yeh graduated with an MBA from National Chengchi University and has backgrounds in industry technology and financial accounting. Mr. Yeh is the vice president of the Financial Center of Macronix and the appointed representative of Hui Ying Investment Ltd., a juridical person that is a director of Macronix. He has over 30-year vast experience in financial management. He was awarded the 13th edition of the Outstanding Financial Manager from the Chinese Professional Management Association in 1995.	1. Serves as the appointed representative director of Macronix. 2. Serves as the vice president of Macronix and a director with the status of a managerial officer. 3. Concurrently serves as directors of the subsidiaries of Macronix. 4. Serves as supervisors of companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 5. Except for 1, 2, 3, and 4, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	0
Tyzz-Jiun Duh	Independent Director Tyzz-Jiun Duh graduated with a PhD in forestry from National Taiwan University and has backgrounds industry technology and education. He has been the Vice Premier of R.O.C., the Minister of the National Development Council, and an adjunct professor at Soochow University. He is currently a consultant of the Taiwan Electrical and Electronic Manufacturers' Association, and possesses a background in industrial technology and education.	Meets all the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	3

Name \ Criteria	Professional Qualifications and Work Experiences (Note 5)	Independence Criteria	Number of Other Public Companies in which Serves Concurrently as an Independent Directors
Chiang Kao	Independent Director Chiang Kao graduated with a PhD in forest management from Oregon State University and has backgrounds in industry technology, financial accounting, and education. He has been the president of National Cheng Kung University and a professor at the Department of Computer Science of Texas State University and is currently a chair professor of the Department of Industrial and Information Management at National Cheng Kung University, and possesses a background in industrial technology, financial accounting, and education.	Meets all the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	0
Yan-Kuin Su	Independent Director Yan-Kuin Su graduated with a PhD in electrical engineering from National Cheng Kung University, and has passed the Civil Service Senior Examination of the Electric Power Section of the Electrical Engineering Division of the Construction Personnel; Mr. Su has backgrounds in industry technology and education. He has been a professor of the Department of Electrical Engineering at National Cheng Kung University and the president of Kun Shan University, also, he has been an academician of the IEEE. Mr. Su is currently an emeritus chair professor at National Cheng Kung University and a chair professor at Kun Shan University.	1. Serves as directors of companies that have specific relationships with Macronix, according to Article 3, Paragraph 1, Subparagraph 7 of "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". 2. Except for 1, the rest all meet the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	1
John C.F. Chen	Independent Director John C. F. Chen graduated with a BBA in accounting and statistics from National Cheng Kung University and has passed the Civil Service Senior Examination of accountants; he has backgrounds in industry technology and financial accounting. He has been the founder and the chairman of Diwan & Company, and is currently the chairman of Qianqiu Investment Co., Ltd.	Meets all the independence requirements in "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies".	0

Note 1: Chien Hsu Investment Co., Ltd. appointed Ms. Ching-Yun Li on July 26, 2019, to attend the 11th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note2: Mr. Ikuo Yamaguchi was reassigned as representative on June 30, 2021 by Shun Yin Investment Ltd.

Note 3: Mrs. Stacey Lee was appointed to represent it to attend the 11th term of the Board of Directors and exercised any and all of a director's rights thereof.

Note 4: Mr. Yeh-Pei Fu was appointed to represent it to attend the 11th term of the Board of Directors and exercised any and all of a director's rights thereof.

Note 5: None of the directors and the appointed representatives appoint by the directors of the legal person has been in or is under any circumstances stated in Article 30 of the Company Act.

3. Diversity and Independence of the Board of Directors

(1) Diversity of the Board of Directors:

Board diversity goals and implementation are as follows:

- The Board of Directors is required to have members with professional knowledge, technology, or experience in, at a minimum, industrial technology, law, and accounting, in which more than half of all directors must have a background or experience in industrial technology, at least 1 director must be a legal expert, and at least 1 director must be an accounting expert.
- The Board of Directors is required to have members of different gender.

The abilities possessed by the Board of Directors as a whole meets the Company's needs for future development and comply with the Board diversity policy. Implementation of the Board diversity policy in 2021 is as follows:

- Over 90% of directors have a background or experience in industrial technology, in addition to that, 1 has a background in law, 4 have a background in accounting, 6 have a background in education, 4 have a background in marketing, and 2 has a background in public relations.
- 2 of the 14 directors are female.

Name	Gender	Professional Background					
		Industrial Technology	Law	Financial Accounting	Education	Marketing	Public Relations
Miin Wu	Male	✓				✓	
Chien Hsu Investment Corporation Representative: Ching-Yun Li	Female						✓
C. Y. Lu	Male	✓			✓	✓	
Shun Yin Investment Ltd. (Note) Former Representative: Shigeki Matsuoka	Male	Omitted					
Representative: Ikuo Yamaguchi	Male	✓					
Cheng-Yi Fang	Male	✓		✓		✓	
Achi Capital Limited Representative: Stacey Lee	Female	✓	✓		✓		✓
Che-Ho Wei	Male	✓			✓		
Tom Yiu	Male	✓				✓	
F. L. Ni	Male	✓					
Hui Ying Investment Ltd. Representative: Paul Yeh	Male	✓		✓			
Tyzz-Jiun Duh	Male	✓			✓		
Chiang Kao	Male	✓		✓	✓		
Yan-Kuin Su	Male	✓			✓		
John C.F. Chen	Male	✓		✓			

Note: Mr. Ikuo Yamaguchi was reassigned as representative on June 30, 2021 by Shun Yin Investment Ltd.

(2) Independence of the Board of Directors

There are 4 independent directors among all the 14 directors, which is 28.57% of the Board of Directors. None of the directors (including independent directors) is spouse or relative within two generations of other directors. Please refer to page 15 of this annual report for the independence of the Board of Directors.

4. Succession Plan for Board Members and Management

(1) Succession Plan for Board Members

The Company's Articles of Incorporation clearly state that the candidate nomination system is used for direction election. Board composition is planned in accordance with the Corporate Governance Principles, Regulations for Director/Supervisor Election, and Nomination Committee Charter, and professionals in industrial technology, law, and accounting are recruited in coordination with the Company's development blueprint and Board diversity policy. Besides irregularly providing directors with continuing education information, the Company regularly schedules directors to take continuing education courses; options include corporate governance, internal control system, and financial reporting responsibility courses. Completion of such courses will continue to improve directors' professional knowledge and skills, and director succession planning and candidates are arranged on this basis.

(2) Succession Plan for Management

Courses for supervisors are offered every year to train managers at all levels and cultivate sufficient managerial talent. Senior executives periodically participate in important cross-departmental business meetings and strategy planning meetings with the president. Discussions during the meetings serve as the basis for establishing the succession team. We also established a talent pool system to examine high-potential talent at any time, and accurately select a succession team.

(II) President, Vice Presidents, Assistant Managers, and Department Directors

March 29, 2022

Title	Nationality	Name	Gender	Date appointed	Shares currently held		Shares held by spouse and underage children		Shares held in the name of others		Education/work experience	Other positions at the Company or elsewhere	Other officer, director or supervisor who is the spouse or a relative within second degree		
					Shares	%	Shares	%	Shares	%			Title	Name	Relation
CEO	R.O.C	Miin Wu (Note 1)	Male	2007.07.30	13,200,809	0.71%	None	None	None	None	M.S. degree in Material Science and Engineering from Stanford University	Director of Macronix America, Inc. Director of Macronix (BVI) Co., Ltd. Representative (Director) of Hui Ying Investment Ltd. Representative (Director) of Run Hong Investment Ltd. Director of Feng Huang Can Innovation and Venture Capital (Shares) Co. Chairman of Mxtran Inc. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd. Executive Director of Macronix Microelectronics (Suzhou) Co., Ltd. Director of Macronix (Asia) Limited Managing Director of Eastern Electronics Co., Ltd.	None	None	None
President	R.O.C	C. Y. Lu	Male	2007.07.30	2,815,766	0.15%	None	None	None	None	Ph.D. degree in Physics from Columbia University	Chairman of Macronix America, Inc. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd. Chairman & CEO of Ardentec Corporation Director of Ardentec Korea Co., Ltd. Director of Ardentec Singapore Pte. Ltd. Representative (Chairman) of Sheng Tang Investment Co., Ltd. Representative (Chairman) of Ardentec Semiconductor Co. Ltd. Representative (Chairman) of Giga Solution Tech. Co., Ltd. Independent Director of Hong Tai Electric Industrial Co., Ltd. Director of ValuTest Incorporated Director of Valucom Investment Inc. Director of Feng Chia University	None	None	None
Senior Vice President & Chief Marketing Officer	R.O.C	Tom Yiu	Male	2007.01.01	6,657,322	0.36%	1,272,084	0.07%	None	None	M.S. degree in Electronic Engineering from University of California, Berkeley	Director of Macronix America, Inc. Representative (Director) of Mxtran Inc. Director of SiTime Corporation Independent Director of Chipbond Technology Corporation	None	None	None
Vice President	R.O.C	F. L. Ni	Male	2006.06.27	1,983,933	0.11%	340,333	0.02%	None	None	M.S. degree in Electronic Engineering from University of Michigan	Chairman of Macronix Europe N.V. Director of Macronix Pte Ltd. Director of Macronix (Hong Kong) Co., Ltd. Director of Wolley Inc.	None	None	None
Vice President	R.O.C	Paul Yeh	Male	2007.10.30	2,676,174	0.14%	4,985	0.00%	None	None	MBA degree in Business Administration, of National Chengchi University	Director of New Trend Technology Inc. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd. Representative (supervisor) of Mxtran Inc.	None	None	None

Title	Nationality	Name	Gender	Date appointed	Shares currently held		Shares held by spouse and underage children		Shares held in the name of others		Education/work experience	Other positions at the Company or elsewhere	Other officer, director or supervisor who is the spouse or a relative within second degree		
					Shares	%	Shares	%	Shares	%			Title	Name	Relation
Vice President	R.O.C	Yen-Hie Chao	Male	2013.05.02	1,556,541	0.08%	35,108	0.00%	None	None	B.S. degree in Materials Science and Engineering of National Tsing Hua University	Representative (Director) of Ardentec Corporation	None	None	None
Vice President	R.O.C	Chun-Hsiung Hung	Male	2015.10.28	520,593	0.03%	2,833	0.00%	None	None	M.S. degree in Electronics Engineering of National Chiao Tung University	None	None	None	None
Vice President	R.O.C	Jui-Kun Chen	Male	2016.12.20	473,040	0.03%	None	None	None	None	M.S. degree in Accounting of National Taiwan University	None	None	None	None
Vice President	R.O.C	Jon-Ten Chung	Male	2018.02.01	676,774	0.04%	158,059	0.01%	None	None	M.S. degree in Economics of University of Arizona	Director of Macronix Pte Ltd. Director of Macronix Europe N.V. Director of Macronix (Hong Kong) Co., Ltd.	None	None	None
Vice President	R.O.C	Kuang-Chao Chen (Note 2)	Male	2022.02.25	861,448	0.05%	1,511	0.00%	None	None	M.S. degree in Chemistry of National Sun Yat-sen University	None	None	None	None
Senior Associate V.P.	R.O.C	Wen-Pin Lu (Note 3)	Male	2022.02.25	380,037	0.02%	None	None	None	None	M.S. degree in Electronic Engineering of National Taiwan University	None	None	None	None
Head of Emerging R&D	R.O.C	Ke-Zhong Wang (Note 4)	Male	2022.02.25	131,534	0.01%	None	None	None	None	PhD in Physics of California Institute of Technology	None	None	None	None
Executive Director	R.O.C	Hsin-Cheng Liu	Male	2020.04.28	58,442	0.00%	None	None	None	None	M.S. degree in Chemical Engineering of National Tsing Hua University	None	None	None	None
Executive Director	R.O.C	Kai-Wen Tu	Male	2020.04.28	68,577	0.00%	None	None	None	None	Ph.D. degree in statistics of National Chiao Tung University	None	None	None	None
Executive Director	R.O.C	Ting-Chang Lin	Male	2020.04.28	95,878	0.01%	None	None	None	None	M.S. degree in Astronomy of National Central University	None	None	None	None

Title	Nationality	Name	Gender	Date appointed	Shares currently held		Shares held by spouse and underage children		Shares held in the name of others		Education/work experience	Other positions at the Company or elsewhere	Other officer, director or supervisor who is the spouse or a relative within second degree		
					Shares	%	Shares	%	Shares	%			Title	Name	Relation
Executive Director	R.O.C	Kun-Lung Chang	Male	2020.04.28	72,253	0.00%	None	None	None	None	M.S. degree in Electronics Engineering of National Chiao Tung University	None	None	None	None
Project Executive Director	R.O.C	Hui-Chi Li	Male	2017.10.11	321,382	0.02%	3,066	0.00%	None	None	M.S. degree in Ceramic Engineering of Alfred University	None	None	None	None

Note 1: Where the chairman and president or equivalent position (the highest level manager) is the same person, the reasonableness, necessity, and response measures must be disclosed:

Mr. Miin Wu founded Macronix in 1989 and served as its President, who has been elected as the Chairman since 2005 and successfully had Macronix become the global leader in non-volatile memory (NVM) with his breadth of vision and innovative business strategy. In 2019, he was elected as the chairman and CEO of the 11th term of the Board of Directors. Considering that Macronix has four independent directors, and more than half of its directors are non-employees nor managers of Macronix, the independence of the Board of Directors can be ensured. Also, to continue the forward-looking and innovative business philosophy, and Macronix's international reputation, image, and competitiveness, it is reasonable and necessary to have Chairman Miin Wu concurrently serve as Macronix's highest level manager (CEO) to improve the operational efficiency and decision-making and further enhance its value for Macronix.

Note 2: Promoted to Vice President on February 25, 2022

Note 3: Promoted to Senior Associate V.P. on February 25, 2022

Note 4: Promoted to Head of Emerging R&D on February 25, 2022

III Remuneration of Directors, Supervisors, President, and Vice Presidents in the Most Recent Fiscal Year

(I) Remuneration of Directors and Independent Directors

December 31, 2021
Unit: NT$ thousands

Title	Name	Remuneration								The Total of Remuneration (A+B+C+D) and the Ratio Between it and Net Income (%)		Relevant Remuneration Received by Directors Who are Also Employees								The Total of Compensation (A+B+C+D+E+F+G) and the Ratio Between it and Net Income (%)		Remuneration received from invested companies other than subsidiaries or the parent company
		Base Compensation (A)		Severance Pay (B) (Note 1)		Directors Compensation(C) (Note 2)		Allowances (D)				Salary, Bonuses, and Allowances (E)		Severance Pay (F) (Note 1)		Employee Compensation (G) (Note 2)						
		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	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			
Chairman	Miin Wu	0	0	0	0	84,677	84,677	120	120	84,797 0.71%	84,797 0.71%	31,003	31,003	580	580	100,000	0	100,000	0	216,380 1.81%	216,380 1.81%	0
Director	Chien Hsu Investment Corporation	0	0	0	0	40,963	40,963	120	120	41,083 0.34%	41,083 0.34%	0	0	0	0	0	0	0	0	41,083 0.34%	41,083 0.34%	0
Director	C. Y. Lu	0	0	0	0	43,713	43,713	120	120	43,833 0.37%	43,833 0.37%	22,138	22,138	580	580	70,000	0	70,000	0	136,551 1.14%	136,551 1.14%	72,576
Director	Shun Yin Investment Ltd. (Note 3) Representative: Ikuo Yamaguchi	0	0	0	0	40,963	40,963	120	120	41,083 0.34%	41,083 0.34%	0	0	0	0	0	0	0	0	41,083 0.34%	41,083 0.34%	0
Director	Cheng-Yi Fang	0	0	0	0	13,655	13,655	120	120	13,775 0.12%	13,775 0.12%	0	0	0	0	0	0	0	0	13,775 0.12%	13,775 0.12%	0
Director	Achi Capital Limited	0	0	0	0	40,963	40,963	120	120	41,083 0.34%	41,083 0.34%	0	0	0	0	0	0	0	0	41,083 0.34%	41,083 0.34%	0
Director	Tom Yiu	0	0	0	0	13,655	13,655	120	120	13,775 0.12%	13,775 0.12%	10,965	10,965	580	580	20,000	0	20,000	0	45,320 0.38%	45,320 0.38%	0
Director	F. L. Ni	0	0	0	0	13,655	13,655	120	120	13,775 0.12%	13,775 0.12%	15,115	15,115	580	580	42,400	0	42,400	0	71,870 0.60%	71,870 0.60%	0
Director	Hui Ying Investment Ltd.	0	0	0	0	13,655	13,655	120	120	13,775 0.12%	13,775 0.12%	0	0	0	0	0	0	0	0	13,775 0.12%	13,775 0.12%	0
Director	Che-Ho Wei	0	0	0	0	13,655	13,655	120	120	13,775 0.12%	13,775 0.12%	0	0	0	0	0	0	0	0	13,775 0.12%	13,775 0.12%	0
Independent Director	Tyzz-Jiun Duh	3,600	3,600	0	0	0	0	120	120	3,720 0.03%	3,720 0.03%	0	0	0	0	0	0	0	0	3,720 0.03%	3,720 0.03%	0
Independent Director	Chiang Kao	3,600	3,600	0	0	0	0	120	120	3,720 0.03%	3,720 0.03%	0	0	0	0	0	0	0	0	3,720 0.03%	3,720 0.03%	0
Independent Director	Yan-Kuin Su	3,600	3,600	0	0	0	0	120	120	3,720 0.03%	3,720 0.03%	0	0	0	0	0	0	0	0	3,720 0.03%	3,720 0.03%	0
Independent Director	John C.F. Chen	3,600	3,600	0	0	0	0	120	120	3,720 0.03%	3,720 0.03%	0	0	0	0	0	0	0	0	3,720 0.03%	3,720 0.03%	0

1. Please describe the policy, system, standard, and structure of remuneration to independent directors, and the correlation between duties, risk, and time input with the amount of remuneration:
   The Board of Directors is authorized to determine the remuneration of independent directors based on participation in the Company's operations, value of contributions, and domestic and overseas industry standards in accordance with the Articles of Incorporation. The independent director’s remuneration is a fixed monthly remuneration and does not participate in the Company’s earnings distribution
2. Other than as disclosed in the above table, the remuneration earned by Directors providing services to the Company and all consolidated entities in the latest fiscal year: None.

Note 1: Estimated amount

Note 2: Proposed amount

Note 3: Mr. Ikuo Yamaguchi was reassigned as representative on June 30, 2021 by Shun Yin Investment Ltd.

Note 4: Explanation of the correlation and rationality of changes in the after tax profit and loss and remuneration.

(1)The Company’s 2020 net profit after tax was NT$5,326,083,000. The net profit for 2021 was NT$11,962,952,000. According to the Articles of Incorporation, bonuses are distributed to Directors and employees as incentive (proposed amount). The Company’s net profit after tax for 2021 increase from 2020, which was in line with the increase in the “Remuneration of Directors” and “Relevant Remuneration Received by Directors Who are Also Employees.”

(2)The Company’s shares distribution is calculated while taking the industry standard, duration of employment for directors (and representatives), and actual participation and contributions into consideration. The remuneration is reasonable.

(II) Remuneration of the President and Vice Presidents

December 31, 2021
Unit: NT$ thousands

<table>
<tr><th rowspan="3">Title</th><th rowspan="3">Name (Note 1)</th><th colspan="2">Salary (A)</th><th colspan="2">Severance Pay (B) (Note 2)</th><th colspan="2">Bonuses and Allowances (C)</th><th colspan="4">Employee Compensation (D) (Note 3)</th><th colspan="2">The Total of Remuneration (A+B+C+D) and the Ratio Between it and Net Income (%)</th><th rowspan="3">Remuneration received from invested companies other than subsidiaries or the parent company</th></tr>
<tr><th rowspan="2">The Company</th><th rowspan="2">Companies in the consolidated financial statements</th><th rowspan="2">The Company</th><th rowspan="2">Companies in the consolidated financial statements</th><th rowspan="2">The Company</th><th rowspan="2">Companies in the consolidated financial statements</th><th colspan="2">The Company</th><th colspan="2">Companies in the consolidated financial statements</th><th rowspan="2">The Company</th><th rowspan="2">Companies in the consolidated financial statements</th></tr>
<tr><th>Cash</th><th>Stock</th><th>Cash</th><th>Stock</th></tr>
<tr><td>CEO</td><td>Miin Wu</td><td rowspan="9">71,945</td><td rowspan="9">71,945</td><td rowspan="9">5,218</td><td rowspan="9">5,218</td><td rowspan="9">70,386</td><td rowspan="9">70,386</td><td rowspan="9">401,800</td><td rowspan="9">0</td><td rowspan="9">401,800</td><td rowspan="9">0</td><td rowspan="9">549,349
4.59%</td><td rowspan="9">549,349
4.59%</td><td rowspan="9">72,576</td></tr>
<tr><td>President</td><td>C. Y. Lu</td></tr>
<tr><td>Senior Vice President & Chief Marketing Officer</td><td>Tom Yiu</td></tr>
<tr><td>Vice President</td><td>F. L. Ni</td></tr>
<tr><td>Vice President</td><td>Paul Yeh</td></tr>
<tr><td>Vice President</td><td>Yen-Hie Chao</td></tr>
<tr><td>Vice President</td><td>Chun-Hsiung Hung</td></tr>
<tr><td>Vice President</td><td>Jui-Kun Chen</td></tr>
<tr><td>Vice President</td><td>Jon-Ten Chung</td></tr>
</table>

Note 1: Current Company managers as of the end of 2021
Note 2: Estimated amount
Note 3: Proposed amount

Range of Remuneration for Presidents and Vice Presidents

Range of Remuneration Paid to Each President and Vice President	Name of President and Vice Presidents	
	The Company	Companies in the consolidated financial statements (Note)
Under 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)		
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)	Tom Yiu / Paul Yeh / Yen-Hie Chao / Jon-Ten Chung	Tom Yiu / Paul Yeh / Yen-Hie Chao / Jon-Ten Chung
NT$50,000,000 (inclusive) – NT$ 100,000,000 (exclusive)	C. Y. Lu / F. L. Ni / Chun-Hsiung Hung / Jui-Kun Chen	F. L. Ni / Chun-Hsiung Hung / Jui-Kun Chen
Over NT$100,000,000	Miin Wu	Miin Wu / C. Y. Lu
Total	9	9

Note: The total amount of A+B+C+D and remuneration received from subsidiaries or the parent company other than invested companies.

(III). Employees Compensation Distributed to Management Team

December 31, 2021
Unit: NT$ thousands

	Title	Name (Note 1)	Stock (Fair Market Value)	Cash (Note 4)	Total	Ratio of Total Amount to Net Income (%)
Managers	CEO	Miin Wu	0	510,200	510,200	4.26%
	President	C. Y. Lu				
	Senior Vice President & Chief Marketing Officer	Tom Yiu				
	Vice President	F. L. Ni				
	Vice President	Paul Yeh				
	Vice President	Yen-Hie Chao				
	Vice President	Chun-Hsiung Hung				
	Vice President	Jui-Kun Chen				
	Vice President	Jon-Ten Chung				
	Vice President	Guang-Chao Chen (Note 2)				
	Senior Associate V.P.	Wen-Bin Lu (Note 3)				
	Executive Director	Hsin-Cheng Liu				
	Executive Director	Kai-Wen Tu				
	Executive Director	Ting-Chang Lin				
	Executive Director	Kun-Lung Chang				
	Project Executive Director	Hui-Ji Li				

Note 1: Current Company managers as of the end of 2021
Note 2: Promoted to Vice President on February 25, 2022
Note 3: Promoted to Associate V.P. on February 25, 2022.
Note 4: Proposed amount

(IV) The Ratio of Total Remuneration Paid by the Company and by All Companies Included in the Consolidated Financial Statements for the Two Most Recent Fiscal Years to Directors, Supervisors, President and Vice Presidents of the Company, to the Net Income as Well as the Policies, Standards, and Portfolios for the Payment of Remuneration, the Procedures for Determining Remuneration, and the Correlation with Risks and Business Performance

1. The ratio of the total remuneration paid by the Company and by all companies included in the consolidated financial statements for the two most recent fiscal years to directors, supervisors, president and vice presidents of the Company, to the net income.

	2020		2021	
	The Company	Companies in the consolidated financial statements	The Company	Companies in the consolidated financial statements
Directors	2.93%	2.93%	2.80%	2.80%
Presidents and Vice Presidents	6.73%	6.73%	4.59%	4.59%

2. The policy, standards and packages of remunerations, the procedures for such decisions and relation to business performance and future risks.
   (1) Remuneration to the Company's directors and managers are distributed in accordance with the Articles of Incorporation and the law, after referring to industry standards in Taiwan and overseas, the length of the tenure of related members, actual participation, and contributions. Remunerations are summarized below:
   - Independent Director: Receives NT$300,000 and travel allowance on a monthly basis regardless of the Company's profit or loss, but does not participate in earning distribution.
   - Non-Independent Director: Calculated and distributed based on the director's (including representatives) performance evaluation items (e.g. attendance in Board meetings and shareholders' meetings and continuing education), length of tenure, actual participation, and contributions in accordance with the Company's Articles of Incorporation and the law, after referring to industry standards in Taiwan and overseas, provided that it does not exceed 2% of profits after deducting accumulated losses.

   (2) Transportation allowance for directors: NT$10,000 per month.
   (3) Compensation for managers: Reviewed and approved by the Compensation Committee after referencing manager performance evaluation items, which include financial indicators (e.g., revenue and EPS) and non-financial indicators (e.g., decision-making ability and performance improvement), and submitted to the Board of Directors for resolution.
   (4) Others: With consideration to future changes in the economic environment, remuneration paid to our management team will be carefully established in accordance with the law, based on business performance and future risks, as well as industry standards in Taiwan and overseas.

IV. Implementation of Corporate Governance

(I) Board of Directors

A total of 7 (A) meetings of the Board of Directors were held in the previous period. The attendance of director and supervisor were as follows:

Title	Name	Attendance in Person (B)	By Proxy	Attendance Rate (%)(B/A) (Note)	Remarks
Chairman	Miin Wu	7	0	100%	
Director	Chien Hsu Investment Corporation Representative: Ching-Yun Li	7	0	100%	Mrs. Ching-Yun Li was appointed on July 26, 2019 to attend the 11th Term of the Board of Directors and authorized to exercise any and all of a director's rights thereof.
Director	C. Y. Lu	7	0	100%	
Director	Shun Yin Investment Ltd. Former Representative: Shigeki Matsuoka	3	0	100%	Mr. Ikuo Yamaguchi was reassigned as representative on June 30, 2021.
	Representative: Ikuo Yamaguchi	4	0	100%	
Director	Cheng-Yi Fang	2	5	29%	
Director	Achi Capital Limited Representative: Stacey Lee	7	0	100%	Mrs. Stacey Lee was appointed to represent it to attend the 11th Term of the Board of Directors and authorized to exercise any and all of a director's rights thereof.
Director	Che-Ho Wei	7	0	100%	
Director	Tom Yiu	7	0	100%	
Director	F. L. Ni	7	0	100%	
Director	Hui Ying Investment Ltd. Representative: Paul Yeh	7	0	100%	Mr. Paul Yeh was the appointed representative to attend the 11th Term of the Board of Directors and authorized to exercise any and all of a director's rights thereof.
Independent Director	Tyzz-Jiun Duh	7	0	100%	
Independent Director	Chiang Kao	7	0	100%	
Independent Director	Yan-Kuin Su	7	0	100%	
Independent Director	John C.F. Chen	7	0	100%	

Other items that shall be recorded:

I. If any of the following circumstances occur to the operation of the Board of Directors, the date of the meeting, session, content of the motion, all independent directors' opinions, and the Company's response to independent directors' opinions should be specified:

(I) Matters referred to in Article 14-3 of the Securities and Exchange Act.

Board of Directors Date/ Term	Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions
2021.01.26 The 11th meeting of the 11th Term of the Board of Directors	Submitted for approval of Year 2021 annual incentive bonus of the Company.	Approved	Not applicable
2021.02.26 The 12th meeting of the 11th Term of the Board of Directors	Approval of fund raising by issuance of new shares, overseas depositary receipts through cash capital increase, and/or the private placement of common shares and/or domestic or overseas convertible bonds.	Approved	Not applicable
2021.04.27 The 13th meeting of the 11th Term of the Board of Directors	Pursuant to the amendments of applicable regulations, it is hereby proposed to amend the Company's Internal Control System for Shareholders Services Process.	Approved	Not applicable
	Submitted for approval of the 2020 employee bonus to be distributed to the managers as defined under the Company Act and/or Securities and Exchange Act ("Company Managers").	Approved	Not applicable
2021.08.05 The 2nd Extraordinary Meeting of the 11th Term of the Board of Directors	Proposal for approval of the Company's 6-inch Fab transaction.	Approved	Not applicable
2021.12.28 The 16th meeting of the 11th Term of the Board of Directors	Submitted for approval of the Company's financial and tax accountants for Year 2022 resolved by the Audit Committee.	Approved	Not applicable
	Submitted for approval of remuneration and expenses of CPAs for Year 2022 resolved by the Audit Committee.	Approved	Not applicable
	Submitted for approval of Year 2022 annual incentive bonus for the Company Managers.	Approved	Not applicable

(II) In addition to the aforementioned matters, other motions resolved by the Board of Directors that are objected to by Independent Directors or expressed reservations and recorded or declared in writing: None.

II. If there is Directors' avoidance of motions in conflicts of interest, the Directors' names, content of the motion, causes of avoiding conflicts of interest, and the voting participation should be specified:

Name of Directors who avoid conflict of interest	Motion	Causes of Avoiding Conflicts of Interest	Voting Participation
Miin Wu, C. Y. Lu, Tom Yiu, F. L. Ni, the representative of Hui Ying Investment, Ltd.: Paul Yeh	Submitted for approval of the 2020 Performance Assessments Report of the Managers.	Related persons	Recusal and no participation in the resolution by proxy
Miin Wu, C. Y. Lu, Tom Yiu, F. L. Ni, the representative of Hui Ying Investment, Ltd.: Paul Yeh	Submitted for approval of Year2021 annual incentive bonus of the Company Managers.	Related persons	Recusal and no participation in the resolution by proxy
Miin Wu, C. Y. Lu, Tom Yiu, F. L. Ni, the representative of Hui Ying Investment, Ltd.: Paul Yeh	Submitted for approval of the 2020 employee bonus to be distributed to the managers as defined under the Company Act and/or the Securities and Exchange Act .	Related persons	Recusal and no participation in the resolution by proxy
Miin Wu, C. Y. Lu, Tom Yiu, F. L. Ni, the representative of Hui Ying Investment, Ltd.: Paul Yeh	Submitted for approval of the 2021 Performance Assessments Report of the Company Managers.	Related persons	Recusal and no participation in the resolution by proxy
Miin Wu, C. Y. Lu, Tom Yiu, F. L. Ni, the representative of Hui Ying Investment, Ltd., Paul Yeh	Submitted for approval of Year 2022 annual incentive bonus of the Company Managers.	Related persons	Recusal and no participation in the resolution by proxy

III. Evaluation of the board of directors:

Assessment cycle	Assessment period	Assessment scope	Assessment method	Assessment content	Evaluation result
Performed once per year	January 1, 2021 to December 31, 2021	Entire Board of Directors	Self-assessment of the board of directors	1. Participation in the Company's Operations 2. Raising the Quality of the Board of Directors' Decisions 3. Composition and Structure of the Board of Directors 4. Election and Continuing Education of Directors	Overall average 4.96 (out of 5)

				5. Internal controls	
Assessment cycle	**Assessment period**	**Assessment scope**	**Assessment method**	**Assessment content**	**Evaluation result**
Performed once per year	January 1, 2021 to December 31, 2021	each member of the board of directors	Self-assessment of each member of the board of directors	1. Understanding of the Company's Objectives and Tasks 2. Directors' Responsibilities 3. Participation in the Company's Operations 4. Management and Communication of Internal Relations 5. Directors' Expertise and Continuing Education 6. Internal controls	Overall average 4.94 (out of 5)
Performed once per year	January 1, 2021 to December 31, 2021	the Audit Committee	Self-assessment of the Audit Committee	1. Participation in the Company's Operations 2. Audit Committee's Responsibilities 3. Raising the Quality of the Audit Committee's Decisions 4. Composition and Membership of the Audit Committee 5. Internal controls	Overall average 5.00 (out of 5)
Performed once per year	January 1, 2021 to December 31, 2021	the Compensation Committee	Self-assessment of the Compensation Committee	1. Participation in the Company's Operations 2. Compensation Committee's Responsibilities 3. Raising the Quality of the Compensation Committee's Decisions 4. Composition and Membership of the Compensation Committee	Overall average 5.00 (out of 5)
Performed once per year	January 1, 2021 to December 31, 2021	the Nomination Committee	Self-assessment of the Nomination Committee	1. Participation in the Company's Operations 2. Nomination Committee's Responsibilities 3. Raising the Quality of the Nomination Committee's Decisions 4. Composition and Membership of the Nomination Committee	Overall average 4.90 (out of 5)

IV. Measures taken to strengthen the functions of the Board (for example, establishing an Audit Committee and enhancing information transparency) for the current year and the most recent year and the implementation:

The Company has functional committees, including the Audit Committees, Compensation Committees and Nomination Committees, to review and resolve proposals within its authority and to submit to the Board of Directors for decision to enhance supervision and strengthen management. Board members continue to participate in continuing education to enhance their professional knowledge as well as communication to improve the Board's performance. In order to encourage the Directors to continue studies, the Company regularly arranges corporate governance courses and provides course information from external institutions for the Directors' reference. Please refer to page 74 of this annual report for the Company's Director training in the most recent year.

Note: A total of 7 meetings were convened by the Board of Directors in the most recent year. Attendance rate (%) is calculated based on the number of meetings convened by the Board of Directors and attendance.

(II) Audit Committee

The Company’s Audit Committee is comprised of four independent directors to carry out supervision under applicable laws and regulations, including ensuring proper statements of the Company's financial reports, engaging or dismissal of auditing CPAs and their independence as well as performance, effective implementation of internal audit, compliance of applicable laws and regulations, and control of the Company’s existing and potential risks. In the most recent year, the following have been duly reviewed and resolved by the Audit Committee:

1. Assessment of the internal control system and efficiency.
2. The offering, issuance, or private placement of equity securities.
3. Engaging and/or dismissal of auditing CPA and the compensation.
4. Annual financial reports.
5. Business report and earnings distribution
6. Transactions of Major Assets

A total of 7 (A) Audit Committee meetings were held in the most recent year. The attendance of the independent directors was as follows:

Title	Name	Attendance in Person (B)	By Proxy	Attendance Rate (%)(B/A)	Remarks
Independent Director	Tyzz-Jiun Duh	7	0	100%	
Independent Director	Chiang Kao	7	0	100%	
Independent Director	Yan-Kuin Su	7	0	100%	
Independent Director	John C.F. Chen	7	0	100%	

Other items that shall be recorded:

I. When one of the following situations has occurred to the operations of the Audit Committee, the convening date, term, and agenda of the Audit Committee, the objections, reservations, and major comments of independent directors, resolution of the Audit Committee, and the Company's response to the comments of the Audit Committee shall be stated:

(I) Items specified in Article 14-5 of the Securities and Exchange Act

Audit Committee Date / Term	Motion	the objections, reservations, and major comments of independent directors	Resolution of the Audit Committee	The Company's response to the comments of the Audit Committee
2021.02.26 The 11th meeting of the 11th Term of the Audit Committee	Year 2020 Financial Statements	None	Unanimously approved by all the members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Approval of fund raising by issuance of new shares, overseas depositary receipts through cash capital increase, and/or the private placement of common shares and/or domestic or overseas convertible bonds.	None	Unanimously approved by all the members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
2021.04.27 The 12th meeting of the 11th Term of the Audit Committee	Pursuant to the amendments of applicable regulations, it is hereby proposed to amend the Company's Internal Control System for Shareholders Services Process.	None	Unanimously approved by all the members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
2021.08.05 The 1st Extraordinary meeting of the 11th Term of the Board of Directors	Proposal for approval of the Company's 6-inch Fab transaction.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
2021.12.28 The 15th meeting of the 11th Term of the Audit Committee	Submitted for approval of appointing the Company's financial and tax accountants for Year 2022, according to the resolution of the Audit Committee.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Submitted for approval of remuneration and expenses of CPAs for Year 2022, according to the resolution of the Audit Committee.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable

(II) Except the items in the preceding issues, other resolutions approved by two-thirds of all Directors but yet to be approved by the Audit Committee: None.

II. Names, content of the motion, cause of the conflict of interest, and participation in the voting of Independent Directors who have abstained from voting for proposals that are considered to present conflicts of interest: None.

III. Communication between Directors and the head of internal audit and CPAs (including important issues, audit methods, and results related to the Company's finance and business):

1. The Company's head of internal audit, in addition to regularly sending various audit reports to independent directors, also attends and reports to the Audit Committee quarterly. The head of internal audit also responds at all times to any questions that the independent directors may have, and the interactions between them were good.
2. CPAs appointed by the Company also attended the Audit Committee quarterly and the meeting of the Board of Directors, where they explained financial/accounting matters to the independent directors, and the interactions between them were good.
3. The head internal audit and CPAs shall contact the independent directors alone at least once per year as well as directly contact independent directors at any times and according to need, and the communication channel between them is unimpeded.

- Summary of communications between the independent directors and the head of internal audit in the most recent fiscal year are as follows:

Audit Committee date	Key points of communication	Results of communication
December 28, 2021	· The 2022 Audit Plan	Full attendance No objections from independent directors

- Summary of communications between the independent directors and CPAs in the most recent fiscal year:

Audit Committee date	Key points of communication	Results of communication
February 26, 2021	· Review results and key review items for the 2020 stand-alone and consolidated financial statements	Full attendance No objections from independent directors

(III) Corporate Governance Implementation Status and Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons

The Company attaches great importance to corporate governance. Not only has it introduced the corporate governance systems in advance by taking overseas norms into consideration, but has also adopted the "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" as its guideline. In 2003, the Company added two independent directors to the Board of Directors in accordance with the US Securities Laws and Regulations. The following year, three Independent Directors were elected. The Company also established an Audit Committee, which was later renamed the Auditing Committee. The Compensation Committee was set up in 2005, with internal auditing being directly subordinate to the Board.

In 2007, the Company adopted the candidate nomination system for the first time for the election of the Board and Supervisors (including three Independent Directors). In June 2009, the Company set up the Audit Committee to replace Supervisors in accordance with Article 14-4 of the Securities and Exchange Act. In January 2019, the "Compensation Committee" was set up in accordance with Article 14-6 of the Securities and Exchange Act. In January 2019, the Company voluntarily set up the "Nomination Committee" to assist the operation of Board.

In 2007 and 2011, the company passed the Taiwan Corporate Governance Association CG6002 and CG6006 evaluations in the corporate governance system respectively and was ranked in the top 5% of all listed companies in the first corporate governance evaluation in 2014. This reaffirms Macronix's implementation and active promotion of corporate governance.

Evaluation Item	Implementation Status			Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
I. Does the company establish and disclose the Corporate Governance Best-Practice Principles" based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies"?	✓		The Company has established the "Corporate Governance Principles" based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and disclosed them on the company website.	None
II. Shareholding structure & shareholders' rights (I) Does the company establish an internal operating procedure to deal with shareholders' suggestions, doubts, disputes, and litigations, and implement based on the procedure?	✓		(I) The Company has established an Investor Relations Office and a legal center. Dedicated personnel are assigned to address issues such as shareholder suggestions, inquiries, and disputes. The legal actions taken by the shareholders are also properly addressed through internal operating procedures, and records are kept for future reference.	None

<table>
<tr><th rowspan="2">Evaluation Item</th><th colspan="3">Implementation Status</th><th rowspan="2">Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Abstract Illustration</th></tr>
<tr><td>(II) Does the company possess the list of its major shareholders as well as the ultimate owners of those shares?</td><td>✓</td><td></td><td>(II) The Company possesses the list of its directors, managers, and shareholders with more than 10% of the shares as well as their major shareholders. Relevant information is routinely disclosed.</td><td>None</td></tr>
<tr><td>(III) Does the company establish and execute the risk management and firewall system within its conglomerate structure?</td><td>✓</td><td></td><td>(III) The Company has established the "Relevant Financial and Business Operations Rules between Relation Parties" and "Regulations of the Supervision and Management of Subsidiaries" to clearly distinguish the assets, finance, and operations between the Company and its affiliated companies, as well as execute the risk management and firewall system.</td><td>None</td></tr>
<tr><td>(IV) Does the company establish internal rules against insiders trading with undisclosed information?</td><td>✓</td><td></td><td>(IV) The Company has established the "Code of Business Conduct and Ethics" and "Preventing Insider Trading" to clearly regulate matters regarding the staff purchasing the Company's securities.</td><td>None</td></tr>
<tr><td>III. Composition and Responsibilities of the Board of Directors
(I) Does the board of directors formulate and implement the diversity policies and the specific administration objectives?</td><td>✓</td><td></td><td>(I) The Company's corporate governance principles stipulate that the composition of the Board of directors shall take diversity into consideration. The authorized Nomination Committee shall also formulate criteria regarding the diversity and independence of the directors' professional knowledge, expertise, experience, and gender. These criteria will be adopted in the search, review, and nomination of director candidates. Please refer to page 24 of this Annual Report for Board diversity policy, objectives and the implementation status.</td><td>None</td></tr>
</table>

Evaluation Item	Implementation Status			Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
(II) Does the company voluntarily establish other functional committees in addition to the Compensation Committee and the Audit Committee?	✓		(II) The Company voluntarily set up the Nomination Committee on January 22, 2019, please refer to page 49 of this Annual Report for the members and operations.	None
(III) Does the Company establish standards and methods for evaluating board performance, conduct annual performance evaluations, submit performance evaluation results to the Board, and use the results as a basis for determining the remuneration and nomination renewal of individual directors?	✓		(III) The Company has established the “Rules for Board of Directors Performance Assessments” to clearly regulate the evaluation cycle, period, scope, execution unit, and procedures. The results were submitted to the Company's Nomination Committee and Board of Directors. Please refer to page 36 of this Annual Report for implementation status in 2021.	None
(IV) Does the company regularly evaluate the independence of CPAs?	✓		(IV) The company engaged a professional accounting firm to conduct financial and tax compliance audits. The Company evaluates the independence of CPAs by the following criteria every year. The engagement shall be duly reviewed by the Audit Committee and approved by the Board of Directors. The evaluation items of independence of CPAs are as follows: 1. Not appointing the same accountant to perform audits for more than seven consecutive years, 2. Obtaining a statement of independence, including but not limited to whether the accountant has direct or indirect significant financial interests in the Company; whether there is kinship or business relations that might have an impact on the independence with the Company's directors, supervisors and managers; whether they concurrently serve as the Company's directors and supervisors during the audit period or hold positions that have direct and significant influence on the audit.	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
IV. Does the TWSE listed company have a suitable number of competent corporate governance personnel, and has it appointed a corporate governance supervisor responsible for corporate governance matters (including but not limited to providing information for directors and supervisors to perform their duties, assisting directors and supervisors with regulatory compliance, handling matters related to Board meetings and shareholders' meetings, and preparing proceedings for Board meetings and shareholders' meetings)?	✓		The Board of Directors has designated the Board Secretariat Department to handle administrative matters for the Board. On March 12th, 2019, the Corporate Governance Officer was also set up to handle corporate governance Officer as per the requests of the directors. The terms of reference are set out below: (1) Responsibilities: 1.Matters related to the meetings of the Board of Directors and shareholders' meetings in accordance with the law; 2.Prepare the minutes of the Board and Shareholders' Meeting; 3.Assist the directors and supervisors in continuous education; 4.Provide information necessary for the Directors and Supervisors; 5.Assist Directors and Supervisors to comply with the laws and regulations; 6. Other matters stipulated in the Articles of Incorporation or the contract. (2) Please refer to page 74 of this annual report for education of corporate governance supervisor in 2021.	None
V. Does the company establish a communication channel and build a designated section on its website for stakeholders (including but not limited to shareholders, employees, customers, and suppliers), as well as handle all the issues they care for in terms of corporate social responsibilities?	✓		The Company understands and responds to the stakeholders' reasonable expectations for the Company, needs, and topics of concern through a number of communication channels, and such communications with stakeholders are reported to the Board of Directors every year. All types of stakeholders can access the Company's contact information and communication channels through the "Contact Us" on the company website, and ask questions or express opinions. Please refer to the Company's ESG Report for the identification method and identity of stakeholders, topics of concern, and response	None

<table>
<tr><th rowspan="2">Evaluation Item</th><th colspan="3">Implementation Status</th><th rowspan="2">Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Abstract Illustration</th></tr>
<tr><td></td><td></td><td></td><td>method.</td><td></td></tr>
<tr><td>VI. Does the company appoint a professional shareholder service agency to deal with shareholder affairs?</td><td></td><td>✓</td><td>The Company has set up an Investor Relations office since 1997 dedicated to handling matters related to the Company's shareholders. All shareholders' equity operations are carried out in accordance with the “Standards for the Internal Control System of the Stock Department", and the same applies to shareholders' meetings.</td><td>Please refer to Implementation Status</td></tr>
<tr><td>VII. Information Disclosure
(I) Does the company have a corporate website to disclose both financial standings and the status of corporate governance?
(II) 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)?
(III)Does the company announce and report annual financial statements within two months after the end of each fiscal year, and announce and report Q1, Q2, and Q3 financial statements, as well as monthly operation results, before the prescribed time limit?</td><td>✓
✓
✓</td><td></td><td>(I) The Company has established a corporate website to disclose information on financial operations and corporate governance.
(II) The Company has established an English website to disclose relevant information and set up dedicated departments for collecting and disclosing company information. Furthermore, to implement the spokesperson system, the Company has designated a spokesperson and a deputy spokesperson for speaking on behalf of the Company. The briefing and procedures of investor conferences are available in the “Investor Relations/Financial Information/Quarterly Results” section of the company website.
(III)The Company announces and reports quarterly financial statements and monthly operation results within the prescribed time limit, and Year 2021 financial statements were announced and reported within two months after the end of the fiscal year.</td><td>None
None
None</td></tr>
<tr><td>VIII. Is there any other important information to facilitate a better understanding of the</td><td>✓</td><td></td><td>1. Status of employee rights and employee wellness: Please refer to the Company's ESG Report.</td><td>None</td></tr>
</table>

Evaluation Item	Implementation Status			Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
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)?			2. Status of risk management policies and risk evaluation: Please refer to (IX) on Page 74 of this annual report for important information that can enhance the 3. Directors' training: The Company arranges training courses for directors annually. Each director also participates in relevant courses organized by external institutions when necessary. All newly elected directors received 12 hours of training in 2021, and all reelected directors also received 6 hours of training. Please refer to page 74 of this annual report for Directors' training records. 4. Directors' Liability Insurance: The Company has taken out liability insurance for Directors and Supervisors since October 15th, 1999. For the status of maintaining the insurance and submission to the Board of Directors, please refer to the Market Observation Post System (MOPS).	
IX. Please describe the improvements your company has made based on the corporate governance evaluation results released by the Corporate Governance Center of Taiwan Stock Exchange in the most recent year, and list priorities and measures for matters that still require improvement. The Corporate Governance Center announced results of the 2020 (the 7th edition) Corporate Governance Evaluation in April, 2021. Macronix ranked top 6-20% among the public companies and top 11-20% among the electronic companies with a market cap of NT$10 billion and above. Improvements on corporate governance in 2021 are as follows: (1) strengthened the mechanism for independent directors to communicate with the chief internal auditor and CPAs exclusively. (2) disclosed the succession plan for board members and important members of management in the annual report. (3) the ESG Report discloses the GHG emissions of Macronix in the past two years. We will continue to improve our corporate governance according to "Corporate Governance 3.0–Sustainable Development Blueprint."				

(IV) Composition, Functional Authority, and Operations of the Compensation Committee

1. Information on Committee Members

December 31, 2021

Title	Criteria / Name	Professional Qualifications and Experience	Independence	Number of Other Public Companies In Which The Member Concurrently As A Member of Their Compensation Committee	Remarks
Independent Director / Convener	Chiang Kao	(Note)	(Note)	0	
Independent Director	Yan-Kuin Su			1	
Independent Director	John C. F. Chen			0	

Note: Please refer to page 15 of this annual report for information on directors and supervisors.

2. Responsibilities
   (1) Establishes and periodically reviews the performance evaluation and policies, system, standards, and structure of the compensations for Directors, supervisors, and managers.
   (2) Periodically evaluates and establishes compensations and benefits for Directors, supervisors, and managers.

3. Implementation Status
   (1) The Company has a Compensation Committee composed of 3 members.
   (2) The term of the current member is from July 23, 2019 to June 17, 2022, the Compensation Committee convened 4 times (A) in the last fiscal year. The qualifications of the members and attendance are as follows:

Title	Name	Attendance in Person (B)	By Proxy	Attendance Rate (%)(B/A)	Remarks
Convener	Chiang Kao	4	0	100%	
Committee Member	Yan-Kuin Su	4	0	100%	
Committee Member	John C. F. Chen	4	0	100%	

Other items that shall be recorded:

I. The main items that discussed in the meetings of the Compensation Committee in the most recent year are as follows

Compensation Committee Date/ Term	Motion	Resolution results of the Compensation Committee	The Company's response to the comments of the Compensation Committee
2021.01.26 The 7th meeting of the 11th Term of the Compensation Committee	Submitted for approval of the raises of the Company Managers in 2021.	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable

Compensation Committee Date/ Term	Motion	Resolution results of the Compensation Committee	The Company's response to the comments of the Compensation Committee
2021.02.26 The 8th meeting of the 11th Term of the Compensation Committee	Submitted for approval of 2020 compensation for employees and directors.	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Submitted for approval of the bonus payments of patents to managers: C.H. Hung, K.C. Chen, and K.L. Chang.		
	Submitted for approval of the bonus payments of R&D to managers: C.H. Hung, R.K. Chen, H.C. Liu, and K.L. Chang.		
2021.04.27 The 9th meeting of the 11th Term of the Compensation Committee	Submitted for approval of the directors' compensation in 2020.	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Submitted for approval of the 2020 employee bonus to be distributed to the managers as defined under Company Law and/or Securities and Exchanged Act.		
2021.12.28 The 10th meeting of the 11th Term of the Compensation Committee	Submitted for approval of the salary adjustment for employees in 2022.	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Submitted for approval of the incentive bonus for the managers in 2022.		

II. If the Board of Directors chooses not to adopt or revise recommendations proposed by the Compensation Committee, the date of the meeting, term, agenda, resolution results, and the Company's response to the comments provided by the Salary and Compensation Committee shall be described (if the compensation passed by the Board of Directors is higher that recommended by the Compensation Committee, the difference and reason shall be described): None.

III. For the decisions made by the Compensation Committee, if there are documented records of members who veto or withhold from expressing their opinions, the date, term, agenda, all members' comments, and the measures for handling these comments shall be elaborated: None.

(V) Information on the Members and the Operation of the Nomination Committee

1. Qualifications and Duties

The Nomination Committee is comprised of 3 to 5 directors, in which more than half shall be the independent directors. With authorization from the board of directors, the Nomination Committee will faithfully perform the following duties with a duty of care and then submit them to the Board of Directors for discussions:

(1) Formulate the standards for directors and senior executives, such as specialized knowledge, skills, experience, and gender. As well as searching, reviewing, and nominating directors and senior executive candidates.

(2) Establish and develop organizational structure of the Board of Directors and various committees. Evaluate the performance of the Board of Directors, various committees, directors, senior executives, and the independence of independent directors.

(3) Establish and periodically review the continuing education plan of directors and succession plan of directors and senior executives.

(4) Other matters entrusted to the committee by resolution of the Board of Directors.

2. Professional Qualifications, Experience and the Operation

(1) The Nomination Committee is comprised of 3 members, including the chairman: Miin Wu and independent directors: Chiang Kao and Yan-Kuin Su. An independent director is chair in meeting of the Nomination Committee.

(2) The term of the incumbent member is from July 23, 2019 to June 17, 2022. The Nomination Committee convened 5 meetings (A) in the most recent year. The professional qualifications and experience of the members, and the attendances and motions that discussed in the meetings are as follows:

Title	Name	Professional Qualifications and Experience	Attendance in Person (B)	By Proxy	Attendance Rate (%) (B/A)	Remarks
Convener	Miin Wu	Note	5	0	100%	
Committee Member	Chiang Kao		5	0	100%	
Committee Member	Yan-Kuin Su		4	1	80%	

Other items that shall be recorded:
The main items that discussed in the meetings of Compensation Committee in the most recent year are as follows

Nomination Committee Date/ Term	Motion	Nomination Committee's Opinions or Objections	Resolution results of the Nomination Committee	The Company's Response to the Comments of the Nomination Committee
2021.01.26 The 6th meeting of the 11th Term of the Nomination Committee	Propose the 2021 advanced study plan of the directors.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Submitted for the approval of 2020 Performance Assessments Report of the Managers.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable

Nomination Committee Date/ Term	Motion	Nomination Committee’s Opinions or Objections	Resolution Results of the Nomination Committee	The Company's Response to the Comments of the Nomination Committee
2021.02.26 The 7th meeting of the 11th Term of the Nomination Committee	Submitted for the approval of 2020 Performance Assessments Report of the Board of Directors.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
2021.07.27 The 8th meeting of the 11th Term of the Nomination Committee	Propose the assessment units and methods of the Company’s 2021 Board of Directors Performance Assessments.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
2021.10.26 The 9th meeting of the 11th Term of the Nomination Committee	2021 "Board of Directors Performance Evaluation" self-evaluation questionnaire.	None	Unanimously approved by all members attending the meeting.	Not applicable
2021.12.28 The 10th meeting of the 11th Term of the Nomination Committee	Propose the 2022 advanced study plan of the directors.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable
	Submitted for the approval of 2021 Performance Assessments Report of the Managers.	None	Unanimously approved by all members attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable

Note: Please refer to page 15 of this annual report for information on directors and supervisors.

(VI) The Implementation Status of the Company's Promotion of Sustainable Development, and differences between it and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
I. Has the company established the governance framework for sustainable development and established a fully (or partially) dedicated sustainable development unit? Does the Board of Directors authorize the senior management to handle such matters under its supervision?	✓		The Environment, Safety and Health Center, the Administration Service Center, and the Professional Development Center with managers as leaders are promoting the ESG work in collaboration with all the units. For the ESR purpose, every year, the corporate social responsibility management system is under continuous improvement by both internal and external audits. The audit results are reviewed by the management to ensure continuous effectiveness of the management system. ESG and CSR related issues and the performance management were reported in the meetings of the Board of Directors each year. In compliance with the requirements of government regulations, we planned to rename the CSR related organization “Sustainable Development Committee” and formulate policies for it and report its performance to the Board of Directors by the end of each year.	None
II. Does the company assess ESG risks associated with its operations based on the principle of materiality, and establish related risk management policies or strategies?	✓		The ESG strategy and risk assessment of the company, including all sites of the company, are in compliance with the GRI (Global Reporting Initiative) Standards. The materiality assessment is determined by how much attention the stakeholders pay and how serious the influence will be on the Company’s operations, and	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			those issues will be managed and responded after being sorted by the materiality. The ESG risks are identified every year, and the high-risk items will be managed. We have formed the TCFD (Task Force on Climate-related Financial Disclosures) Group in response to the impact of climate change on the operation of the company, and the group will propose effective strategies for the risk of climate change. Please refer to the ESG Report of our company.	
III. Environmental issues (I) Has the Company established a suitable environmental management system based on the characteristics of the industry?	✓		(I) The company established and passed the ISO 14001 Environmental Management System certification in 1997. In 2007, the IECQ QC 080000 Hazardous Substance Process Management System was established and passed to promote environmental management on both the operational and product aspects.	None
(II) Is the Company committed to improving the efficiency of various resources and utilizing renewable materials to reduce the environmental impact?	✓		(II) The Company continues to engage in energy conservation and carbon reduction by purchasing products with green and eco-friendly labels. The Company has spared no effort in improving resource efficiency and producing green products to reduce the environmental impact of its operations and enhance corporate competitiveness.	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
(III) Does the company evaluate potential risks and opportunities brought by climate change, and take response measures to climate-related issues?	✓		(III) We have conducted evaluations of the short-term, mid-term, and long-term based on our current capabilities and commitment to the environment. Semiconductor processes continue to emit greenhouse gas and use large amounts of power. Hence, we have begun to plan and manage green electricity management and greenhouse gas reduction mechanisms in response to short-term regulatory impact. We have evaluated the possibility of installing renewable energy devices and local scrubbers in order to reduce fluorinated greenhouse gas emissions. Despite there not being any external requirements, we made the devices mandatory for new production lines in hopes of lowering the main factor that causes climate change. We have already started to install solar PV devices on the rooftops of our existing buildings and install local scrubbers to reduce the emission of fluorinated greenhouse gas in the hope that the main factor of climate change could be reduced in the short term. Internal and external climate risks and opportunities are jointly reviewed by the TCFD framework to determine the management of the impacts, and quantify the financial impact of material risks and opportunities with scenario-based analysis. Macronix will face transformation risk that will directly impact operating costs in the short, mid, and long term.	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			Hence, we actively track international trends and regulatory developments, and ensure that our climate management is 100% in compliance with government laws. For green energy management, we are considering installing solar panels and formulating a green energy purchasing policy. For technology transformation, we are actively purchasing low-carbon new process machinery to lower the carbon emission of products and produce low-carbon products that meet the expectations of our customers to enhance our competitiveness for sustainability. The long-term risks are establishing a weather forecast and refrigerating machine optimization mechanism, replacing machinery with more efficient machinery, and requiring a 2nd source for suppliers that are assessed to be high risk.	
(IV) Does the company compile statistics of greenhouse gas emissions, water use, and total weight of waste in the past two years, and does it establish policies for energy conservation & carbon reduction, greenhouse gas emission reduction, water use reduction, and other waste management?	✓		(IV) Macronix cooperates with the Environmental Protection Administration's annual inspection of GHG emissions and files reports accordingly. The Company set the policy of energy conservation and carbon reduction in its ISO 14001 Environmental Management System, and promotes water conservation, waste reduction, and waste recycling and reuse based on the Macronix EHS policy and CSR management approach. We compiled a GHG inventory for all plants, excluding the subsidiaries, according to ISO 14064-1 and domestic	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			environmental protection laws and regulations, and the GHG inventory was verified by a third party. A total of 7 types of GHG was verified, including carbon dioxide, methane, nitrous oxide, HFCs, PFCs, sulfur hexafluoride, and nitrogen trifluoride. Statistics of GHG emissions in 2020 and 2021 are as follows:	

Item	Unit	2020	2021
Scope 1	tonCO2e	174,863.8816	148,853.6200
Scope 2		268,119.2733	256,991.0941
Scope 3		181,011.1129	325,464.5601
Intensity	tonCO2e/Per NT$1 million in revenue	11.1	8.0

Remark:

1. An external inspection of 2021 data will be conducted from March to April in 2022
2. FAB 1 is counted up to September 1, 2021, and the ownership was subsequently transferred.
3. With consideration to the direct association with operations, intensity is not included in Scope 3.

The Company’s GHG reduction policy is listed in the EHS policy and sets out from the perspective of hazard prevention to

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			implement hazard identification, risk assessment, environmental impact analysis, hazardous sources control, implementation of energy conservation, carbon reduction, greenhouse gas reduction, water conservation, and waste reduction. Since plants were established in different years, we set 2011 as the inspection baseline year for the GHG inventory, and emission was determined to be 491,861.29 tonCO2e after third party verification. The reduction goal is ≧1% per year and will be adjusted according to government laws and regulations, customer needs, and international trends. Carbon reduction measures implemented in response to climate change include but is not limited to: 1.Compiling a greenhouse gas inventory every year to understand changes in emissions from plants. 2.Managing PFCs emissions, which has high GHG potential, every month and reviewing emissions quarterly. 3.Evaluating the feasibility of carbon reduction measures and continuing to encourage energy conservation and carbon reduction plans, managing the quarterly progress of projects using the EHS goal planning system, and summarizing the results of energy conservation plans each year. 4.Evaluating participation in projects of the Environmental Protection Administration and making an effort to obtain carbon reduction quota. We have currently passed one offset project of	

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			the Environmental Protection Administration, and the machinery in the project are periodically monitored to ensure carbon reduction effectiveness. The project's carbon reduction potential is approximately 11,821 tonCO2e. 5.Evaluating the feasibility of purchasing and installing renewable energy devices; solar PV devices with installed capacity of approximately 400 kW will be installed on the rooftop of some facilities by the end of 2023, and is expected to generate 500,000 kWh of green electricity each year after completion, which will be equivalent to reduce carbon emissions by 250 tonCO2e per year. GHG emissions in 2020 and 2021 decreased by 10% and 18% respectively compared to the baseline year, and both reached the goal that was set. Macronix sets annual goals for water consumption and waste generation, and conducts quarterly reviews to verify that operations are on track to achieving the goals: The water consumption data and water balance chart submitted to the Science Park Bureau each month are used to regularly track and manage the usage data of water resources, and conduct risk assessment and management. Our water consumption was 2,887 million liters in 2021, and 84.7% of process water was recycled; our goal is to maintain process water recycling rate at ≧84.7% in 2022. Furthermore, we reduced our water consumption of FAB 5 through process	

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			water recycling, installation of water saving devices, and improvement of pipelines. These measures are expected to reduce water consumption per wafer by 9.357%. Our internal units also monitor the process water recycling rate on a daily basis through wastewater recycling technology and the SCADA system. We set up a rainwater harvesting tank at our head office and store rainwater in the water tower. The water is then used to water plants and flush toilets. We are continuing to actively develop a water resource recycling strategy to achieve the water conservation and increase the efficiency of water use. As for waste reduction, we compile statistics of waste storage, generation, and clearance on a monthly basis to determine the generation of waste in our plants. We reduce waste by cutting down the consumption of materials through the joint efforts of engineering departments based on a feasible reduction plan. As for improving waste recycling and reuse, prior to waste disposal, we verify if the way contractors process the waste is appropriate, giving priority to reuse. We also audit waste treatment contractors on an annual basis with an emphasis on if waste is properly cleared in the treatment process. We set the goal in 2019 to maintain waste recycling and reuse rate ≧ 88%. We generated nearly 11,428 metric tons of waste in 2021. General waste and hazardous waste are mainly recycled and reused with a recycling/reuse rate reaching 94% (general waste) and 99% (hazardous waste), and overall recycling/reuse rate	

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			reaching 97.2%; our goal is to maintain recycling/reuse rate ≧ 94% in 2022.We hope to reduce the environmental load caused by production through vendor selection, auditing, and self-management measures.	
IV. Social issues (I) Has the Company formulated management policies and procedures in accordance with relevant laws and regulations as well as the International Bill of Human Rights?	✓		(I) The Company's management rules are superior to the Labor Standards Act. Similarly, the international social responsibility standard SA 8000 and RBA Code of Conducts are the Company's basic requirements. The Company's corporate social responsibility policy, HR compilation and procedures not only satisfy the legal requirements but also take employee rights and interests into consideration. Regular reviews are conducted to achieve continuous improvement.	None
(II) Does the company have reasonable employee benefit measures (including salaries, leave, and other benefits), and do business performance or results reflect on employee salaries?	✓		(II) The Company has established and implemented reasonable employee benefit measures; please refer to V. Labor/Management Relations on page 109 of this Annual Report. The Company's performance is reflected by the employees' and directors' salaries; please refer to (VIII) Remuneration of employees, Directors and Supervisors on page 94 of this Annual Report.	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
(III) Has the Company provided employees with a safe and healthy working environment, and routinely implemented safety and health education for employees?	✓		(III) The Company has established a safety and healthy work environment that is better than other company in the same sector based on the ideal of providing a warm and happy environment for employee's growth. The Company provides comprehensive training for the employees, which has received recognition from the competent authority, including the National Work Safety Award from the Executive Yuan, Contribution to Work Opportunity Creation from the Ministry of Economic Affairs, and the Excellent Employee Assistance Program Award from the Ministry of Labor. 1. The Company's core philosophy is "people orientation". We fully understand the effect of employees' safety and health on our competitiveness, and constantly promote occupational safety and health concepts through training and promotion measures. We work together with employees and vendors to jointly create a healthy, safe, and comfortable working environment, and we received the highest honor, the National Occupational Safety and Health Award-the Enterprise Benchmarking Award, from the Ministry of Labor in 2021. 2. The company continue to implement occupational safety and health management in the entire company and at all plants according to the occupational health and safety management	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			systems certifications ISO 14001, ISO 45001, and CNS 45001. 3. The Company is comprised of nearly 4,000 employees. In 2021, the Company experienced one minor injury and the injury rate (IR) is 0.03%. Following Macronix's Safety and Health Management System, root cause analysis and corrective measures are adopted immediately for occupational injuries, and improvements to software measures, such as management and personal protection, have been made and the effectiveness has been confirmed.	
(IV) Has the Company established an effective career developmental plan for its employees?	✓		(IV) The individual development plan of Macronix employees is closed connected to the performance management system. The Company conducts a performance review once every year to examine individual and organizational performance. Employees can have face face-to-face discussions with their supervisor to develop their personalized development plan based on their performance and the needs for career development, in order to gradually develop various professional knowledge and skills.	None
(V) Does the company comply with relevant regulations and international standards and establish rights protection policies for consumers and clients and complaint procedures in issues like customer health	✓		(V) The Company's products have green product. The products meet the requirements of the European Union's RoHS directive SVHC (Substances of Very High Concern) and ELV (End-of-Life Vehicle). We comply with NDAs with customers and the Personal Data Protection Act to maintain	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
and safety, customer privacy, marketing, and labeling?			customer privacy, and we also established a personal data protection policy, which employees are required to comply with when performing work that may not be disclosed. Labeling on our products comply with the Commodity Labeling Act, this involves clearly labeling all necessary information, such as product datasheets, outer box and all necessary labels with product specifications and manufacturing information. The Company established a dedicated unit for customer complaint handling procedures, and management process to properly handle customer complaints.	
(VI) Does the company have a supplier management policy, require suppliers to comply with regulations on environmental protection, occupational safety and health, and labor rights, and what is its implementation status?	✓		(VI) We proposed due diligence for suppliers in our CSR policy for supplier management. We make suppliers aware of the importance of CSR during annual supplier meetings, and require suppliers to jointly achieve RBA Code of Conducts requirements together with us. We also transformed our expectations for suppliers into actual management requirements on the Code of Conducts Compliance Certificate, which suppliers must sign and submit to us. Responsible units conduct on-site audits or documentary audits of suppliers each year based on their risk, so as to verify whether or not suppliers met our requirements. We also transformed our expectations for suppliers into actual management requirements on the Code of Conducts	None

Items of the Promotion	Implementation Status			Differences Between the Implementation Status and the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies with Reasons
	Yes	No	Summarized Explanation	
			Compliance Certificate (CoC) that shall be signed by suppliers then submitted to us. The CoC requires suppliers to obtain ISO14001 (environmental protection) and ISO45001 (safety) certifications. Responsible units conduct on-site audits or documentary audits of suppliers each year based on their risk to verify whether suppliers met our requirements. Standards are set in the Company's normative documents.	
V. Does the company reference internationally accepted reporting standards or guidelines, and prepare reports that disclose non-financial information of the company, such as ESG reports? Have the reports above obtained assurance from a third-party verification unit?	✓		Macronix began structuring its CSR Report in accordance with the GRI Standards in 2014, and obtained a third-party assurance report that there are no deviations in the CSR Report. Over the years, we have obtained assurance according to AA1000AP(2018) through third party certification companies, such as SGS and BV.	None
VI. If the Company has established corporate social responsibility principles based on "Corporate Social Responsibility Best Practice Principles for TWSE/TPEx Listed Companies", please describe any discrepancy between the principles and their implementation: There was no substantial difference.				
VII. Other important information that will help understand the ESG operations: Relevant information is detailed in the ESG Report of the Company and websites of the Company and the Macronix Education Foundation (http://www.macronix.com).				

CSR Milestones for Macronix

Year	Milestones
2000	• Founded the first "Golden Silicon Award – Semiconductor Design and Application Contest"
2001	• Established the Macronix Education Foundation
2002	• Held The first "Macronix Science Award"
2004	• Awarded as an Excellent Energy Conservation Enterprise by the Bureau of Energy, Ministry of Economic Affairs • Became the first company in the science park to complete the greenhouse inventory and verification • Established the "Macronix Science Award Winners' Club"
2005	• Passed the BSI ISO 14001: 2004 Environmental Management System Certification • Won the 14th Enterprise Environmental Protection Award for four consecutive years
2006	• Achieved RoHS compliance and awarded green product certificates from internationally-renowned companies such as SONY, CANON, and LG
2007	• Obtained verification from the IECQ QC080000 Hazardous Substance Process Management System • Awarded as the "Excellent Enterprise for Voluntary Greenhouse Gas Reduction" by the Industrial Development Bureau, Ministry of Economic Affairs • Certified by the British Standards Institute (BSI)and obtained the "ISO 14064 Greenhouse Gas Inventory and Reduction Certificate" • Obtained the CG6002 Corporate Governance System Assessment Certification from the Corporate Governance Association of the Republic of China
2008	• Became the first semiconductor company in the science park certified by the "SA 8000 Enterprise Social Responsibility Management System" • Donated NT$300 million to Tsinghua University for the new learning resource center, Macronix Hall • The Group donated RMB5 million for the Sichuan Earthquake. • Promoted the "Code of Conduct for Electronic Industry" for the upstream and downstream supply chain partners • Passed the new SGS OHSAS 18001: 2007 certification • Passed the TOSHMS (Taiwan Occupational Safety and Health Management System) certification • Awarded the Green Procurement Award by the Environmental Protection Administration
2009	• Won the 3rd National Work Safety Award • Became a semiconductor company that obtained a quality enterprise certificate • Donated NT$100 million to relieve the damage caused by Typhoon Morakot to Taiwan • Won the "Role Model Award" from 5th Global Views Monthly's CSR Awards
2010	• Won the first prize "Five-Star Award" at the 6th Global Views Monthly's CSR Awards • Won the "Corporate Citizen Award" from the Common Wealth Magazine in 2010 • Increased the donation to the Macronix Hall, Tsinghua University by NT$ 100 million • Awarded the "Contribution to Work Opportunity Creation Award" by the Executive Yuan
2011	• Donated NT$30 million for the aftermath of the 2011 Tohoku earthquake and tsunami • Awarded the "Contribution to Work Opportunity Creation Award" by the Executive Yuan • Received the "Top 100 Brand in Taiwan" award from the Ministry of Economic Affairs • Won the Corporate Citizen Award from the Common Wealth Magazine again • Won the 2011 National Invention Award • Awarded the Corporate Governance System Assessment Certificate by CG 6006 • Awarded as the enterprise for offering an excellent "Employee Assistance Program" by the Council of Labor and Welfare, Executive Yuan

Year	Milestones
2012	• Won the 8th "Corporate Social Responsibility Award" from Global Views Monthly • Won the Corporate Citizen Award from the Common Wealth Magazine again
2013	• Macronix Hall, the new learning resource center of Tsinghua University, was officially put to use • The Macronix Education Foundation was given the Award of Excellence by the Ministry of Education among education foundations
2014	• Hong-chi Wang, the Deputy Head, was chosen as an "Excellent Internal Auditor" by the Internal Audit Committee of the Republic of China • Won the "Balanced Lifestyle" and "Healthy Happy Life" awards from the first work-life balance competition held by the Ministry of Labor
2015	• Received the "Excellent Healthy Workplace" from the Health Promotion Administration, Ministry of Health and Welfare • Ranked in the top 5% in the first corporate governance evaluation of Taiwan Stock Exchange
2016	• The Water Conservation Plant V was awarded the 2016 Water Conservation Excellence Award by the National Water Conservation Agency, the Ministry of Economic Affairs
2017	• Mr. Miin Wu, Chairman & CEO of Macronix was awarded of social Education Contribution Award from the Ministry of Education
2018	• Mr. Miin Wu, Chairman & CEO of Macronix was awarded of "Country Winner" and "Business Paradigm Entrepreneur" of EY's Entrepreneur of the Year
2019	• Company receives the CSR 1st Annual Sustainable Elite Award • Donation of NT$420 million to National Cheng Kung University for its construction of "Cheng Kung Innovation Center-MACRONIX Hall"
2020	• Company receives the 2nd CSR Annual Sustainable Elite Award • Annual donation of NT$100 million to National Cheng Kung University for the next ten years to establish Miin Wu School of Computing
2021	• National Occupational Safety and Health Award-the Enterprise Benchmarking Award • Received the 2021 Air Quality Purification Areas Special Award from the Environmental Protection Administration of the Executive Yuan

(VII) Ethical Corporate Management, and Departure from the Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies, and Reasons Thereof

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
I. Establishment of ethical corporate policies and programs				
(I) Does the Company establish a board-approved ethical corporate management policy and state in its regulations or external correspondence the policies and practices of the ethical corporate management policy? Are the board of directors and the managerial officers committed to fulfilling this commitment?	✓		(I) The Ethical Corporate Management Best Practice Principles and the Code of Conduct and Ethics of the Company are approved by the board of directors and published on the Company website and internal electronic bulletin board, and they require our employees and the employees of subsidiaries included in our consolidated financial statements to exhibit honest and ethical conduct when performing their duties.	None
(II) Does the Company establish mechanisms to assess the risks of unethical conduct and perform regular analysis and assessment of operating activities with higher risks of unethical conduct? Does the Company implement programs to prevent unethical conduct based on the above and ensure the programs cover at least precautionary measures described in Article 7, Paragraph 2 of the Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies?	✓		(II) Macronix developed ethical and social responsibility risk assessments for each department, which are carried out on a regular basis and cover all departments of the Company. The Company has established the " Ethical Corporate Management Principles " and " Code of Business Conduct and Ethics " which prohibit giving and taking bribes, receiving unreasonable gifts, benefits, and other improper benefits (avoiding conflicts of interest); intellectual property rights, confidential information, and personal data infringement; and unfair competition and discrimination. The above regulations apply to all Macronix staff. The promotion is further strengthened for departments with a higher risk of integrity violation. The effectiveness is regularly evaluated. Suppliers must sign the "Code of	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			Conducts Compliance Certificate" which stipulates that supplier shall not conduct any inappropriate commercial behavior such as bribery. Should any incidents occur, the Company can terminate the contract or transactions with the supplier as well as request compensation for any damages.	
(III) Does the Company establish procedures, guidelines of conduct, punishment for violation, and reporting system clearly stated in the mechanisms to prevent unethical conduct? Does the Company enforce the programs effectively and perform regular reviews of the preceding?	✓		(III) The Company has established the "Ethical Corporate Management Principles" and "Code of Business Conduct and Ethics". In addition to promoting these principles to the Directors and managers, the Company has also included relevant educational training and testing for employees as well as taking the employees' implementation status into consideration in the annual performance evaluation. The task force established under the Company's Committee for the Promotion of Ethical Corporate Management Best Practice Principles host regular meetings to establish and enhance relevant measures as well as follow-up procedures of the Ethical Corporate Management based on related laws and regulations, Macronix's Ethical Corporate Management Best Practice Principles, resolutions of the board of directors and functional committees, and procedures of the Committee for the Promotion of Ethical Corporate Management Best Practice Principles.	None
II、Fulfill operations integrity policy				

Evaluation Item	Implementation Status			Deviations from “Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
(I) Does the company evaluate business partners’ ethical records and include ethics-related clauses in business contracts?	✓		(I) Before engaging in business, the company conducts a credit investigation on the potential partner's records to avoid doing business with those who have records of illegal or unethical behavior. The Company has drafted the "Code of Conducts Compliance Certificate" to regulate supplier behavior. Should a supplier engage in improper business conduct such as bribery, the Company may terminate the contract or transaction at any time as well as request damages.	None
(II) Does the Company have a unit under the board of directors to promote ethical corporate management on a full-time basis, report ethical corporate management, and regularly report on the programs for the prevention of unethical conduct (at least once a year) to the board of directors, and oversee the operations thereof?	✓		(II) In addition to establishing functional committees under the board of directors, the Company also established the Committee for the Promotion of Ethical Corporate Management, which should be convened at least one time per year, under the management executives that consists of the president as the chairperson and level-1 managers of all departments as committee members. The committee aims to establish an ethical corporate management policy that will be submitted for discussion during the meeting of the board of directors and report the implementation status of the policy to the board at least once a year in accordance with the law. Macronix’s Committee for the Promotion of Ethical Corporate Management shall hold a meeting at least once a year. The task forces established under the committee should host regular meetings to establish and enhance relevant measures as well as follow-up procedure of the	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			Ethical Corporate Management based on related laws and regulations, Macronix's Ethical Corporate Management Best Practice Principles, resolutions of the board of directors and functional committees, and procedures of the Committee for the Promotion of Ethical Corporate Management Best Practice Principles.	
(III)Does the company establish policies to prevent conflicts of interest and provide appropriate communication channels, and implement it?	✓		(III) The Company has established the "Ethical Corporate Management Principles" and "Code of Business Conduct and Ethics" to prevent conflicts of interests. The Audit Committee has been set up to assist the Board in overseeing the Company's implementation status. Directors shall be excused from voting or discussions during the Board meeting when their interests as individuals or representatives of institutions are in potential conflicts.	None
(IV) Does the Company have an effective accounting system and internal control system set up to facilitate ethical corporate management? Does the internal audit unit follow the results of unethical conduct risk assessments and devise audit plans to audit compliance to the prevention of unethical conduct? Or are the audits commissioned to a CPA?	✓		(IV) The Company's accounting and internal control systems are approved by the Audit Committee and the Board. The internal auditing unit is responsible for auditing the actual operations as well as preparing the draft and report of the audit results for the Audit Committee. The goal is to effectively prevent malpractices and oversee the implementation of the Company's policies and ensure the effectiveness of the internal control system.	None
(V) Does the company provide educational training on corporate social responsibility on a regular basis?	✓		(V) The Company has established the "Ethical Corporate Management Principles " and " Code of	None

Evaluation Item	Implementation Status			Deviations from “Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
			Business Conduct and Ethics " which are published on the Company's website and the internal e-bulletin system. The employees' implementation status is taken into consideration in the annual performance evaluation. To implement ethical corporate management and ethical behavior, the Company arranges courses for directors and online courses for employees every year and organizes educational courses on business secrets, domestic and international data privacy regulations, information security management, and the prevention of insider trading for the purpose of raising the awareness of corporate ethics and compliance. In 2021, there were a total of 18,575 participants, and the number of training hours amounted to 5,736. Suppliers were also invited to the courses to ensure that they understand the regulations of Macronix’s ethical corporate management. To prevent insider trading, regulations and legal liabilities of insider trading are reported to the Board of Directors each year, and online courses are provided to employees and announcements are made in the second half of the year. Contents include insider trading regulations, elements, prohibited conducts, and prevention items, etc. In 2021, a total of 3,665 employees participated in the training, and the number of training hours are 204. In 2021, there were a total of 134 supplier	

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			participations, and the number of training hours received amounted to 536.	
III、Operation of the integrity channel (I) Does the company establish both a reward/punishment system and an integrity hotline? Can the accused be reached by an appropriate person for a follow-up?	✓		(I) The Company has set up a "No Topic is Off Limits" suggestion box and a hotline. The staff can report any fraud they discover to prevent damages to the Company's image caused by dishonest behavior. The Company also enhanced internal and external reporting channels, and set up an audit office hotline (03-5786688 ext. 78119). In addition, the Company established a process for reporting breaches of ethical corporate management. Once a case is reported and accepted for processing, a task force is established based on the nature and type of the case the case is sent to the relevant units for investigation. The board of directors will also be informed.	None
(II) Does the Company establish standard operating procedures for investigating reported cases, the follow-up measures after investigations, and relevant confidentiality mechanisms?	✓		(II) All cases reported through the "No Topic is Off Limits" suggestion box, the reporting hotline, and the audit office hotline will be given file numbers, documented, investigated, handled, and stored as required by the law. Once a case is reported and accepted for processing, a task force is established based on the nature and type of the case, the case is sent to relevant units for investigation. The board of directors will also be informed.	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
(III) Does the company provide proper whistleblower protection?	✓		Macronix takes measures to maintain the confidentiality of previous cases to guarantee the legal rights of members. (III) The management regulations of the "No Topic is Off Limits" suggestion box and the reporting hotline specify that the Company will strictly fulfill its responsibility to maintain the confidentiality of whistleblowers and prohibit retaliation against reports made with good intentions. The Company will impose an appropriate penalty for any violations thereof. Macronix takes measures to maintain the confidentiality of cases reported through the audit office hotline to guarantee the legal rights of members.	None
IV. Strengthening information disclosure (I) Does the company disclose its ethical corporate management policies and the results of its implementation on the company's website and MOPS?	✓		The Company has disclosed the content and relevant effectiveness of the Company's "Code of Business Conduct and Ethics" on the Company's website and MOPS. The content of the "Ethical Corporate Management Principles" is disclosed on the Company's website. Implementation results of the ethical corporate management were reported to the Board of Directors on February 26, 2021. The annual meeting of the Committee for the Promotion of Ethical Corporate Management was convened on February 8, 2021. Completed the Ethical Corporate Management Best Practice Principles related training in 2021.	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/ TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			There was no violation of the Ethical Corporate Management Best Practice Principles in 2021.	

V、If the company has established the ethical corporate management policies based on the Ethical Corporate Management Best-Practice Principles for TWSE/GTSM Listed Companies, please describe any discrepancy between the policies and their implementation: There was no substantial difference.

VI、Other important information to facilitate a better understanding of the company's ethical corporate management policies (e.g., review and amend its policies)

The Company believes that a corporate culture of integrity is a key factor for the sustainable and sound development of the Company. Therefore, the Company has actively complied with the Responsible Business Alliance (RBA) code of conduct.

A supplier conference is held annually to announce and promote important policies and messages of the Company. The Company also conducts regular training courses for its suppliers to ensure their quality. In the future, the Company will continue to pay attention to the development of domestic regulations related to integrity and review relevant Company regulations accordingly in order to enhance the effectiveness of the Company's corporate governance.

(VIII) The Method for Inquiry if the Company has Established Corporate Governance Principles and Relevant Regulations

The Company has set up the "Corporate Governance" section for investors to inquire about the Company's corporate governance information or regulations.

(IX) Other Important Information for Better Understanding of Implementation of Corporate Governance

1. Implementation of risk management policies and risk assessment standards:
   To protect the Company's assets, the health of all employees and the interests of Stakeholder , the Company has implemented risk management in accordance with the “Risk Management Policy” and “Corporate Social Responsibility Policy”, as well as taking out insurance to avoid risks. To ensure the quality of the Company's internal control system, the internal audit regularly and irregularly reviews the implementation status and reports to the Audit Committee and the Board of Directors.
2. Handling of Company's Internal Material Information
   The Company has established the "Code of Business Conduct and Ethics" and "Preventing Insider Trading" and announced that the content on the company website for all directors, managers, and employees to avoid violation.
   Material information disclosure shall be conducted in compliance with the provisions of Regulations Governing the Scope of Material Information and the Means of its Public Disclosure Under Article 157-1, Paragraphs 5 and 6 of the Securities and Exchange Act as well as Taiwan Stock Exchange Corporation Procedures for Verification and Disclosure of Listed Exchange Traded Notes by Securities Firms .The Company has three principles for public disclosure: (1) accurate, complete and timely, (2) information disclosure shall have a solid base, and (3) fair disclosure to ensure that the interests of the Company and all stakeholders are protected.
3. Directors’ training records
   The Directors’ training records for the most recent year are set out in the table below. For further information, please refer to the Market Observation Post System (MOPS).

Title	Name	Date	Organizer	Course Name	Hours
Chairman	Miin Wu	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
Director Representative of the Corporation	Ching-Yun Li	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
Director	C.Y. Lu	2022.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2022.04.29	Taiwan Corporate Governance Association	Business management from CSR to ESG	3
		2022.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
		2022.10.28	Taiwan Corporate	Business strategies and	3

Title	Name	Date	Organizer	Course Name	Hours
			Governance Association	corporate governance in response to the risk of an unsustainable world from the perspective of COVID-19	
Director	Cheng-Yi Fang	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
Director Representative of the Corporation	Ikuo Yamaguchi	2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
		2021.09.24	Accounting Research and Development Foundation	Protection of companies' copyright and legal liability case analysis	3
		2021.11.23	Accounting Research and Development Foundation	New policy of sustainable development, climate governance, and low carbon management	6
Director Representative of the Corporation	Stacey Lee	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.04.23	Taiwan Corporate Governance Association	Business and M&A strategies of Taiwanese businesses in the global economic and political situation	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies – Global trends and impact on Taiwanese businessmen	3
Director	Che-Ho Wei	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.03.15	Taiwan Corporate Governance Association	ESG/CSR and sustainable governance trends in 2021	3
Director	Tom Yiu	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
Director	F. L. Ni	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
Director Representative of the Corporation	Paul Yeh	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3

Title	Name	Date	Organizer	Course Name	Hours
		2021.09.23~ 2021.09.24	Accounting Research and Development Foundation	Continuing Education Course for Chief Accounting Officers of Issuers, Securities Firms, and Securities Exchanges	12
		2021.11.23	Taiwan Business Council for Sustainable Development	Forum on Trends in ESG Risk Management	3
Independent Director	Tyzz-Jiun Duh	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.21	Computer Audit Association	Strengthening the financial sector's "information resilience"–Response to risk and crisis	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
		2021.09.01	Securities & Futures Institute	Value of information security in the post-pandemic era and US-China trade war	3
Independent Director	Chiang Kao	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
Independent Director	Yan-Kuin Su	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
		2021.10.15	Taiwan Stock Exchange	2021 Conference on compliance with insider trading laws	3
Independent Director	John C.F. Chen	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3

4. Education of corporate governance supervisor within the most recent year is shown in the table below:

Date	Organizer	Course Name	Hours
2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies – Global trends and impact on Taiwanese businessmen	3
2021.09.24	Accounting Research and Development Foundation	Continuing Education Course for Chief Accounting Officers of Issuers, Securities Firms, and Securities Exchanges–Analysis of ESG Report Practices Under the Policy of Corporate Governance 3.0	3
2021.11.23	Taiwan Business Council for Sustainable Development	Forum on Trends in ESG Risk Management	3
Total Hours of Education within the most recent year of Appointment			12

5. Manager Training Records

Miin Wu, C. Y. Lu, Tom Yiu, F. L. Ni, and Paul Yeh are also managers of the Company. Please refer to the table above for the training records. Corporate governance training records for other managers and the audit supervisors of the Company in the most recent year are as follows:

Title	Name	Date	Organizer	Course Name	Hours
Vice President	Yen-Hai Chao	2022.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2022.04.29	Taiwan Corporate Governance Association	Business management from CSR to ESG	3
		2022.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
		2022.10.28	Taiwan Corporate Governance Association	Business strategies and corporate governance in response to the risk of an unsustainable world from the perspective of COVID-19	3
Deputy Director of the Auditing Office	Hong-Chi Wang	2021.02.26	Taiwan Institute of Directors	Future trend of AI in digital transformation of companies	3
		2021.07.27	Taiwan Corporate Governance Association	Value and disclosure of the non-financial performance of companies–Global trends and impact on Taiwanese businessmen	3
		2021.08.17	The Institute of Internal Auditors-Chinese Taiwan	How to utilize digital technology, explore and improve operating procedures, and detect corruption–Discussion of auditing practices	6
		2021.12.14	The Institute of Internal Auditors-Chinese Taiwan	Common internal control deficiencies and examples under various operating cycles	6

(X) Implementation of Internal Control System

1. Internal Control System Statement

Macronix International Co., Ltd.
Internal Control System Statement

Date: January 25, 2022

The Company states the following with regard to its internal control system during the period from January 1, 2021 to December 31, 2021, based on the findings of a self-assessment:

(1) The Company is fully aware that establishing, operating, and maintaining an internal control system are the responsibility of its Board of Directors and management. The Company has established such a system aimed at providing reasonable assurance of the achievement of objectives in the effectiveness and efficiency of operations (including profits, performance, and safeguard of asset security), reliability, timeliness, transparency and regulatory compliance of reporting, and compliance with applicable laws, regulation and bylaws.

(2) An internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can provide only reasonable assurance of accomplishing the three goals mentioned above. Furthermore, the effectiveness of an internal control system may change along with changes in environment or circumstances. The internal control system of the Company contains self-monitoring mechanisms, however, and the Company takes corrective actions as soon as a deficiency is identified.

(3) The Company judges the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing the Establishment of Internal Control Systems by Public Companies (herein below, the "Regulations"). The internal control system judgment criteria adopted by the Regulations divide internal control into five elements based on the process of management control: 1. control environment 2. risk assessment 3. control activities 4. information and communications 5. monitoring activities. Each element further contains several items. Please refer to the Regulations for details.

(4) The Company has assessed the design and operating effectiveness of its internal control system according to the aforesaid criteria.

(5) Based on the findings of the assessment mentioned in the preceding paragraph, the Company believes that as of December 31, 2021 its internal control system (including its supervision of subsidiaries), encompassing internal controls for understanding of the degree of achievement of operational effectiveness and efficiency objectives, reliability, timeliness, transparency and regulatory compliance of reporting, and compliance with applicable laws, regulation and bylaws, was effectively designed and operating, and reasonably assured the achievement of the above-stated objectives.

(6) This Statement will become a major part of the content of the Company'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 Law.

(7) This statement has been passed by the Board of Directors Meeting of the Company held on January 25, 2022, with zero of the 14 attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

Macronix International Co., Ltd.

Chairman: Miin Wu

President: C.Y. Lu

2. If the company engages an accountant to examine its internal control system, disclose the CPA examination report: None.

(XI) Penalty against the company or its internal personnel, or any disciplinary penalty by the company against its internal personnel for violation of the internal control system, during the most recent fiscal year or during the current fiscal year up to the publication date of the annual report, where the result of such penalty could have a material effect on shareholder equity or securities prices, the annual report shall disclose the penalty, the main shortcomings, and condition of improvement: None

(XII) Major Resolutions of Shareholders' Meeting and Board Meetings during the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report:

1.2021 Major Resolutions of Shareholders' Meeting

Major Resolutions	Review of Implementation
1. Ratification of the 2020 Business Report and Financial Statements	Resolution announced in accordance with Article 230 of the Company Act
2. Ratification of the Company's 2020 Distribution	September 14, 2021 was set as the Ex-dividend Record Date and cash dividends were paid on October 13, 2021. Due to the Company's outstanding common shares varied, the cash dividends per share to be distributed was adjusted from NT$1.2, determined by the Shareholders' Meeting, to NT$1.20010901.
3. Approval of fund raising by issuance of new shares, overseas depositary receipts through cash capital increase, and/or the private placement of common shares and/or domestic or overseas convertible bonds	The capital increase proposal was approved but was not carried out in 2021. The capital increase proposal was approved by the Board of Directors again on February 25, 2022 and submitted to the 2022 Annual Shareholders' Meeting.
4. Approval of releasing competition restrictions of the directors	Resolution and announcement according to law.

2. Major Resolutions Adopted by the Board of Directors in the Most Recent Year up to the Publication Date

Board of Directors	Date	Major Resolutions
The 11th meeting of the 11th term of the Board of Directors	2021.01.26	1. Approval of the record date of the capital reduction for the redeemed shares of employee Restricted Stock Awards
The 12th meeting of the 11th term of the Board of Directors	2021.02.26	1. Approval of the Company's 2020 Financial Statements. 2. Approval of the Company's 2020 Distribution Plan 3. Approval of fund raising by issuance of new shares, overseas depositary receipts through cash capital increase, and/or the private placement of common shares and/or domestic or overseas convertible bonds 4. Board of Directors resolved to convene the 2021 Annual Shareholders Meeting.
The 13th meeting of the 11th Term of the Board of Directors	2021.04.27	1. Approval of the record date of the capital reduction for the redeemed shares of Employee Restricted Stock Awards

Board of Directors	Date	Major Resolutions
The 14th meeting of the 11th Term of the Board of Directors	2021.07.27	1. Approval of the record date of the capital reduction for the redeemed shares of Employee Restricted Stock Awards 2. Approval of the updated items of the 2021 Annual Shareholders' Meeting 3. Board of Directors approved the capital expenditure budget 4. Approval of the purchase and donation of the WHO-approved COVID-19 vaccines.
The 2nd Extraordinary meeting of the 11th Term of the Board of Directors	2021.08.05	1. Approval of the Company's 6-inch FAB transaction.
The 15th meeting of the 11th Term of the Board of Directors	2021.10.26	1. Approval of the record date of the capital reduction for the redeemed shares of Employee Restricted Stock Awards 2. Approval of the PCM project with IBM
The 16th meeting of the 11th Term of the Board of Directors	2021.12.28	1. Board of Directors approved the capital expenditure budget 2. Board of Directors approved the year 2022 donation to Macronix Education Foundation
The 17th meeting of the 11th Term of the Board of Directors	2022.01.25	1. Approval of the record date of the capital reduction for the redeemed shares of Employee Restricted Stock Awards 2. Approval of stopping the purchase and donation of the WHO-approved COVID-19 vaccines.
The 18th meeting of the 11th Term of the Board of Directors	2022.02.25	1. Approval of the Company's 2021 Financial Statements. 2. Approval of the Company's 2021 Distribution Plan 3. Approval of fund raising by issuance of new shares, overseas depositary receipts through cash capital increase, and/or the private placement of common shares and/or domestic or overseas convertible bonds 4. Board of Directors resolved to convene the 2022 Annual Shareholders Meeting.

(XIII) Major Issues of Record or Written Statements Made by Any Director or Supervisor Dissenting to Important Resolutions Passed by the Board of Directors: None.

(XIV) In the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report, A Summary of the Resignation and Dismissal of Chairman, President, and Heads of Accounting, Finance, Internal Audit, Corporate Governance and R&D: None.

V. Information on the Professional Fees of the Attesting CPAs

Unit: NT$ thousands

Accounting Firm	Name of CPAs	Period Covered by CPA's Audit	Audit Fee	Non-Audit Fee	Total	Remarks
Deloitte & Touche	Tung-Hui Yeh Kuo-Tyan Hong	2021.01.01 ~2021.12.31	6,295	1,370	7,665	Non-audit fees are mainly for the transfer pricing service fees and other services.

(I) Where The Accounting Firm Changed the Audit Partners and the Audit Fee Paid for the Year is Less than that of the Previous Year, the Sum, Proportion, and Cause of the Reduction Shall be Disclosed: Not applicable.

(II) Where the Audit Fee Paid for the Year is Reduced by more than 10% Compared to that of the Previous Year, the Sum, Proportion, and Cause of the Reduction Shall be Disclosed: Not applicable.

VI. CPA Replacement Information

(I) Regarding the Former CPA

<table>
<tr><td>Replacement Date</td><td colspan="4">2019.12.23</td><td colspan="2">2020.10.26</td></tr>
<tr><td>Replacement reasons and explanations</td><td colspan="4">Macronix's accountants were originally Ming-Hui Chen and Benjamin Shih from Deloitte & Touche. To ensure the independence of appointed accountants, starting from 2020Q1, accountants Tung-Hui Yeh and Ching Pin Shih were appointed to audit Macronix's financial statements.</td><td colspan="2">Macronix's accountants were originally Tung Hui Yeh and Ching Pin Shih from Deloitte & Touche. Starting in 2020Q3, accountants Tung-Hui Yeh and Kuo Tyan Hong were appointed to audit Macronix's financial statements in coordination with adjustments to internal operations by Deloitte & Touche.</td></tr>
<tr><td rowspan="3">Describe whether the Company terminated or the CPA did not accept the appointment</td><td colspan="3">Parties
Status</td><td colspan="2">CPA</td><td>The Company</td></tr>
<tr><td colspan="3">Termination of appointment</td><td colspan="2">—</td><td>—</td></tr>
<tr><td colspan="3">No longer accepted (continued) appointment</td><td colspan="2">—</td><td>—</td></tr>
<tr><td>Other issues (except for unqualified issues) in the audit reports within the last two years</td><td colspan="6">None</td></tr>
<tr><td rowspan="6">Differences with the company</td><td rowspan="4">Yes</td><td>—</td><td colspan="4">Accounting principles or practices</td></tr>
<tr><td>—</td><td colspan="4">Disclosure of Financial Statements</td></tr>
<tr><td>—</td><td colspan="4">Audit scope or steps</td></tr>
<tr><td>—</td><td colspan="4">Others</td></tr>
<tr><td>None</td><td colspan="5">✓</td></tr>
<tr><td colspan="6">Remarks/specify details: —</td></tr>
<tr><td>Describe whether the Company terminated or the CPA did not accept the appointment</td><td colspan="6">None</td></tr>
</table>

(II) Regarding the Successor CPA

Name of accounting firm	Deloitte & Touche	
Name of CPA	Tung Hui Yeh Ching Pin Shih	Tung Hui Yeh Kuo Tyan Hong
Date of appointment	2019.12.23	2020.10.26
Consultation results and opinions on accounting treatments or principles with respect to specified transactions and the company's financial reports that the CPA might issue prior to the engagement.	None	
Succeeding CPA’s written opinion of disagreement toward the former CPA	None	

(III) Reply from the Previous CPA to Item 1 and Item 2-3, Subparagraph 6, Article 10 of the Regulations Governing Information to be Published in Annual Reports of Public Companies: Not applicable.

VII. If Chairman, President, or Chief Financial Officer Holding Positions at the Independent Audit Firm or its Affiliated Company within the Most Recent Fiscal Year: None.

VIII. Equity Transfer and Pledge by Directors, Supervisors, Managers and/or Shareholders, Who Hold More Than 10% of Outstanding Shares, in the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report

(I) Changes in Shares Held by Directors, Managers, and Shareholders Holding 10% or more of Shares

Title	Name	2021		up to March 29, 2022	
		Increase (decrease) in shares held	Increase (decrease) in shares pledged	Increase (decrease) in shares held	Increase (decrease) in shares pledged
Chairman / CEO	Miin Wu	240,000	0	(100,000)	0
Director	Chien Hsu Investment Corporation (Note 1)	0	0	0	0
	Representative: Ching-Yun Li	0	0	0	0
Director / President	C.Y. Lu	126,000	0	0	0
Director	Shun Yin Investment Ltd. (Note 2)	0	0	0	0
	Former Representative: Shigeki Matsuoka	Omitted	Omitted	Omitted	Omitted
	Representative: Ikuo Yamaguchi	0	0	0	0
Director	Cheng-Yi Fang	0	0	0	0

Title	Name	2021		up to March 29, 2022	
		Increase (decrease) in shares held	Increase (decrease) in shares pledged	Increase (decrease) in shares held	Increase (decrease) in shares pledged
Director	Achi Capital Limited	0	0	0	0
	Representative: Stacey Lee (Note 3)	19,446	0	0	0
Director	Che-Ho Wei	0	0	0	0
Director / Senior Vice President & Chief Marketing Officer	Tom Yiu	24,000	0	0	0
Director / Vice President	F. L. Ni	84,000	0	0	0
Director / Vice President	Hui Ying Investment Ltd.	0	0	0	0
	Representative: Paul Yeh (Note 4)	54,000	0	0	0
Independent Director	Tyzz-Jiun Duh	0	0	0	
Independent Director	Chiang Kao	0	0	0	0
Independent Director	Yan-Kuin Su	0	0	0	0
Independent Director	John C.F. Chen	0	0	0	0
Vice President	Yen-Hie Chao	60,000	0	0	0
Vice President	Chun-Hsiung Hung	78,000	0	0	0
Vice President	Jui-Kun Chen	75,000	0	0	0
Vice President	Jon-Ten Chung	75,000	0	0	0
Vice President	Kuang-Chao Chen (Note 5)	129,000	0	0	0
Senior Associate V.P.	Wen-Pin Lu (Note 6)	60,000	0	0	0
Head of Emerging R&D	Ko-Chung Wang (Note 7)	Omitted	Omitted	0	0
Executive Director	Hsin-Cheng Liu	18,000	0	0	0
Executive Director	Kai-Wen Tu	24,000	0	0	0
Executive Director	Ting-Chang Lin	13,500	0	0	0
Executive Director	Kun-Lung Chang	30,000	0	0	0
Project Executive Director	Hui-Chi Li	4,800	0	0	0

Note 1: Chien Hsu Investment Co., Ltd. appointed Mrs. Ching-Yun Li on July 26, 2019, to attend the 11th Term of the Board of Directors and exercised any and all of a director's rights thereof.
Note 2: Mr. Ikuo Yamaguchi was reassigned as representative on June 30, 2021 by Shun Yin Investment Ltd.
Note 3: Mrs. Stacey Lee was appointed to represent it to attend the 11th Term of the Board of Directors and exercised any and all of a director's rights thereof.
Note 4: Mr. Paul Yeh was appointed to represent it to attend the 11th Term of the Board of Directors and exercised any and all of a director's rights thereof.
Note 5: Promoted to Vice President on February 25, 2022
Note 6: Promoted to Senior Associate V.P. on February 25, 2022

Note 7: Promoted to Head of Emerging R&D on February 25, 2022

(II) Information on Transfer of Equity

Name	Reason for Equity Transfer	Transaction Date	Transaction Counterparty	Relationship Between Counterpart and the Company and its Directors, Supervisors and Shareholders with Shareholding Ratio of 10% or More	Number of Shares	Transaction Price
Stacey Lee	Inherit	March 19, 2021	Ho Mei Huang	Mother-daughter relationship	19,446	NA

(III) Information on Pledge of Shares: None.

IX. Relationship Among the Top Ten Shareholders

March 29, 2022

Name	Current Shareholding		Spouse's/minor's Shareholding		Shareholding by Nominee Arrangement		Name and Relationship Between the Company's Top Ten Shareholders, or Spouses or Relatives Within Two Degrees		Remarks
	Shares	%	Shares	%	Shares	%	Name	Relationship	
Syue-Rong Shen	51,654,000	2.78%	None	None	None	None	None	None	
J.P. Morgan Securities Plc	40,059,487	2.16%	None	None	None	None	None	None	
Mitsubishi UFJ Morgan Stanley Securities Co. Ltd.-Product Support Division (Agency Trading Desk)	32,139,161	1.73%	None	None	None	None	None	None	
Cathay Life Insurance Representative: Tiao-Kuei Huang	28,915,000	1.56%	None	None	None	None	None	None	
Vanguard Emerging Markets Stock Index Fund A Series of Vanguard International Equity Index Funds	25,961,737	1.40%	None	None	None	None	None	None	
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Vanguard Total International Stock Index Fund A Series of Vanguard Star Funds	23,119,546	1.25%							
The New Labor Pension Fund	22,937,906	1.24%							
Shun Yin Investment Ltd.	22,587,265	1.22%	None	None	None	None	None	None	
Representative: Ikuo Yamaguchi	None	None	None	None	None	None	None	None	
Robeco Capital Growth Funds	19,142,000	1.03%	None	None	None	None	None	None	
Nomura International Plc	18,786,299	1.01%	None	None	None	None	None	None	

Note: There was no information on the person responsible for the investment account.

X. The Total and Combined Shareholding in a Single Enterprise by the Company, its Directors, Supervisors, Managers, and the Directly or Indirectly Controlled Entities

December 31, 2021
Unit: shares / %

Affiliated Enterprises (Note)	Ownership by the Company		Direct or Indirect Ownership by Directors/Supervisors/ Managers		Total Ownership	
	Shares	%	Shares	%	Shares	%
Macronix America, Inc.	100,000	100.00%	0	0%	100,000	100.00%
Macronix (BVI) Co., Ltd.	212,048,000	100.00%	0	0%	212,048,000	100.00%
Hui Ying Investment Ltd.	None	100.00%	None	0%	None	100.00%
Run Hong Investment Ltd.	None	100.00%	None	0%	None	100.00%
Mxtran Inc.	69,627,323	90.43%	3,614,600	4.69%	73,241,923	95.12%

Note: Invested by the Company using the equity method.

Chapter IV. Capital Overview

I. Capital and Shares

(I) Source of capital

Year/ month	Issue price	Authorized capital		Paid-up capital		Comments		
		Shares (1,000 shares)	Amount (NT$1,000)	Shares (shares)	Amount (NTD)	Source of capital	Subscriptions paid with property other than cash	Other
1989.12	-	150,000	1,500,000	81,583,000	815,830,000	Established with a capital of NT$815,830,000	5,200,000 technology shares	-
1990.12	10	300,000	3,000,000	209,717,000	2,097,170,000	Cash capital increase in the amount of NT$1,281,340,000	-	Note 1
1992.06	10	300,000	3,000,000	239,717,000	2,397,170,000	Cash capital increase in the amount of NT$300,000,000	-	Note 2
1993.05	10	300,000	3,000,000	300,000,000	3,000,000,000	Cash capital increase in the amount of NT$602,830,000	-	Note 3
1995.02	28.5	500,000	5,000,000	350,000,000	3,500,000,000	Cash capital increase in the amount of NT$500,000,000	-	Note 4
1995.08	-	500,000	5,000,000	433,218,172	4,332,181,720	Capital increase out of earnings in the amount of NT$832,181,720	-	-
1995.12	40	500,000	5,000,000	500,000,000	5,000,000,000	Cash capital increase in the amount of NT$667,818,280	-	Note 5
1996.05	48	850,000	8,500,000	600,000,000	6,000,000,000	Issuance of GDRs in the amount of NT$1,000,000,000 for cash capital increase	-	Note 6
1996.08	-	1,160,000	11,600,000	941,676,940	9,416,769,400	Earnings and capital surplus in the amount of NT$3,416,769,400 transferred to capital	-	-
1997.04	-	1,160,000	11,600,000	945,824,135	9,458,241,350	Corporate bonds conversion in the amount of NT$41,471,950	-	-
1997.07	-	2,500,000	25,000,000	1,274,939,621	12,749,396,210	Earnings and capital surplus in the amount of NT$3,291,154,860 transferred to capital	-	-
1997.08	-	2,500,000	25,000,000	1,415,586,910	14,155,869,100	Corporate bonds conversion in the amount of NT$1,406,472,890	-	-
1997.12	-	2,500,000	25,000,000	1,441,815,433	14,418,154,330	Corporate bonds conversion in the amount of NT$262,285,230	-	-
1998.03	-	2,500,000	25,000,000	1,442,334,998	14,423,349,980	Corporate bonds conversion in the amount of NT$5,195,650	-	-
1998.08	-	2,500,000	25,000,000	1,785,823,693	17,858,236,930	Earnings and capital surplus in the amount of NT$3,434,886,950 transferred to capital	-	-
1999.09	-	2,500,000	25,000,000	1,964,406,063	19,644,060,630	Capital surplus in the amount of NT$1,785,823,700 transferred to capital	-	-
2000.03	30	2,500,000	25,000,000	2,099,996,063	20,999,960,630	Cash capital increase in the amount of NT$1,355,900,000	-	Note 7
2000.03	-	2,500,000	25,000,000	2,126,074,584	21,260,745,840	Convertible bonds conversion in the amount of NT$260,785,210	-	-
2000.03	-	2,500,000	25,000,000	2,127,526,851	21,275,268,510	Convertible bonds conversion in the amount of NT$14,522,670	-	-
2000.07	-	3,500,000	35,000,000	2,404,105,343	24,041,053,430	Earnings and capital surplus in the amount of NT$2,765,784,920 transferred to capital	-	-
2000.07	-	3,500,000	35,000,000	2,472,586,493	24,725,864,930	Corporate bonds conversion in the amount of NT$684,811,500	-	-
2000.12	-	3,500,000	35,000,000	2,474,409,144	24,744,091,440	Corporate bonds conversion in the amount of NT$18,226,510	-	-
2001.06	-	4,500,000	45,000,000	3,359,342,613	33,593,426,130	Earnings and capital surplus in the amount of NT$8,849,334,690 transferred to capital	-	-

Year/ month	Issue price	Authorized capital		Paid-up capital		Comments		
		Shares (1,000 shares)	Amount (NT$1,000)	Shares (shares)	Amount (NTD)	Source of capital	Subscriptions paid with property other than cash	Other
2002.08	-	5,350,000	53,500,000	3,691,276,875	36,912,768,750	Capital surplus in the amount of NT$3,319,342,620 transferred to capital	-	-
2003.04	-	5,350,000	53,500,000	3,733,149,529	37,331,495,290	Corporate bonds conversion in the amount of NT$418,726,540	-	-
2003.07	-	5,350,000	53,500,000	3,779,349,500	37,793,495,000	Corporate bonds conversion in the amount of NT$461,999,710	-	-
2003.11	-	5,350,000	53,500,000	3,927,758,305	39,277,583,050	Corporate bonds conversion in the amount of NT$1,484,088,050	-	-
2003.12	**8.11**	**6,550,000**	**65,500,000**	**4,402,758,305**	**44,027,583,050**	**Cash capital increase in the amount of NT$4,750,000,000**	**-**	**Note 8**
2004.03	-	6,550,000	65,500,000	4,430,251,943	44,302,519,430	Corporate bonds conversion in the amount of NT$274,936,380	-	-
2004.04	10.9	6,550,000	65,500,000	4,955,251,943	49,552,519,430	Issuance of GDRs in the amount of NT$5,250,000,000 for cash capital increase	-	Note 9
2004.05	-	6,550,000	65,500,000	5,003,704,439	50,037,044,390	Corporate bonds conversion in the amount of NT$484,524,960	-	
2004.09	-	6,550,000	65,500,000	5,034,928,514	50,349,285,140	Corporate bonds conversion in the amount of NT$312,240,750	-	-
2004.11	-	6,550,000	65,500,000	5,035,296,328	50,352,963,280	Corporate bonds conversion in the amount of NT$3,678,140	-	-
2005.09	-	6,550,000	65,500,000	4,995,296,328	49,952,963,280	Decrease in treasury stock in the amount of NT$400,000,000	-	-
2006.03	-	6,550,000	65,500,000	2,915,821,786	29,158,217,860	Capital reduction in the amount of NT$20,794,745,420	-	Note 10
2006.03	**8.07**	**6,550,000**	**65,500,000**	**2,915,921,786**	**29,159,217,860**	**Private placement in the amount of NT$1,000,000**	**-**	**-**
2007.02	-	6,550,000	65,500,000	2,916,157,808	29,161,578,080	Exercise of employee stock options in the amount of NT$2,360,220	-	-
2007.04	-	6,550,000	65,500,000	2,916,415,946	29,164,159,460	Exercise of employee stock options in the amount of NT$2,581,380	-	-
2007.09	-	6,550,000	65,500,000	2,917,058,354	29,170,583,540	Exercise of employee stock options in the amount of NT$6,424,080	-	-
2007.10	-	6,550,000	65,500,000	2,978,817,751	29,788,177,510	Capital increase out of earnings in the amount of NT$617,593,970	-	-
2007.11	-	6,550,000	65,500,000	3,050,653,298	30,506,532,980	Exercise of employee stock options in the amount of NT$718,355,470	-	-
2008.02	-	6,550,000	65,500,000	3,060,226,622	30,602,266,220	Exercise of employee stock options in the amount of NT$95,733,240	-	-
2008.05	-	6,550,000	65,500,000	3,062,751,980	30,627,519,800	Exercise of employee stock options in the amount of NT$25,253,580	-	-
2008.08	-	6,550,000	65,500,000	3,063,677,465	30,636,774,650	Exercise of employee stock options in the amount of NT$9,254,850	-	-
2008.09	-	6,550,000	65,500,000	3,124,019,472	31,240,194,720	Capital increase out of earnings in the amount of NT$603,420,070	-	-
2008.11	-	6,550,000	65,500,000	3,126,296,368	31,262,963,680	Exercise of employee stock options in the amount of NT$22,768,960	-	-
2009.02	-	6,550,000	65,500,000	3,126,775,749	31,267,757,490	Exercise of employee stock options in the amount of NT$4,793,810	-	-
2009.02	-	6,550,000	65,500,000	3,123,962,749	31,239,627,490	Decrease in treasury stock in the amount of NT$28,130,000	-	-

Year/ month	Issue price	Authorized capital		Paid-up capital		Comments		
		Shares (1,000 shares)	Amount (NT$1,000)	Shares (shares)	Amount (NTD)	Source of capital	Subscriptions paid with property other than cash	Other
2009.05	-	6,550,000	65,500,000	3,135,134,847	31,351,348,470	Exercise of employee stock options in the amount of NT$111,720,980	-	-
2009.08	-	6,550,000	65,500,000	3,147,538,945	31,475,389,450	Exercise of employee stock options in the amount of NT$124,040,980	-	-
2009.09	-	6,550,000	65,500,000	3,272,552,230	32,725,522,300	Capital increase out of earnings in the amount of NT$1,250,132,850	-	-
2009.11	-	6,550,000	65,500,000	3,289,772,530	32,897,725,300	Exercise of employee stock options in the amount of NT$172,203,000	-	-
2010.02	-	6,550,000	65,500,000	3,303,027,880	33,030,278,800	Exercise of employee stock options in the amount of NT$132,553,500	-	-
2010.05	-	6,550,000	65,500,000	3,330,319,836	33,303,198,360	Exercise of employee stock options in the amount of NT$272,919,560	-	-
2010.08	-	6,550,000	65,500,000	3,350,388,992	33,503,889,920	Exercise of employee stock options in the amount of NT$200,691,560	-	-
2010.11	-	6,550,000	65,500,000	3,355,417,899	33,554,178,990	Exercise of employee stock options in the amount of NT$50,289,070	-	-
2011.02	-	6,550,000	65,500,000	3,362,301,642	33,623,016,420	Exercise of employee stock options in the amount of NT$68,837,430	-	-
2011.05	-	6,550,000	65,500,000	3,378,174,280	33,781,742,800	Exercise of employee stock options in the amount of NT$158,726,380	-	-
2011.08	-	6,550,000	65,500,000	3,381,545,259	33,815,452,590	Exercise of employee stock options in the amount of NT$33,709,790	-	-
2011.11	-	6,550,000	65,500,000	3,382,456,382	33,824,563,820	Exercise of employee stock options in the amount of NT$9,111,230	-	-
2012.02	-	6,550,000	65,500,000	3,384,748,566	33,847,485,660	Exercise of employee stock options in the amount of NT$22,921,840	-	-
2012.05	-	6,550,000	65,500,000	3,392,196,696	33,921,966,960	Exercise of employee stock options in the amount of NT$74,481,300	-	-
2012.08	-	6,550,000	65,500,000	3,392,302,064	33,923,020,640	Exercise of employee stock options in the amount of NT$1,053,680	-	-
2012.08	-	6,550,000	65,500,000	3,521,142,831	35,211,428,310	Capital increase out of earnings in the amount of NT$1,288,407,670	-	-
2012.11	-	6,550,000	65,500,000	3,521,369,314	35,213,693,140	Exercise of employee stock options in the amount of NT$2,264,830	-	-
2013.02	-	6,550,000	65,500,000	3,521,462,303	35,214,623,030	Exercise of employee stock options in the amount of NT$929,890	-	-
2014.02	-	6,550,000	65,500,000	3,521,473,020	35,214,730,200	Exercise of employee stock options in the amount of NT$107,170	-	-
2015.01	-	6,550,000	65,500,000	3,558,773,970	35,587,739,700	New restricted employee shares in the amount of NT$373,009,500	-	-
2015.08	-	6,550,000	65,500,000	3,620,052,730	36,200,527,300	New restricted employee shares in the amount of NT$612,787,600	-	-
2015.08	-	6,550,000	65,500,000	3,618,598,730	36,185,987,300	Reduction of new restricted employee shares in the amount of NT$14,540,000	-	-

Year/ month	Issue price	Authorized capital		Paid-up capital		Comments		
		Shares (1,000 shares)	Amount (NT$1,000)	Shares (shares)	Amount (NTD)	Source of capital	Subscriptions paid with property other than cash	Other
2015.11	-	6,550,000	65,500,000	3,617,848,930	36,178,489,300	Reduction of new restricted employee shares in the amount of NT$7,498,000	-	-
2016.02	-	6,550,000	65,500,000	3,617,159,130	36,171,591,300	Reduction of new restricted employee shares in the amount of NT$6,898,000	-	-
2016.05	-	6,550,000	65,500,000	3,616,471,930	36,164,719,300	Reduction of new restricted employee shares in the amount of NT$6,872,000	-	-
2016.08	-	6,550,000	65,500,000	3,615,716,830	36,157,168,300	Reduction of new restricted employee shares in the amount of NT$7,551,000	-	-
2016.11	-	6,550,000	65,500,000	3,615,353,570	36,153,535,700	Reduction of new restricted employee shares in the amount of NT$3,632,600	-	-
2017.01	-	6,550,000	65,500,000	3,672,829,150	36,728,291,500	New restricted employee shares in the amount of NT$574,755,800	-	-
2017.02	-	6,550,000	65,500,000	3,672,063,730	36,720,637,300	Reduction of capital for new restricted employee shares in the amount of NT$7,654,200	-	-
2017.05	-	6,550,000	65,500,000	3,671,002,330	36,710,023,300	Reduction of capital for new restricted employee shares in the amount of NT$10,614,000	-	-
2017.07	-	6,550,000	65,500,000	1,805,895,303	18,058,953,030	Capital reduction in the amount of NT$18,651,070,270	-	Note 11
2017.09	-	6,550,000	65,500,000	1,805,028,142	18,050,281,420	Reduction of capital for new restricted employee shares in the amount of NT$8,671,610	-	-
2017.11	-	6,550,000	65,500,000	1,804,938,491	18,049,384,910	Reduction of capital for new restricted employee shares in the amount of NT$896,510	-	-
2018.02	-	6,550,000	65,500,000	1,804,775,803	18,047,758,030	Reduction of capital for new restricted employee shares in the amount of NT$1,626,880	-	-
2018.05	-	6,550,000	65,500,000	1,804,478,493	18,044,784,930	Reduction of capital for new restricted employee shares in the amount of NT$2,973,100	-	-
2018.09	-	6,550,000	65,500,000	1,840,574,009	18,405,740,090	Capital increase out of earnings in the amount of NT$360,955,160	-	-
2018.11	-	6,550,000	65,500,000	1,840,291,935	18,402,919,350	Reduction of capital for new restricted employee shares in the amount of NT$2,820,740	-	-
2019.02	-	6,550,000	65,500,000	1,840,166,993	18,401,669,930	Reduction of capital for new restricted employee shares in the amount of NT$1,249,420	-	-
2019.05	-	6,550,000	65,500,000	1,840,144,856	18,401,448,560	Reduction of capital for new restricted employee shares in the amount of NT$221,370	-	-
2019.08	-	6,550,000	65,500,000	1,840,013,422	18,400,134,220	Reduction of capital for new restricted employee shares in the amount of NT$1,314,340	-	-
2019.11	-	6,550,000	65,500,000	1,839,927,014	18,399,270,140	Reduction of capital for new restricted employee shares in the amount of NT$864,080	-	-
2020.03	-	6,550,000	65,500,000	1,839,908,862	18,399,088,620	Reduction of capital for new restricted employee shares in the amount of NT$181,520	-	-
2020.07	-	6,550,000	65,500,000	1,856,309,082	18,563,090,820	New restricted employee shares in the amount of NT$164,002,200	-	-
2020.08	-	6,550,000	65,500,000	1,856,301,702	18,563,017,020	Reduction of capital for new restricted employee shares in the amount of NT$73,800	-	-

Year/ month	Issue price	Authorized capital		Paid-up capital		Comments		
		Shares (1,000 shares)	Amount (NT$1,000)	Shares (shares)	Amount (NTD)	Source of capital	Subscriptions paid with property other than cash	Other
2021.02	-	6,550,000	65,500,000	1,856,186,402	18,561,864,020	Reduction of capital for new restricted employee shares in the amount of NT$1,153,000	-	-
2021.05	-	6,550,000	65,500,000	1,856,127,002	18,561,270,020	Reduction of capital for new restricted employee shares in the amount of NT$594,000	-	-
2021.08	-	6,550,000	65,500,000	1,856,046,002	18,560,460,020	Reduction of capital for new restricted employee shares in the amount of NT$810,000	-	-
2021.11	-	6,550,000	65,500,000	1,856,017,802	18,560,178,020	Reduction of capital for new restricted employee shares in the amount of NT$282,000	-	-
2022.02	-	6,550,000	65,500,000	1,855,976,783	18,559,767,830	Reduction of capital for new restricted employee shares in the amount of NT$410,190	-	-

Note 1: Letter Tai-Cai-Zheng (1)-Zi No. 03305 dated December 7, 1990
Note 2: Letter Tai-Cai-Zheng (1)-Zi No. 03489 dated December 24, 1991
Note 3: Letter Tai-Cai-Zheng (1)-Zi No. 00335 dated February 15, 1993
Note 4: Letter Tai-Cai-Zheng (1)-Zi No. 43729 dated November 5, 1994
Note 5: Letter Tai-Cai-Zheng (1)-Zi No. 49345 dated September 25, 1995
Note 6: Letter Tai-Cai-Zheng (1)-Zi No. 18164 dated March 26, 1996
Note 7: Letter Tai-Cai-Zheng (1)-Zi No. 95699 dated November, 1999
Note 8: Letter Tai-Cai-Zheng-1-Zi No. 0920139445 dated October 15, 2003
Note 9: Letter Tai-Cai-Zheng-1-Zi No. 0920161647 dated January 30, 2004
Note 10: Letter Jin-Guan-Zheng-1-Zi No. 0940156791 dated February 3, 2006
Note 11: Letter Jin-Guan-Zheng-Fa-Zi No. 1060022715 dated June 26, 2017

March 29, 2022
Unit: shares

Type of stock	Authorized capital			Remarks
	Shares issued and outstanding (Note 1)	Un-issued shares	Total	
Common stocks	1,855,976,783	4,694,023,217	6,550,000,000	Note 2

Note 1: 1,855,921,132 shares are public shares; 55,651 shares are private placement shares.
Note 2: Retained 650,000,000 shares of authorized capital for employee stock option certificates, and authorized the Board of Directors to issue the certificates in batches as needed. Retained 864,703,672 for conversion to corporate bonds, which may be adjusted by resolution of the Board of Directors in view of the market situation and business needs.

(II) Composition of Shareholders

March 29, 2022

Type of Shareholders	Government Agencies	Financial Institutions	Other Legal Persons	Domestic Natural Persons	Foreign Institutions and Natural Persons	Total
Number of Shareholders	11	64	452	299,719	783	301,029
Shareholding	28,658,361	54,775,528	109,590,679	1,169,157,638	493,794,577	1,855,976,783
Shareholding Percentage (%)	1.54%	2.95%	5.91%	62.99%	26.61%	100.00%

(III) The Dispersal of Shareholdings

March 29, 2022

Class of Shareholding (Unit: Share)	Number of Shareholders	Shareholding	Shareholding Percentage (%)
1 ~ 999	139,857	30,954,589	1.67%
1,000 ~ 5,000	124,567	256,794,876	13.84%
5,001 ~ 10,000	19,864	150,356,245	8.10%
10,001 ~ 15,000	5,696	70,031,812	3.77%
15,001 ~ 20,000	3,332	60,866,530	3.28%
20,001 ~ 30,000	2,876	71,845,364	3.87%
30,001 ~ 40,000	1,293	45,664,375	2.46%
40,001 ~ 50,000	827	38,010,111	2.05%
50,001 ~ 100,000	1,417	100,555,081	5.42%
100,001 ~ 200,000	641	89,769,159	4.84%
200,001 ~ 400,000	332	92,601,960	4.99%
400,001 ~ 600,000	90	44,472,123	2.40%
600,001 ~ 800,000	56	38,531,451	2.08%
800,001 ~ 1,000,000	29	26,184,851	1.41%
1,000,001 and above	152	739,338,256	39.84%
Total	301,029	1,855,976,783	100.00%

(IV) Major Shareholders

March 29, 2022

Name of Shareholders	Shareholding	Shareholding Percentage (%)
Syue-Rong Shen	51,654,000	2.78%
J.P. Morgan Securities Plc	40,059,487	2.16%
Mitsubishi UFJ Morgan Stanley Securities Co. Ltd.-Product Support Division (Agency Trading Desk)	32,139,161	1.73%
Cathay Life Insurance	28,915,000	1.56%
Vanguard Emerging Markets Stock Index Fund A Series of Vanguard International Equity Index Funds	25,961,737	1.40%
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Vanguard Total International Stock Index Fund A Series of Vanguard Star Funds	23,119,546	1.25%
New Labor Pension Fund	22,937,906	1.24%
Shun Yin Investment Ltd.	22,587,265	1.22%
Robeco Capital Growth Funds	19,142,000	1.03%
Nomura International Plc	18,786,299	1.01%

(V) Market Price, Net Worth, Earnings, and Dividends Per Share

Unit: NT$

<table>
<tr><td colspan="3">Year
Item</td><td>2020</td><td>2021</td><td>By the End of March 29,2022</td></tr>
<tr><td rowspan="3">Market Price per Share (Note 1)</td><td colspan="2">Highest Market Price</td><td>46.9</td><td>50</td><td>45.15</td></tr>
<tr><td colspan="2">Lowest Market Price</td><td>22.05</td><td>34</td><td>38.2</td></tr>
<tr><td colspan="2">Average Market Price</td><td>34.59</td><td>42.87</td><td>42.43</td></tr>
<tr><td rowspan="2">Net Worth per Share</td><td colspan="2">Before Distribution</td><td>19.52</td><td>25.20</td><td rowspan="13">Not applicable</td></tr>
<tr><td colspan="2">After Distribution</td><td>18.32</td><td>(Note 5)</td></tr>
<tr><td rowspan="2">Earnings per Share</td><td colspan="2">Weighted Average Shares (thousand shares)</td><td>1,839,322</td><td>1,845,347</td></tr>
<tr><td colspan="2">Earnings per Share</td><td>2.90</td><td>6.48</td></tr>
<tr><td rowspan="4">Dividends per Share</td><td colspan="2">Cash Dividends</td><td>1.20010901</td><td>1.8</td></tr>
<tr><td rowspan="2">Stock Dividends</td><td>Dividends from Retained Earnings</td><td>-</td><td>-</td></tr>
<tr><td>Dividends from Capital Surplus</td><td>-</td><td>-</td></tr>
<tr><td colspan="2">Accumulated Undistributed Dividends</td><td>-</td><td>-</td></tr>
<tr><td rowspan="3">Return on Investment</td><td colspan="2">Price / Earnings Ratio (Note 2)</td><td>11.54</td><td>6.42</td></tr>
<tr><td colspan="2">Price / Dividend Ratio (Note 3)</td><td>27.88</td><td>23.11</td></tr>
<tr><td colspan="2">Cash Dividend Yield Rate (Note 4)</td><td>3.59%</td><td>4.33%</td></tr>
</table>

Note 1: Source of data: Taiwan Stock Exchange.

Note 2: Price / Earnings Ratio = Average Market Price / Earnings per Share

Note 3: Price / Dividend Ratio = Average Market Price / Cash Dividends per Share

Note 4: Cash Dividend Yield Rate = Cash Dividends per Share / Average Market Price

Note 5: The distribution of earnings for 2021 will be resolved at the 2022 Shareholders' Meeting.

(VI) Dividend Policy and Implementation

1. Dividend policy in the articles of incorporation

   If there is a surplus in the Company's annual final accounts, it will first be used to pay taxes and make up for accumulated losses before the next 10% is taken for legal capital reserve (except when the legal capital reserve has reached the amount of the total capital). A special capital reserve is listed or reversed in accordance with relevant regulations. The remaining balance and the undistributed surplus of the previous year are the shareholder dividends.

   The Company belongs to a capital-intensive industry. In line with the long-term financial planning, all or part of the shareholder dividends in the preceding paragraph may be reserved as undistributed earnings depending on the resolution by the shareholders' meeting. The dividends will then be distributed in the following year, together or separately.

   The Company prioritizes cash dividends for surplus distribution. However, the Company shall still be able to distribute the surplus as shares depending on the financial, business, or operational status. The ratio follows the principle of not exceeding 50% of the total distributable surplus for the year.
2. Distribution of dividend proposed at the shareholders' meeting: NT$3,340,758,209 (NT$1.8 per share).
3. Expected material changes to the dividend policy: None.

(VII) Effect to Business Performance and EPS of the Proposed Stock Dividends Distribution: Not applicable.

(VIII) Compensation for Employees, Directors, and Supervisors

1. Percentage or scope of compensation for employees, directors and supervisors provided in the Company's Articles of Incorporation

   According to the Articles of Incorporation, if there is profit for the year, 15% and 2% (or below) of the remaining balance should be allocated as employee and director compensation after accumulated losses have been deducted from the profit. Employee compensation should also be distributed to employees of subordinate companies that meet certain conditions.
2. The basis for estimating the amount of employee, director, and supervisor compensation, for calculating the number of shares to be distributed as employee compensation, and the accounting treatment of the discrepancy, if any, between the actual distributed amount and the estimated figure, for the current period

   The Company's employee and director compensation in 2021, as stipulated by the Articles of Incorporation, were NT$2,396,656,310 and NT$319,554,174 respectively. The basis of the above estimate is the balance after deducting accumulated losses from the profit of the previous year. If the actual distribution amount differs from the estimated figure, accounting treatment will be given to the changes. The amount will be adjusted in the following year.
3. Distribution of compensation approved in the board of directors meeting

   On February 25, 2022, the Board of Directors approved NT$2,396,656,310 for employee compensation and NT$319,554,174 for director compensation.

4. Information of distribution of compensation of employees, directors, and supervisors for the previous year, and, if there are any discrepancies between the actual distribution and the recognized employee, director, or supervisor compensation, and the discrepancy, cause, and its treatment: None.

(IX) Redemption of Common Stock: None.

II. **Corporate Bonds:** None.

III. **Preferred Shares:** None.

IV. **Global Depository Receipts:** None.

V. **Employee Stock Options**: None.

VI. Operation of Restricted Stock Awards

(I) New Shares of Employee Restricted Stock Awards

March 29, 2022

Types of new shares of employee Restricted Stock Awards	The 1st issuance of 2019 New shares of employee Restricted Stock Awards Plan
Effective date	October 8, 2019
Distribution date	October 21, 2019
Issue date	June 16,2020
New Shares of employee Restricted Stock Awards issued	16,400,220 shares
Issued price	NT$0
Ratio of New shares of employee Restricted Stock Awards to total issued	0.89%
The vesting conditions of new shares of employee Restricted Stock Awards	(1) Remain employed by the Company within one year after the grant date; and has a current year's performance rating of A0 or A1: 40% of restricted shares will be vested. (2) Remain employed by the Company within two years after the grant date; and has a current year's performance rating of A0 or A1: 30% of restricted shares will be vested. (3) Remain employed by the Company within three years after the grant date; and has a current year's performance rating of A0 or A1: 30% of restricted shares will be vested.
Restricted rights of new shares of employee Restricted Stock Awards	(1) Except for being inherited, the new shares of employee Restricted Stock Awards not be sold, transferred, pledged, or gifted to others or disposed of using any other methods. (2) The new shares of employee Restricted Stock Awards shall be kept in a stock trust. (3) When a new share is returned in cash due to the Company's capital reduction, the refund of the vested capital loss shall be under custodian trust. In accordance with the issuance method, such capital and shares shall be granted if the vesting conditions for new shares of employee restricted stock awards are met. The vested shares are granted to employees without interests; if the vested conditions are not met, such cash will be recovered by the Company.
Custody status of new shares of employee Restricted Stock Awards	The exercise of shareholder rights, while the new shares of employee Restricted Stock Awards restricted are held during trust period shall be in accordance with the custodial agreement.
Measures to handling employees that do not meet the vesting conditions for receiving or subscribing to new shares	The Company will redeem and cancel the granted but not yet vested shares
Number of new shares of employee Restricted Stock Awards taken back or bought back	375,919 shares
Number of released new shares of employee Restricted Stock Awards	11,250,935 shares
Number of unreleased new shares of employee Restricted Stock Awards	4,773,366 shares
Ratio of unreleased new shares of employee Restricted Stock Awards to total issued (%)	0.26%
Impact on shareholder's equity	Dilution of the Company's EPS during the vesting period is limited and should not have a significant impact on shareholders' equity.

(II) New Shares of Employee Restricted Stock Awards received by Managers and the Top Ten Employees

March 29, 2022

<table>
<tr><th rowspan="2"></th><th rowspan="2">Title</th><th rowspan="2">Name</th><th rowspan="2">No. of New Restricted Shares</th><th rowspan="2">New Restricted Shares as a Percentage of Shares Issued</th><th colspan="4">Released</th><th colspan="4">Unreleased</th></tr>
<tr><th>No. of Shares</th><th>Issued Price (NT$)</th><th>Amount (NT$ thousands)</th><th>Released Restricted Shares as a Percentage of Shares Issued</th><th>No. of Shares</th><th>Strike Price (NT$)</th><th>Amount (NT$ thousands)</th><th>Unreleased Restricted Shares as a Percentage of Shares Issued</th></tr>
<tr><td rowspan="17">Managers</td><td>CEO</td><td>Miin Wu</td><td rowspan="17">3,501,000</td><td rowspan="17">0.189%</td><td rowspan="17">2,450,700</td><td rowspan="17">0</td><td rowspan="17">0</td><td rowspan="17">0.132%</td><td rowspan="17">1,050,300</td><td rowspan="17">0</td><td rowspan="17">0</td><td rowspan="17">0.057%</td></tr>
<tr><td>President</td><td>C. Y. Lu</td></tr>
<tr><td>Senior Vice President & Chief Marketing Officer</td><td>Tom Yiu</td></tr>
<tr><td>Vice President</td><td>F. L. Ni</td></tr>
<tr><td>Vice President</td><td>Paul Yeh</td></tr>
<tr><td>Vice President</td><td>Yen-Hie Chao</td></tr>
<tr><td>Vice President</td><td>Chun-Hsiung Hung</td></tr>
<tr><td>Vice President</td><td>Jui-Kun Chen</td></tr>
<tr><td>Vice President</td><td>Jon-Ten Chung</td></tr>
<tr><td>Vice President.</td><td>Kuang-Chao Chen (Note 1)</td></tr>
<tr><td>Senior Associate V.P.</td><td>Wen-Pin Lu (Note 2)</td></tr>
<tr><td>Head of Emerging R&D</td><td>Ke-Zhong Wang (Note 3)</td></tr>
<tr><td>Executive Director</td><td>Hsin-Cheng Liu</td></tr>
<tr><td>Executive Director</td><td>Kai-Wen Tu</td></tr>
<tr><td>Executive Director</td><td>Ting-Chang Lin</td></tr>
<tr><td>Executive Director</td><td>Kun-Lung Chang</td></tr>
<tr><td>Project Executive Director</td><td>Hui-Chi Li</td></tr>
<tr><td rowspan="10">Employees</td><td>Senior Director</td><td>Han-Song Chen</td><td rowspan="10">1,192,000</td><td rowspan="10">0.064%</td><td rowspan="10">834,400</td><td rowspan="10">0</td><td rowspan="10">0</td><td rowspan="10">0.045%</td><td rowspan="10">357,600</td><td rowspan="10">0</td><td rowspan="10">0</td><td rowspan="10">0.019%</td></tr>
<tr><td>Senior Director</td><td>Ta-Hung Yang</td></tr>
<tr><td>Senior Director</td><td>Shuo-Nan Hung</td></tr>
<tr><td>Senior Director</td><td>Tao-Cheng Lu</td></tr>
<tr><td>Senior Director</td><td>Yen-Hao Shih</td></tr>
<tr><td>Senior Director</td><td>Keng-Hui Chen</td></tr>
<tr><td>Project Director</td><td>Ming-Xiang Chen</td></tr>
<tr><td>Project Director</td><td>Suzuki Junhiro</td></tr>
<tr><td>Project Director</td><td>Ling-Wu Yang</td></tr>
<tr><td>Project Director</td><td>Nan-Tzu Lien</td></tr>
</table>

	Project Director	Tien-Chu Yang										
	Project Director	Hung-Chih Li										
	Project Director	Rong-Yu Xie										
	Project Director	Tong Luo										

Note 1: Promoted to Vice President on February 25, 2022

Note 2: Promoted to Senior Associate V.P. on February 25, 2022

Note 3: Promoted to Head of Emerging R&D on February 25, 2022

VII. Mergers, Acquisitions or Issuance of New Shares for Acquisition of Shares of other Companies: None.

VIII. Financing Plans and Implementation

As of one quarter before the printing date of this annual report, the Company has not experienced any previous issuance or private placement of marketable securities that have not been completed, or that have been completed but any benefits are yet to be recorded within the past three fiscal years.

Chapter V. Operation Summary

I. Business Activities

(I) Scope of Business:

1. Main Business:

The Company's main business concentrates on the design, manufacture, sales, and foundry services of integrated circuits and memory chips, as well as the commissioned design, development, and consultancy of relevant products. The Company concurrently engages in the import and export of relevant affairs. For the main businesses of the consolidated company, please refer to the main section regarding the Consolidated Financial Report on page 172 of this annual report.

2. Business Proportion

Unit: NT$ thousands

Products	2020		2021	
	Net Revenue	%	Net Revenue	%
Flash	20,953,865	52.65%	33,504,267	66.25%
ROM	16,022,159	40.26%	13,556,983	26.81%
Foundry	2,794,731	7.02%	3,501,876	6.92%
Others	30,192	0.07%	9,865	0.02%
Total	39,800,947	100.00%	50,572,991	100.00%

3. Current Products of the Company

Product Category	Main Products
Non-Volatile Memory IC	Flash Memory (NOR Flash, NAND Flash)
	Read-Only Memory (ROM)
Wafer Foundry Services	Sub-micron logic process / high voltage CMOS and BCD process
	BCD and logic processes of embedded non-volatile memory (NVM)

Currently, most of Macronix's flash memory products are NOR Flash. With excellent technology and quality, the product range covers various storage capacities, including 3V or 1.8V operating voltage, Serial or Parallel interfaces, and mainstream or niche specifications. Macronix has all products ready, and they are widely adopted by customers around the world.

In addition to NOR Flash, the independently-developed NAND Flash product line has stable quality and mass production, making Macronix one of the few suppliers of both NOR Flash and NAND Flash in the world.

Macronix has also passed the IATF 16949 certification of the quality management system in the fast-growing automotive electronics industry. The Company has equally managed to win the reliability standard AEC-Q100 certification for the two main product categories, namely NOR Flash and NAND Flash. Passing the two most important standards in the electronic IC supply chain makes Macronix an important partner of the first-class automotive electronics manufacturers.

Macronix's read-only memory products adopt world-class technologies with a complete lineup of storage capacity and a high level of security. With rich manufacturing experience and a comprehensive management system, Macronix has reached the highest level in the world in terms of delivery speed and shipment volume.

4. Plans for New Product Development

(1) Non-Volatile Memory Product Line

The Company makes good use of the advantages of the new equipment in the 12-inch wafer lab to create a higher-level R&D environment, and continues to develop the following two core technologies of the new generation. The Company will create the innovative memory product series and combinations based on this foundation.

※ 3D NAND Flash: The second-generation project

※ NOR Flash: 45-nanometer plan

(2) Wafer Foundry Service

※ Integrating Macronix's own embedded non-volatile memory logic platform technology into MCU and IoT markets

※ BCD (Bipolar-CMOS-DMOS) technology integrated with Macronix's own embedded non-volatile memory that will greatly enhances the added value of analog and smart power management ICs.

※ Embedded ROM and OTP are applied to voice ICs.

(II) State of the Industry

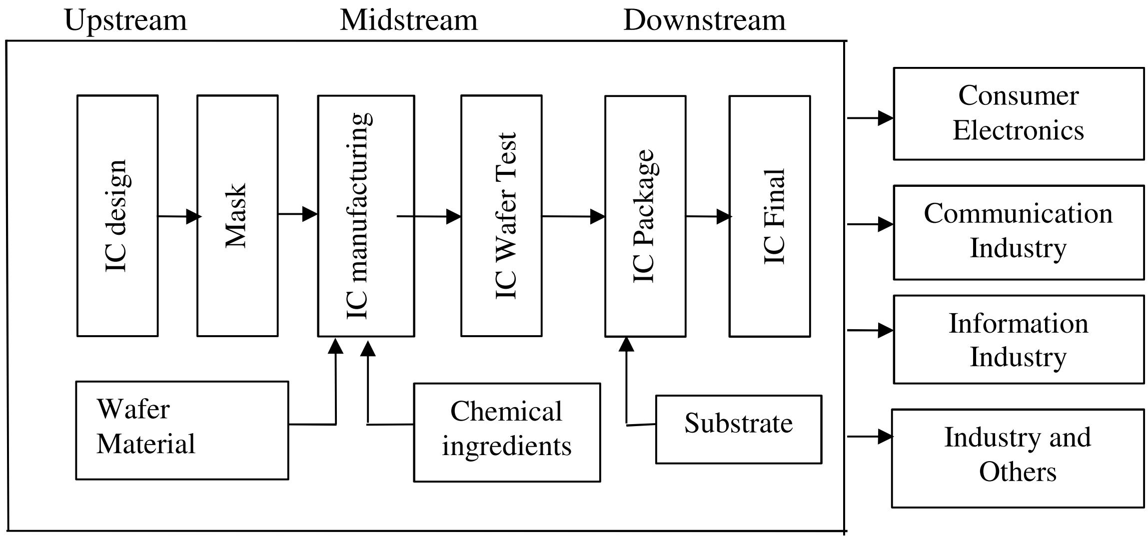
1. Industry Development and Competition

Memory IC can be divided into two types according to their functions. Volatile memory refers to the memory that loses data when the power has been switched off, such as DRAM and SRAM. On the other hand, non-volatile memory retains the memory even when the power is switched off. The Company specializes in non-volatile memory, especially Flash Memory and ROM (read-only memory).

Flash Memory can be read and written repeatedly, and is widely used in consumer electronics, communications, information, mobile phones, automotive, and industrial fields. Macronix is the world's leading supplier of NOR Flash and SLC NAND Flash. It has the advantages of sound finance, stable supply, a 12-inch wafer lab, and production capacity. It will grow with the development of emerging applications in the future.

The special feature of ROM is that the data cannot be modified after storage. The main advantage is large storage capacity with low cost. Its application focuses on electronic gaming cards, electronic toys, and game consoles. The industry has become application-oriented. Macronix has long been ranked as the largest ROM supplier in the world, with more than half of the market share.

2. Correlation with Upstream, Midstream, and Downstream Sections of the Industry



Source: ITRI Industrial Economics and Knowledge Center

The Company provides customers with a complete range of flexible solutions from R&D, manufacturing to backend package testing and is one of the few professional suppliers in the world that specialize in non-volatile memory.

(III) Overview of Technology and Research & Development

1. R&D Expenses

Unit: NT$ thousands

Item \ Year	2020	2021
R&D expenses	4,115,844	5,615,664
Operating Revenue	39,800,947	50,572,991
% of R&D expenses to Operating Revenue	10%	11%

2. Successfully Developed Technologies or Products

In 2021, Macronix successfully implemented product and technology innovations to extend its superior product competitiveness.

(1) Technology Innovation

※ The innovation and demonstration of the second-generation 3D NAND flash IC and control technology.

(2) Product Innovation

※ Suitable for the applications of automotive electronic and IoT, and the innovation and mass production of the new-generation-designed ultra-fast encryption and protected NOR Flash.

※The innovation and mass production of the first-generation 3D NAND flash IC and control technology.

※ Macronix's mature proprietary 0.11 μm embedded non-volatile memory technology and 0.18 μm BCD (Bipolar-CMOS-DMOS) technology are integrated to provide foundry services in MCU and analog IC related markets.

(3) Intellectual Rights Achievements

Macronix is persistent in its pursuit of innovation and invention. It is proactive in its application for patents and in the deployment of its international patent strategy network. The Company regularly reports on issues related to intellectual property in each quarterly meeting of the board of directors.

Intellectual Property Strategy: In today's international industrial environment, intellectual property rights are gradually becoming the weapons used in the competition for strategic technologies. For Macronix, a company that strives to become a mainstream leader and a global provider of comprehensive solutions, the key strategy to sustainable operations is in the planning, deployment, production, and accumulation of equal amounts of quality and quantity in its patent rights strategy network, which entails the creation of high-quality innovative technology and intellectual property that can protect high-value-added products.

Intellectual Property Management: To encourage employees to pro-actively submit their inventions, Macronix has established the Patent Management and Incentive Guidelines, and has also introduced the Intellectual Property Rights and Patent Service Network, which incorporates patent engineers, developers, and the patent office and offers real-time control of each step in the intellectual property process.

Intellectual Property Risk and Countermeasures: The Company values R&D and innovation, and actively applies for patents as a form of intellectual property rights. By the end of 2021, the Company has obtained 3,215 patents in the U.S., 3,030 patents in Taiwan, 2,090 patents in China, and 319 patents in other countries. More than 1,200 patents are pending in the patent offices of different countries. The Company will continue to seek the protection of patent and intellectual property rights for the innovative technologies it has developed.

The Company will continue to seek the protection of patent and intellectual property rights for the innovative technologies it has developed.

(IV) Short/Long-Term Business Development Plans

1. Short-term

※ Develop XtraROM® and NAND Flash customized product solutions for video games and entertainment to enhance the business growth of niche-based applications.

※ Provide customized services and promote the compact nature of NOR Flash in order to increase adoption in consumer electronics, information applications, and IoT.

※ Make good use of the high quality of the Company's products and the excellent production management to develop high value-added business in automotive electronics and medical electronics.

※ Macronix's mature proprietary embedded non-volatile memory logical platform and BCD (Bipolar-CMOS-DMOS) technology are integrated to provide foundry services in MCU, IoT, and analog and smart power management IC related markets and make leaders in related markets our long-term clients.

2. Long-term

※ Develop high-capacity NOR Flash and 3D NAND Flash technologies and products to provide solutions for niche applications.

II. Market and Sales Overview

(I) Market Analysis

1. Net Revenue by Geography

Unit: NT$ thousands

Geography \ Year		2020		2021	
		Net revenue	%	Net revenue	%
Domestic		6,867,071	17.25	11,663,044	23.06
Export	Japan	17,745,042	44.59	15,938,468	31.52
	USA	1,441,766	3.62	2,419,083	4.78
	Europe	2,527,467	6.35	3,948,345	7.81
	Asia	11,219,601	28.19	16,604,051	32.83
	Subtotal	32,933,876	82.75	38,909,947	76.94
Total		39,800,947	100.00	50,572,991	100.00

2. Market Share

(1) ROM

The Company's ROM products account for more than 50% of the global market and has been firmly established as the market leader.

(2) NOR Flash

We remain a global leader in non-volatile memory devices with the market share of our NOR flash product line reaching 27.6% in 2021.

3. Competitive Niches

The Company has been developing ROM and Flash technology and products for more than 30 years. The continuous innovation enhances competitiveness while maintaining stable product quality and supply. Recently, IoT and automotive electronics applications are in the ascendant. One of the trends is the need to integrate NOR Flash into compact wafer products. Macronix's emphasis on quality and supply is its competitive advantage.

4. Favorable and Unfavorable Factors Affecting the Company's Development Prospects and Corresponding Countermeasures

The Company's operations and finance are currently sound and stable. The independent technologies and production of Flash Memory and ROM, and stable supply has won customers' trust as Macronix's competitive advantage.

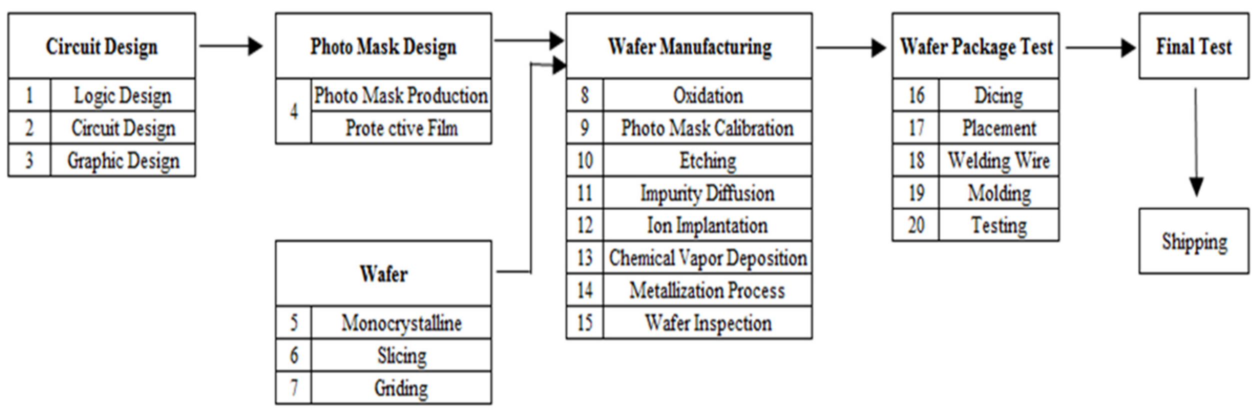
In order to achieve sustainable development, the Company will continue to develop advanced non-volatile memory technology and update the 12-inch fab equipment to create an advanced R&D environment and production base. Our goal is to provide customers with superior products and services in order to gain a stable foothold in the industry.

(II) Important Applications and Production Processes of the Primary Products

1. Major Uses of the Primary Products

Product Category	Primary Products	Use and Function
Non-Volatile Memory IC	Flash Memory	Used in mobile phones, set-top boxes, IoT, personal computers, digital cameras, automotive electronics, CD players, printers, hard drives, network devices, tablets, wireless communications (Bluetooth, WLAN), and large entertainment equipment.
	ROM	Mainly used in TV game cards, electronic entertainment equipment, electronic toys and so on.
Wafer Foundry Services	Sub-micron logic process / high voltage CMOS and BCD process	Providing high-voltage CMOS manufacturing technology in order to serve analog IC design customers.
	BCD and logic processes of embedded non-volatile memory (NVM)	Provides integrated technology of BCD and logic processes of embedded NVM to serve microcontroller and smart power management IC design customers.

2. Production Process



(III) Supply of Primary Raw Materials

The ICs manufactured by our fabs are mainly made of silicon wafers, photoresist chemicals, and special gases. The suppliers are well-known large factories at home and abroad, with stable supply and excellent quality.

(IV) Suppliers/Customers Accounted for at Least 10% of Purchase/Sales and Respective Amount and Percentage

1. Information on Major Suppliers in the Last Two Fiscal Years

Unit: NT$ thousands

	2020				2021			
Item	Name	Amount	Percentage of Annual Net Purchase (%)	Relationship with the Issuer	Name	Amount	Percentage of Annual Net Purchase (%)	Relationship with the Issuer
1	Supplier A	6,209,245	52.25	Related party	Supplier A	5,895,828	49.27	Related party
	Others	5,674,686	47.75		Others	6,069,885	50,73	
	Net Purchase	11,883,931	100.00		Net Purchase	11,965,713	100.00	

Note 1: In line with regulations regarding IFRSs since 2013, the figures in this chart are based on the consolidated financial statements.

Note 2: Names of suppliers taking up more than 10% of the total purchase for the last two years and the amount as well as percentage are listed. However, because the contract stipulates that the name of the supplier should not be disclosed, or the counterparty is an individual but not a related party, it can be represented by a code instead.

Note 3: The increase/decrease is caused by changes in market trends and customer demands.

2. Information on Major Customers in the Last Two Fiscal Years

Unit: NT$ thousands

	2020				2021			
Item	Name	Amount	Percentage of Annual Net Sales (%)	Relationship with the Issuer	Name	Amount	Percentage of Annual Net Sales (%)	Relationship with the Issuer
1	Customer A	16,101,433	40.45	Related party	Customer A	13,704,352	27.10	Related party
	Others	23,699,514	59.55		Others	36,868,639	72.90	
	Net Sales	39,800,947	100.00		Net Sales	50,572,991	100.00	

Note 1: Names of customers taking up more than 10% of the total sales for the last two years and the amount as well as percentage are listed. However, because the contract stipulates that the name of the customer should not be disclosed, or the counterparty is an individual but not a related party, it can be represented by a code instead.

Note 2: The increase/decrease is caused by fluctuating customer needs.

(V) Table of Production Volume and Value in the Most Recent Two Years

Capacity/Output Unit: Kea or PC
Revenue Unit: NT$ thousands

Main Products \ Year / Produce Amount	2020			2021		
	Capacity	Output	Amount	Capacity	Output	Amount
Flash		2,286,843	12,373,011		3,017,076	17,758,738
ROM		139,839	10,800,102		141,907	9,972,945
Subtotal (Kea)		2,426,682	23,173,113		3,158,983	27,731,683
Foundry (PC)		323,317	2,214,175		297,067	1,912,611
Capacity (PC)	1,167,500			1,163,352		

Note 1: Capacity refers to the quantity that can be produced under normal operations using existing production equipment after the company has taken factors such as necessary downtime, holidays, etc. into consideration.
Note 2: If the product is substitutable, capacity can be jointly calculated and explained in the note.
Note 3: Capacity and Foundry output are estimated in 8-inch equivalent wafers.
Note 4: Amount refers to the manufacturing cost of the finish goods that are available for sale in the year.

(VI) Sales & Shipments in the Most Recent Two Years

Unit: Shipments (Kea or PC)
Revenue Unit: NT$ thousands

Products \ Year / Sales & Shipments	2020				2021			
	Domestic		Export		Domestic		Export	
	Shipments	Net revenue	Shipments	Net revenue	Shipments	Net revenue	Shipments	Net revenue
Flash	679,862	4,721,667	1,411,679	16,232,198	916,239	8,926,375	1,779,043	24,577,892
ROM	-	-	137,720	16,022,159	-	-	139,585	13,556,983
Foundry (PC)	242,692	2,143,117	80,836	651,614	230,362	2,736,069	64,253	765,807
Others	-	2,287	-	27,905	-	600	-	9,265
Total (Kea)	679,862	6,867,071	1,549,399	32,933,876	916,239	11,663,044	1,918,628	38,909,947

Note: The total amount of sales does not include Foundry (PC); unit of Foundry shipments is 8-inch equivalent wafers.

III. Employees Information

(I) Company Employees Information

Year		2020	2021	By the End of March 29, 2022
Number of employees	Management Personnel	787	724	712
	R&D and Technical Personnel	1,662	1,664	1,641
	Operators	1,443	1,402	1,366
	Total	3,892	3,790	3,719
Average age		38.4 years old	38.5 years old	39.5 years old
Average Length of Service		11 years and 9 months	11 years and 11 months	12 years and 1 months
Education Level (%)	Ph.D.	2	2	2
	Master's Degree	30.6	31.6	31.7
	Bachelor's	50.1	49.7	49.5
	High School	17.1	16.5	16.6
	Below High School	0.2	0.2	0.2

(II) Consolidated Employees information

Year		2020	2021	By the End of March 29,2022
Number of employees	Management Personnel	118	118	113
	R&D and Technical Personnel	155	158	149
	Operators	0	0	0
	Total	273	276	262
Average age		39.3 years old	40 years old	40.8 years old
Average Length of Service		8 years and 7 months	9 years and 2 months	9 years and 6 months
Educational Level (%)	Ph.D.	0.0	0.7	0.8
	Master's Degree	38.5	38.4	37.4
	Bachelor's	59.7	58.7	59.5
	High School	1.8	2.2	2.3
	Below High School	0.0	0.0	0.0

IV. Environmental Protection Expenditures

(I) Any losses suffered by the company in the most recent fiscal year and up to the annual report publication date due to environmental pollution incidents (including any compensation paid and any violations of environmental protection laws or regulations found in environmental inspection, specifying the disposition dates, disposition reference numbers, the articles of law violated, and the content of the dispositions), and disclosing an estimate of possible expenses that could be incurred currently and in the future and measures being or to be taken. If a reasonable estimate cannot be made, an explanation of the facts of why it cannot be made shall be provided.

The Company has not been penalized for polluting the environment in the most recent fiscal year and up to the printing date of this annual report. The Company will continue to keep up with equipment maintenance and the implementation of an environmental management system in the future.

(II) Countermeasures and Expenditures

1.The Company's investment and improvement fees in environmental protection engineering, equipment operation maintenance fee, depreciation expenses for environmental protection equipment, clearance and disposal fees, and detection, project research, and training expenses amounted to NT$171,856,000 in 2021.

2. Impact on competitive position and capital expenditures:

(1) The Company promotes energy-saving, water-saving, and waste reduction by investing in and maintaining various pollution prevention equipment. The Company continues to work toward the goal of establishing a green wafer plant that is high in efficiency and low in pollution.

(2) The Company has established the "ISO 14001 Environmental Management System", "ISO 14064-1 Guidelines for quantification and reporting of greenhouse gas emissions and removals at the organization level", "IECQ-QC080000 Hazardous Substance Process Management System", etc., and continues to invest manpower in the promotion and maintenance of strengthening its competitive edge on the international stage.

(3) The Company has received the Green Partner certificate from customers in meeting their requirements for “Green Products”.

(4) The Company has received multiple awards from the competent authority in recent years. In 2021, the Company won awards including the " Hsinchu Science Park Bureau Adoption Park Green Space, Excellent Achievement Adoption, an Excellent Private Enterprise Green Procurement Unit, and the 2021 Outstanding Adopter of Air Quality Purification Zones from the Environmental Protection Administration, etc.

(5) The Company purchases products with the "Green Mark" from the Environmental Protection Administration or ones with the Ministry of Economic Affairs' "Energy Saving" and "Water Saving" labels, such as energy-saving lamps, water dispensers, personal computers, cleaner supplies, and peripheral equipment, etc., to fulfill its corporate social responsibilities.

(6) We adopted a bicycle path in Hsinchu City and became responsible for its cleaning and maintenance, and gained the recognition of the competent authority and citizens.

(7) Based on respect and care toward social responsibility, the Company will continue to engage and invest in environmental protection in order to achieve the goal of sustainable development.

(III) The Company's Measures in Response to Restriction of Hazardous Substances (RoHS)

With the trend of green consumption awareness and the increasingly strict international environmental protection regulations, the Company strives to manage chemical substances in product components in addition to efforts of reducing environmental pollution caused by the production process.

1. Green Products
   (1) The products comply with the requirements of the European Union's Restriction of Hazardous Substances (RoHS).
   (2) The products meet the requirements of the European Union's Substance of Very High Concern (SVHC) and ELV (End-of-Life Vehicle).
   (3) No "conflict minerals" are used in the products (conflict minerals refer to minerals such as gold, tin, tungsten, tantalum and those related to labor exploitation in the Democratic Republic of the Congo and its adjoining countries).
   (4) The products have obtained green product certificates from internationally renowned customers such as Sony.
2. Management System
   (1) In September 2007, the Company passed the certification of the IECQ QC 080000 Hazardous Substance Process Management System. It obtained the certification once again in 2021, which ensured the effectiveness of green products management.
   (2) The Company Implements Risk Assessment of Suppliers (RAS) to ensure that the EU RoHS Directive and the requirements of SVHC are implemented both for the upstream and downstream of the supply chain, in compliance with international regulations and customer specifications.

V. Labor Relations

(I) Employee Benefits

1. Labor insurance and national health insurance: Employees' insurance and national health insurance coverage is handled according to laws and regulations. The employees enjoy the protection of both labor insurance and national health insurance from the first day of work.

2. Group insurance: Employees are covered by the Company's group insurance policies since the first day of work. The premiums are paid by the Company according to their positions. Group insurance is also open to the employees' family members provided that the employees pay the premiums, which provides extra protection and care for their families.

3. Cancer insurance: The employees receive cancer insurance coverage from the first day of work with the premiums borne by the Company. The employees can opt to pay for the same coverage for their spouses and children.

4. Travel insurance for business trips abroad: Employees' travel insurance is provided by the Company during business trips, covering incidents such as accidental death, injuries, and medical care.

5. Restaurants, accommodation, transportation, free parking space, and healthcare services.

6. Bonuses and employee benefits

7. Employee recreation and fitness center: The center is equipped with a 50-meter heated swimming pool, a hydrotherapy SPA, a children's swimming pool, an aerobics classroom, a fitness room, a massage room, karaoke, courses for billiard, table tennis, badminton, and squash, a family reading room, a children's play room, a video game room, and a common room.

8. Employee Welfare Committee: In order to promote employee welfare, the Company has set up the Employee Welfare Committee in accordance with the provisions of the Employee Welfare Fund

Act. The Company sets aside employee welfare fund to organize various welfare measures, activities, and the operation and management of employee clubs.

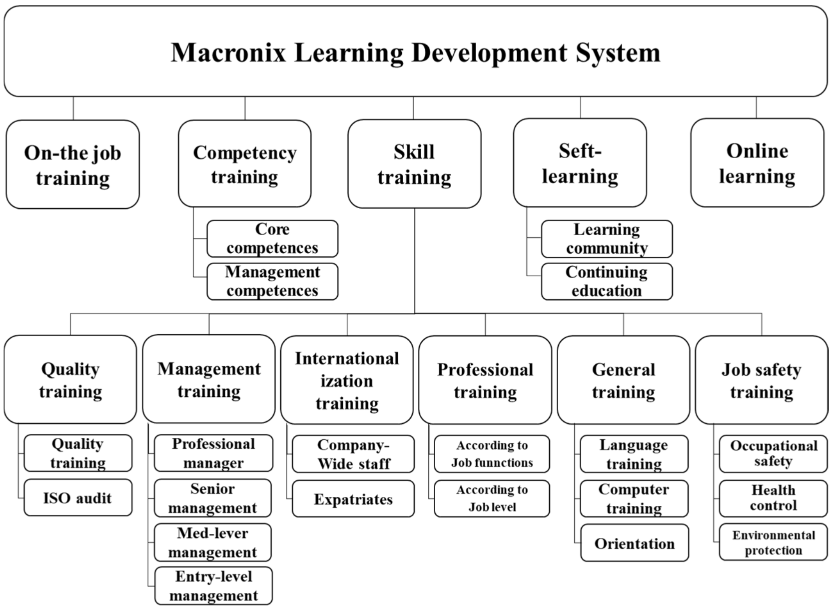
(II) Staff Training and Development

The Company held a total of 1,658 internal and external training courses in 2021. The average training hours of employees were 62.8 hours. The total number of trainees was 80,925 and the total number of their training hours was 239,205 hours. The total training cost was NT$9,488,797.

Macronix's performance management system is closely integrated with individual development plans. Performance interviews are conducted twice a year to examine the setting of individual performance goals and the achievement of individual performance goals and organizational goals. Employees can communicate and discuss with supervisors face-to-face based on the individual job performance and career development needs. A personal development plan is customized to develop various professional knowledge and skills in a step-by-step manner.

※ Comprehensive Learning Development System

The learning development system of the Company is planned according to its strategies, job requirements, and individual development.



The Company's training is designed based on the principles of advancement, function, planning, and continuity. Through a clear and strategically oriented system structure, the Company provides clear and detailed learning maps for the employees to understand their learning path.

1. The Company's learning roadmap system consists of four categories:

(1) A newcomer roadmap is designed for new recruits to shorten the adjustment period and quickly integrate into corporate culture.

(2) A competency roadmap is developed in accordance with the Company's values, in the hope that employees can demonstrate behavior in line with the Company's expectations.

(3) The management roadmap is developed for different management levels in order to strengthen their management capacity step-by-step.

(4) Professional roadmaps are developed according to professional competences required in different fields of work; internal and external lecturers are employed to carry out professional training courses to strengthen employees' professional capacity.

2. Other training courses:

(1) Providing language learning in line with individual needs to strengthen employees' language skills and competitiveness; organizing computer application software courses to improve work efficiency.

(2) Offering opportunities for employees to participate in foreign academic seminars to understand the latest development trends of technology and industry abroad; providing opportunities of working overseas which can increase international vision and personal competitiveness

※ Diverse Learning Channels

The Company offers different learning channels to meet different employee learning needs.

1. Internal training:
The Company hires internal and external lecturers to hold various training courses in the Company.

2. External training:
The employees can participate in external training courses and seminars that are closely related to work.

3. On-the-job training:
Through professional learning in the workplace, the employees can "learn by doing" and acquire the knowledge and skills necessary for work.

4. Online learning:
The employees can use the Internet to learn without the limits of time and space and learn according to their individual learning speed.

5. Self-learning:
The employees can engage in cross-disciplinary learning of knowledge, skills, etc. according to their personal career plan. They can also advance individual learning through reading or participating in on-the-job training courses.

※Comprehensive Training Facilities

Macronix Academy's comprehensive facilities and professional equipment enable each employee to study in a good environment.

1. Audio-visual study room: With multimedia computers, books, CDs, video tapes, and audio tapes, the rich learning channel allows employees to learn without boundaries.
2. Training classroom: Several lecture halls and group discussion rooms provide appropriate learning environment according to the curriculum design.
3. Computer classroom: One person is equipped with one computer to maximize learning efficiency.
4. International lecture hall: The hall can accommodate 250 people, and it is the ideal venue for large-scale training, seminars, and lectures.
5. Library: There are a large number of books, periodicals, and audio-visual materials to meet diverse reading needs.

(III) Retirement system

The Company's retirement policy is set according to the relevant provisions of the Labor Standards Act, and the “Retirement Reserve Supervision Committee” has been set up to supervise and manage the retirement reserve. In addition, pension is withheld according to the relevant provisions of the Labor Pension Act.

(IV) Employee Working Environment and Personal Safety Protection Measures

In order to achieve sustainable management, the Company implements Environmental Safety and Health Policy and lays emphasis on corporate social responsibility. It has obtained outstanding achievements in protecting the environment as well as the safety and health of employees. It has won many awards from the government and recognition from customers. The specific management measures include:

1. Management System

(1) Passed verification from ISO 14001 Environmental Management System, ISO 45001 Occupational Safety and Health Management System, and TOSHMS Taiwan Occupational Safety and Health Management System.

(2) Verified by the IECQ QC080000 Hazardous Substance Process Management System. The products meet the requirements of EU RoHS and have obtained the Green Product (GP) certificates from international customers.

(3) Passed the verification "IOS 14064-1 Guidelines for quantification and reporting of greenhouse gas emissions and removals at the organization level".

2. Environmental Protection and Safety Management

(1) Implementing strict and comprehensive monitoring of the work environment and monitoring air quality on site 24 hours a day to ensure the health and safety of employees.

(2) Complying with laws and regulations as well as customer requirements to regularly identify and review environmental safety management measures.

(3) Setting up various environmental pollution prevention measures (water, air, waste, toxic waste, and noise) and strictly monitoring the quality of the environment.

(4) Implementing "Green Procurement" to purchase equipment or product with the domestic and foreign Environmental Protection Label, such as "Environmental Protection Label" from the Environmental Protection Administration or the "Energy Conservation Label" and "Water Conservation Label" from the Ministry of Economic Affairs, which include energy-saving lamps, water dispensers, personal computers and their peripheral equipment, etc. to realize corporate social responsibility; recognized as an Excellent Green Procurement Unit in the private sector by the Hsinchu Municipal Government in 2021.

(5) Fully providing employees with personal protective equipment (PPE) and comprehensive safety, health, and environmental protection training.

(6) Establishing an Emergency Response Team (ERT) with dedicated staff on call 24 hours a day and establishing a Business Continuity Plan (BCP), implementing training, to ensure the safety of all employees and the Company's factory buildings.

(7) Regularly inspecting the fire safety equipment and complying with the buildings' public safety; regularly holding evacuation drills to improve staff resilience.

(8) Regularly improving and reviewing human factors in the work environment to provide employees with a comfortable work environment.

(9) Assisting the Hsinchu Science Park Administration Bureau to organize the work safety and environmental protection promotion month.

(10) Adopting the Hsinchu Environmental Bikeway and implementing environmental protection public welfare events; won the Outstanding Adopter of Air Quality Purification Zones from the Environmental Protection Administration of the Executive Yuan.

3. Health Management

(1) Regularly holding employee health promotion activities and providing quality health management services. Macronix won the "National Excellent Healthy Workplace – Paradigm in Health Award" from the Ministry of Health and Welfare in 2019.

(2) Regularly bringing doctors on site to provide employee health consultation and health promotion activities, as well as conducting health risk assessment and graded health management.

(3) The responsible unit collects the latest epidemic prevention information to strengthen the epidemic prevention management, provides vaccination services and gives "anti-epidemic packages" for employees on business trips abroad to protect their health.

(4) In response to the COVID-19 outbreak the "Epidemic Prevention Office" was established to carry out overall planning of the matters related to epidemic prevention, and to conduct rolling review and adjustment of emergency response plans based on the situation in Taiwan and overseas, thereby preventing the pandemic from affecting our operations, while protecting the health of our employees and visitors.

(5) Improving the employee assistance program and providing the best psychological counseling services.

(6) Implementing maternal health protection measures to take care of pregnant employees and implementing the principle of three noes (no night shifts, no carrying heavy loads, and no engaging in free radiation operations) to build a friendly workplace.

(7) Regularly monitoring the work environment to ensure a good working environment and protect employee health.

(8) Conducting spot checks of food ingredients such as meat, oil, and flour products in the Company's kitchen; entrusting government-accredited institution to inspect and ensure the safety of employees’ food.

(9) Setting up a "breastfeeding room" for employees, which has gained employee satisfaction with its lovely environment and comprehensive equipment and received the triennial "Excellence Award" from the Hsinchu City Public Health Bureau in 2020.

(V) Measures for Safeguarding Labor Agreements and Employees' Rights and Interests

1. The Company regularly organizes various meetings as channels of communication, including orientation, departmental meetings, cadre meetings, and labor-management meetings, etc. The goal is to facilitate communication and ensure all opinions are heard.
2. The Company has set up the "No Topic is Off Limits" suggestion box for the employees to communicate and express their opinions. Employees can make inquiries, suggestions, and complaints through the suggestion box.
3. The Company has set up a paper and digital bulletin board to facilitate timely delivery of information that is relevant to the employees' rights and interests.
4. "Regulations Governing Sexual Harassment" has been developed to prevent sexual harassment and maintain gender equality at work, detailing the prevention, complaint filing, and punishment of sexual harassment.

5. The Company has set up the "Our Family Employee Relationship Portal Website" as a channel of communication with features including an interface for communicating employee needs directly with the management team, information sharing, lifestyle tips sharing, passing on culture, and employee assistance. Positive behavior is encouraged to enhance motivation and maintain a harmonious labor-management relationship.

(VI) List any Losses Suffered by the Company in the Most Recent Fiscal Years and Up to the Annual Report Publication Date Due to Labor Disputes, Including any Violations of the Labor Standards Act found in Labor Inspection, Specifying the Disposition Dates, Disposition Reference Numbers, the Articles of Law Violated, the Substance of the Legal Violations, and the Content of the Dispositions, and Disclosing an Estimate of Possible Expenses that Could be Incurred Currently and in the Future and Measures Being or to Be Taken. If a Reasonable Estimate Cannot Be made, an Explanation of the Facts of Why It Cannot Be Made Shall Be Provided.

Since its establishment in 1989, the Company has maintained harmonious labor-management relations. There have not been and will not be losses due to labor disputes. The Company has received recognition of the highest level from the competent authority. The awards regarding labor-management relations received in the past five years are as follows:

Year	Awards	Issued by
2017	Sports Enterprise Certification	Sports Administration, Ministry of Education
2017	Awarded Excellence in Workplace Equality Promotion	Hsinchu Science Park Bureau
2017	Award of Excellence for Breastfeeding Room Certification	Public Health Bureau, Hsinchu City
2018	Sports Enterprise Certification	Sports Administration, Ministry of Education
2018	Validated Assessment Program-Gold Level	Responsible Business Alliance
2018	Badge of Accredited Healthy Workplace	Health Promotion Administration, Ministry of Health and Welfare
2018	Healthy Workplace Creative Gold Award	Health Promotion Administration, Ministry of Health and Welfare
2019	CSR Annual Sustainable Elite	SGS Taiwan Ltd. (SGS)
2019	【Paradigm in Health Award】 from the National Excellent Healthy Workplace	Health Promotion Administration, Ministry of Health and Welfare
2019	【Award for Workplace Innovation】from the Creativity Gold Award for Healthy Workplace	Health Promotion Administration, Ministry of Health and Welfare
2019	Healthy Workplace Certification	Health Promotion Administration, Ministry of Health and Welfare
2020	Sports Enterprise Certification	Sports Administration, Ministry of Education
2020	【Award of Excellence】for Workplace Equality Promotion	Hsinchu Science Park Bureau
2020	Platinum Level	Responsible Business Alliance
2020	CSR Annual Sustainable Elite	SGS Taiwan Ltd. (SGS)
2020	Award of Excellence for Breastfeeding Room Certification	Public Health Bureau, Hsinchu City
2021	National Occupational Safety and Health Award-the Enterprise Benchmarking Award	Occupational Safety and Health Administration, Ministry of Labor
2021	Sports Enterprise Certification	Sports Administration, Ministry of Education
2021	Award of Excellence for Workplace Equality Promotion	Hsinchu Science Park Bureau
2021	Award of Excellence for Breastfeeding Room Certification	Public Health Bureau, Hsinchu City

VI. Information Security Management

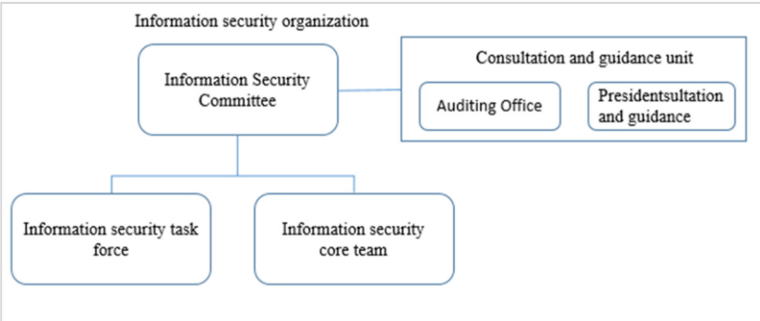
(I) Information Security Management Strategy, Framework, and Efficacy

1.Information Security Policy

Information security is an important issue for the Company's operation. In 2006, the Company has formulated the information security policy and established related management systems that all employees and suppliers should comply with to protect the Company's information assets from internal, external, intentional, or accidental threats and damages, and lower the incidence of information security incidents and mitigate risks arising from the incidents to an acceptable level.
With proactive action to protect the confidentiality, integrity, and availability, the Company could comply with requirements of the competent authorities and related regulations and ensure the normal operation of the Company's business.

2.Information Security Management Organization and Its Responsibilities

To implement our information security policies and ensure the purposes of information security management could be achieved, we established the Information Security Committee that led by the vice president with the highest-level management from all divisions and business units serve as representatives, in addition, we formed the Information Security Core Team and the Information Security Task Force to implement related affairs.



The Information Security Committee is mainly responsible for amending the Company's information security policy, reviewing various information security management systems, and formulating/reviewing material information security work plans, etc. The Information Security Core Team holds monthly meetings to review information security issues and track the progress of improvements; it also arranges interdepartmental meetings from time to time when deemed necessary to ensure related issues can be properly handled in a timely manner. The Information Security Task Force holds meetings as per issue, and it cooperates in information security related operations and assists in the promotion of information security maintenance and management measures.

Information Security Organizations and Its Responsibilities

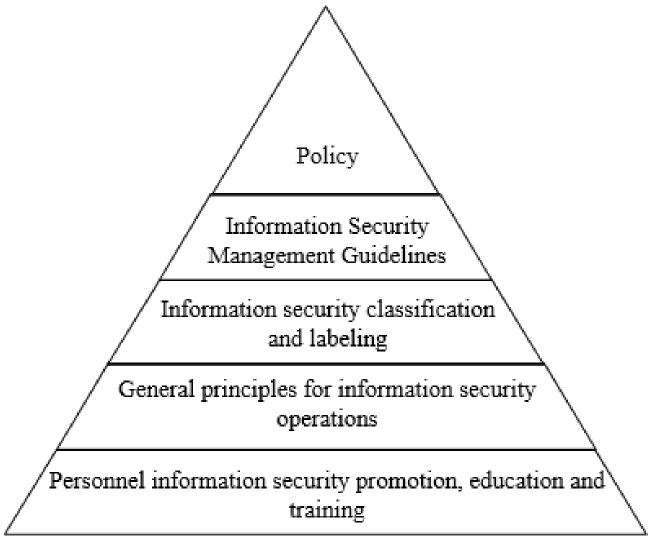
Organization	Responsibilities
Information Security Committee	1. Formulate the Company's information security policy 2. Review information security management systems 3. Formulate/review major work plans for information security
Information Security Core Team	1. Develop information security management systems 2. Formulate information security regulations 3. Promote and implement information security maintenance and management measures 4. Execute the various resolutions of the Information Security Committee 5. Coordinate with the information security task force in performing information security operations 6. Provide consultation on information security management

Information Security Task Force	1. Propose suggestions for improvements on information security maintenance and management measures 2. Carry out information security tasks 3. Act as the information security contact of all units, assist in the promotion of security maintenance and management measures

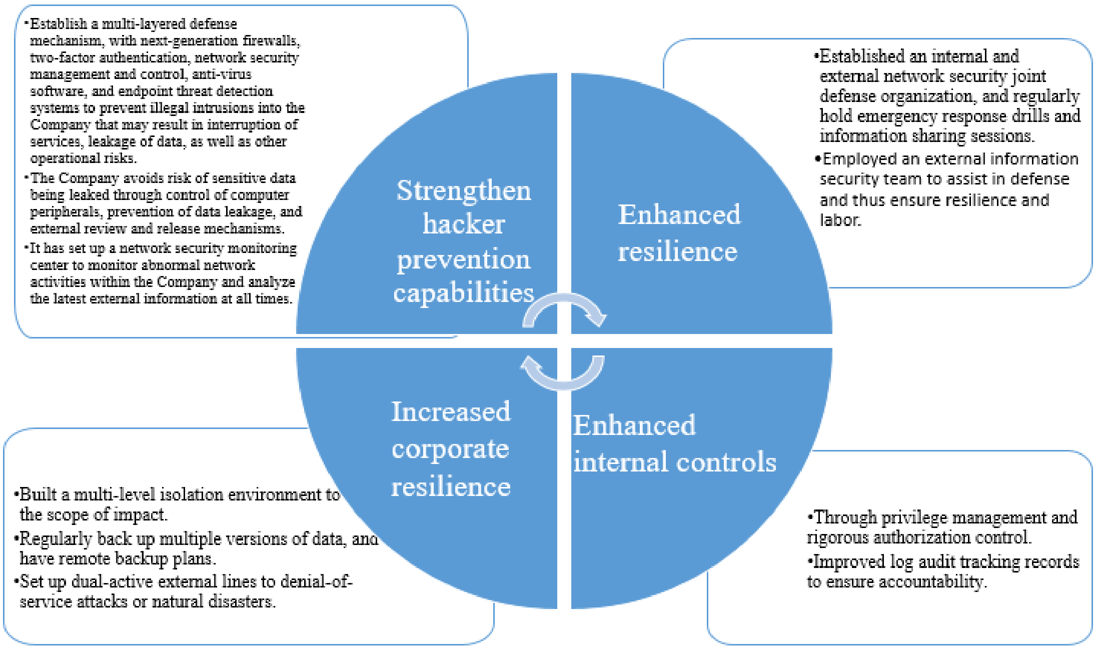
3. Information Security Management Framework

Macronix has formulated relevant management procedures for confidential information protection in terms of policy and standards, classified and labeled information assets of the Company. We utilize a variety of information security mechanisms and system framework designs, such as a DLP (Data Loss Prevention) system, data encryption, file management, network security control, endpoint protection, to provide mechanisms to control and protect confidential information and thereby ensure the best interests of the Company, shareholders, employees, customers, and suppliers.
Macronix also holds educational, training sessions, and promotional campaigns to raise awareness of information security for employees, including but not limited to training programs for new recruits, annual educational training in increasing the awareness of information security of employees, issuing monthly information security e-newsletters, and information security websites establishment, to make "information security" not just an abstract slogan but an internalized policy for employees to protect the Company's confidential assets and clients' confidential information. Furthermore, courses on trade secrets and other sensitive information have been included in the annual employee education and training. The courses could build and strengthen employees' concepts of trade secrets and confidential information protection with experts explaining and sharing professional knowledge, related cases, and practice.

Besides requiring employees to gain awareness of information security, we also included contractors/suppliers into the scope of information security protection. Before outsiders enter the Company, to guarantee the information security, they must complete our information security course and test.



4. Specific Objectives for Information Security Management



5. Achievements of the Promotion of Information Security

Rules	Training and awareness	Auditing	Monitoring	Review and improvement
• Enhance management and control of trade secrets, manipulation of sensitive data, and notification and processing operations for information security incidents • Total of 6 regulations added/amended	• Information security awareness training for 4,000 employees globally • 3,265 participants in trade secret awareness courses • 89 participants in contractor/supplier information security awareness courses • 4 issues of Chinese and English information security e-newsletter published	• 3,277 physical audits • 816 checks of information and communication operation records • 32 randomized checks of file catalog authorization • 5 checks of self-management measures	•Entrusted a professional external information security team to regularly perform company intrusion threat hunting and in-depth network security assessment and analysis; no instances of successful hacking have been found. •0 material information security incidents	•Completed 87 improvements to application system security management and control operations •Completed 2 improvements to operation process of self-management measures

6. Investment of Resources in Information Security Management

Category	Content
Defense Measures	✓ Built a company-wide anti-virus and anti-hacking framework that includes IT and OT areas ✓ Built firewalls and intrusion detection and prevention systems on the network segments where confidential data is kept ✓ Built a DLP system at the external data transmission node to safeguard the transmission of confidential data ✓ Built functions of document-labeling and watermark-printing for information to enhance identification of confidential documents ✓ Cooperated with information security information units, professional manufacturers, and consultants to ensure agility with respect to information security incidents
Hedging Mechanisms	✓ Signed non-disclosure agreements with external customers and suppliers ✓ Invested in information security insurance to reduce the damages and impact caused by information security incidents and ensure that the Company can make up for part of the losses in the event of an information security incident

(II) In the Most Recent Year and Up to the Publication Date of this Annual Report, If the Losses, Possible Impacts, and Response Measures Caused by Major Information Security Incidents Cannot Be Reasonably Estimated, an Explanation of the Facts of Why They Cannot be Estimated Shall be Provided.

The Company had no major information security incidents in the most recent three years.

VII. Important Contracts

Number	Contract	Party	Dates	Main Content	Restriction terms
1	Technology Transfer	Industrial Technology Research Institute	From February 1997	Technology transfer of MEPG-2 Audio Decoder	Intellectual property rights, use, confidentiality and other restrictions
2	License Agreement	Cybernetics, USA	From April 2000	Low Rate Coder technology license	Use, confidentiality and other restrictions
3	License Agreement	Saifun Semiconductors, Israel	From May 2000 until Saifun NROM patent validity period ends	"NROM" technology license	Intellectual property rights, use, confidentiality and other restrictions
4	License Agreement	Zoran, USA	From June 2000	Technology license of TV decoder/TV signal decoder+3Dimentional color signal enhancement function	Intellectual property rights, use, confidentiality and other restrictions
5	License Agreement	ARM, England	From August 2002	Obtained ARM technology license	Intellectual property rights, use, confidentiality and other restrictions
6	License Agreement	Saifun Semiconductors, Israel	From April 2004	MLC Flash technology license	Intellectual property rights, use, confidentiality and other restrictions
7	License Agreement	Mentor Graphics, Ireland	From July 2005	Work system technology license	Intellectual property rights, use, confidentiality and other restrictions
8	Strategic Alliance	Tower Semiconductor, Israel	From December 2000	Strategic alliance investment in Tower Semiconductor	Confidentiality and other obligations
9	License Agreement	Qimonda	From March 2011	Obtained a specific flash memory design related license	Use, confidentiality and other restrictions
10	Joint Development	IBM, USA	January 22, 2019-January 21, 2025	Joint research for phase-change non-volatile memory	Intellectual property rights, use, confidentiality and other restrictions
11	License Agreement	Creative Integrated Systems, Inc., USA	From April 2014	U.S. Patent 5,241,497 and 5,812,461 and related licensing	License, warranties, exemption, confidentiality and other terms
12	Settlement Agreement	Spansion, USA	From January 2015	Reached a settlement for both parties' litigation and disputes over global patents, and was granted cross-licensing of disputed patents.	Special patent license, settlement fee, confidentiality and other terms
13	License Agreement	RPX Corporation, USA	December 15, 2019-December 14, 2022	RPX and Round Rock technology license	License, use, confidentiality and other terms

Number	Contract	Party	Dates	Main Content	Restriction terms
14	Distribution Agreement	Avnet, Inc.	From September 2017	Expanded product sales on the international market	Confidentiality, license, liability and other terms
15	Purchase Agreement	SUMCO CORPORATIO N, Japan	October 1, 2019- June 30, 2021	Raw materials purchasing	Confidentiality terms and other arrangements
16	Syndicated Loan	Seven financial institutions including Taiwan Cooperative Bank	November 24, 2017- December 18, 2022	NT$7.7 billion syndicated loan	Annual financial statements' liability ratio, current ratio, interest coverage multiples and others are subject to restrictions.
17	Settlement and License Agreement	Toshiba Corporation/ Toshiba Memory Corporation	From October 9, 2018	Settlement of patent litigation in the United States, Japan and Taiwan and cross-licensing patents	Special patent license, settlement fee, confidentiality and other terms
18	Syndicated Loan	Nine financial institutions including Taiwan Cooperative Bank	February 25, 2019- February 24, 2024	NT$8 billion syndicated loan	Annual financial statements' liability ratio, current ratio, interest coverage multiples and others are subject to restrictions.
19	Joint Research	Chiao Tung University	September 1, 2020- December 31, 2021	Research on Low Power 4KB LDDC Code design and application to NAND Controller	Intellectual property rights, confidentiality terms and other terms
20	Assets Transaction	Hon Hai Precision Industry Co., Ltd.	From August 05, 2021-	Transaction of the 6-inch wafer fab	Use, intellectual property rights, confidentiality, liability for damages and other terms
21	License Agreement	IBM, USA	From November 08, 2021-	Obtained an AI technology license	License, disclaimer, confidentiality and other terms

Chapter VI. Financial Summary

I. Condensed Balance Sheet and Comprehensive Income Statement in the Most Recent Five Fiscal Years

(I) Condensed Balance Sheets

1. Condensed Consolidated Balance Sheets

Unit: NT$ thousands

Item / Year		Financial Information for the Most Recent Five Fiscal Years				
		2017	2018	2019	2020	2021
Current Assets		24,532,556	36,677,290	26,886,695	30,161,824	38,932,255
Property, Plant, and Equipment		16,258,622	19,308,675	29,365,507	31,462,800	32,218,383
Intangible Assets		45,808	45,223	47,022	57,280	96,873
Other Assets		3,356,913	3,017,633	4,357,554	4,210,314	5,460,637
Total Assets		44,193,899	59,048,821	60,656,778	65,892,218	76,708,148
Current Liabilities	Before Distribution	13,059,869	20,152,229	15,794,226	16,568,758	17,860,670
	After Distribution	14,864,645	22,360,429	18,002,117	18,796,182	Note
Non-current Liabilities		6,477,683	7,536,235	12,369,884	13,129,068	12,122,001
Total Liabilities	Before Distribution	19,537,552	27,688,464	28,164,110	29,697,826	29,982,671
	After Distribution	21,342,328	29,896,664	30,372,001	31,925,250	Note
Equity Attributable to Shareholders of the Parent		24,655,662	31,360,023	32,491,392	36,193,592	46,724,791
Share Capital		18,047,758	18,401,670	18,399,089	18,561,864	18,559,768
Capital Surplus		(207,088)	(56,241)	543,920	384,772	399,210
Retained Earnings	Before Distribution	5,413,602	14,077,527	14,685,430	17,771,636	27,095,127
	After Distribution	3,247,871	11,869,327	12,477,539	15,544,212	Note
Other Equity		1,560,451	(903,872)	(977,986)	(365,619)	829,747
Treasury Shares		(159,061)	(159,061)	(159,061)	(159,061)	(159,061)
Non-controlling Interests		685	334	1,276	800	686
Total Equity	Before Distribution	24,656,347	31,360,357	32,492,668	36,194,392	46,725,477
	After Distribution	22,851,571	29,152,157	30,284,777	33,966,968	Note

Note: Pending approval from the shareholders' meeting.

2. Parent Company Only Balance Sheet

Unit: NT$ thousands

Item \ Year		Financial Information for the Last Five Fiscal Years				
		2017	2018	2019	2020	2021
Current Assets		23,575,557	35,483,232	25,503,411	28,628,546	37,301,782
Property, Plant, and Equipment		15,781,321	18,829,669	28,904,312	31,016,511	31,792,537
Intangible Assets		44,149	42,755	43,559	54,629	95,108
Other Assets		4,809,653	4,689,353	6,075,266	6,059,348	7,362,814
Total Assets		44,210,680	59,045,009	60,526,548	65,759,034	76,552,241
Current Liabilities	Before Distribution	13,078,633	20,149,508	15,733,930	16,504,303	17,754,438
	After Distribution	14,883,409	22,357,708	17,941,821	18,731,727	Note
Non-current Liabilities		6,476,385	7,535,478	12,301,226	13,061,139	12,073,012
Total Liabilities	Before Distribution	19,555,018	27,684,986	28,035,156	29,565,442	29,827,450
	After Distribution	21,359,794	29,893,186	30,243,047	31,792,866	Note
Equity Attributable to Owners of the Company		24,655,662	31,360,023	32,491,392	36,193,592	46,724,791
Share Capital		18,047,758	18,401,670	18,399,089	18,561,864	18,559,768
Capital Surplus		(207,088)	(56,241)	543,920	384,772	399,210
Retained Earnings	Before Distribution	5,413,602	14,077,527	14,685,430	17,771,636	27,095,127
	After Distribution	3,247,871	11,869,327	12,477,539	15,544,212	Note
Other Equity		1,560,451	(903,872)	(977,986)	(365,619)	829,747
Treasury Shares		(159,061)	(159,061)	(159,061)	(159,061)	(159,061)
Non-controlling Interests		-	-	-	-	-
Total Equity	Before Distribution	24,655,662	31,360,023	32,491,392	36,193,592	46,724,791
	After Distribution	22,850,886	29,151,823	30,283,501	33,966,168	Note

Note: Pending approval from the shareholders' meeting.

(II) Statement of Comprehensive Income

1. Consolidated Statements of Comprehensive Income

Unit: NT$ thousands

Item \ Year	Financial Information for the Last Five Fiscal Years				
	2017	2018	2019	2020	2021
Net Operating Revenue	34,196,916	36,953,032	34,995,411	39,800,947	50,572,991
Gross Profit	12,634,711	13,926,319	9,615,494	13,409,355	21,049,979
Income from Operations	5,753,206	6,509,338	3,098,877	5,866,477	11,064,105
Non-operating Income and Expenses	(216,729)	2,755,049	(72,551)	(25,431)	2,263,584
Income before Income Tax	5,536,477	9,264,387	3,026,326	5,841,046	13,327,689
Net Income from Continuing Operations	5,517,309	8,992,849	3,012,901	5,325,612	11,962,839
Income from Discontinued Operations	-	-	-	-	-
Net Income	5,517,309	8,992,849	3,012,901	5,325,612	11,962,839
Other Comprehensive Income, net of income tax	606,648	(943,048)	240,854	288,014	678,177
Total Comprehensive Income	6,123,957	8,049,801	3,253,755	5,613,626	12,641,016
Net Income (loss) Attributable to Shareholders of the parent	5,517,847	8,993,006	3,011,960	5,326,083	11,962,952
Net Income (loss) Attributable to Non-controlling interest	(538)	(157)	941	(471)	(113)
Comprehensive Income Attributable to Shareholders of the parent	6,124,501	8,049,958	3,252,814	5,614,102	12,641,130
Comprehensive Income Attributable to Non-controlling interest	(544)	(157)	941	(476)	(114)
Earnings Per Share	3.06	4.94	1.64	2.90	6.48

2. Parent Company Only Statements of Comprehensive Income

Unit: NT$ thousands

Item \ Year	Financial Information for the Last Five Fiscal Years				
	2017	2018	2019	2020	2021
Net Operating Revenue	33,500,949	36,280,727	34,235,969	38,995,968	49,598,199
Gross Profit	11,937,095	13,297,451	8,872,210	12,631,084	20,068,015
Income from Operations	5,530,009	6,391,270	2,966,762	5,691,103	10,701,751
Non-operating Income and Expenses	(12,162)	2,847,107	45,198	119,895	2,559,748
Income before income tax	5,517,847	9,238,377	3,011,960	5,810,998	13,261,499
Net Income from Continuing Operations	5,517,847	8,993,006	3,011,960	5,326,083	11,962,952
Income from Discontinued Operations	-	-	-	-	-
Net Income	5,517,847	8,993,006	3,011,960	5,326,083	11,962,952
Other Comprehensive Income, net of income tax	606,654	(943,048)	240,854	288,019	678,178
Total Comprehensive Income	6,124,501	8,049,958	3,252,814	5,614,102	12,641,130
Net Income (Loss) Attributable to Shareholders of the parent	5,517,847	8,993,006	3,011,960	5,326,083	11,962,952
Net Income Attributable to Non-controlling interest	-	-	-	-	-
Comprehensive Income Attributable to Shareholders of the parent	6,124,501	8,049,958	3,252,814	5,614,102	12,641,130
Comprehensive Income Attributable to Non-controlling interest	-	-	-	-	-
Earnings Per Share	3.06	4.94	1.64	2.90	6.48

(III) Independent Auditors' Opinions in the Most Recent Five Fiscal Years

Year	Name of CPA	Audit opinions
2021	Tung Hui Yeh, Kuo Tyan Hong	An Unmodified Opinion
2020	Tung Hui Yeh, Kuo Tyan Hong	An Unmodified Opinion
2019	Ming Hui Chen, Ching Pin Shih	An Unmodified Opinion
2018	Ming Hui Chen, Ching Pin Shih	An Unmodified Opinion
2017	Ming Hui Chen, Ching Pin Shih	An Unmodified Opinion

II. Financial Analysis for the Most Recent Five Fiscal Years

1. Consolidated Financial Analysis-IFRS

Items analyzed (Note 1) / Year		Financial analysis for the Most Recent Five fiscal years				
		2017	2018	2019	2020	2021
Financial Structure Analysis (%)	Debt ratio	44.21	46.89	46.43	45.07	39.09
	Long-term capital to property, plant and equipment ratio	191.49	201.45	152.77	156.77	182.65
Liquidity Analysis (%)	Current ratio	187.85	182.00	170.23	182.04	217.98
	Quick ratio	110.85	90.76	87.52	103.20	143.24
	Interest coverage multiples	26.68	65.63	16.37	24.65	57.34
Operating performance Analysis	Accounts receivable turnover (times)	7.30	7.25	7.44	7.94	8.60
	Days Sales Outstanding	50.00	50.34	49.05	45.96	42.44
	Inventory turnover (times)	2.54	1.65	1.65	2.04	2.26
	Average payable turnover (times)	4.34	2.60	2.76	3.78	3.93
	Average Inventory turnover days	143.70	221.21	221.21	178.92	161.50
	Property, plant and equipment turnover (times)	2.15	2.08	1.44	1.31	1.59
	Total assets turnover (times)	0.86	0.72	0.58	0.63	0.71
Profitability Analysis	Return on total assets (%)	14.29	17.64	5.30	8.73	17.04
	Return on equity (%)	25.68	32.11	9.44	15.51	28.85
	Pre-tax income to paid-in capital ratio (%)	30.67	50.34	16.45	31.47	71.81
	Net income ratio (%)	16.13	24.34	8.61	13.38	23.65
	Basic Earnings per share (NT$)	3.06	4.94	1.64	2.90	6.48
Cash flow	Cash flow ratio (%)	53.86	50.08	28.76	59.48	90.23
	Cash flow adequacy ratio (%)	87.65	100.94	77.63	83.96	94.85
	Cash reinvestment ratio (%)	5.30	5.83	1.58	4.91	9.00
Leverage	Operating leverage	1.34	1.33	1.88	1.64	1.39
	Financial leverage	1.04	1.02	1.07	1.04	1.02

Analysis of deviation over 20% for the most recent two years:

- An increase in quick ratio: Mainly due to the increase in cash and cash equivalents in 2021.
- An increase in interest coverage multiples: Mainly due to the increase in Pre-tax income in 2021.
- An increase in property, plant and equipment turnover: Mainly due to the increase in net sales in 2021.
- An increase in return on total assets: Mainly due to the increase in net Income in 2021.
- An increase in return on equity: Mainly due to the increase in net Income in 2021.
- An increase in pre-tax income to paid-in capital ratio: Mainly due to the increase in Pre-tax income in 2021.
- An increase in net income ratio: Mainly due to the increase in net income in 2021.
- An increase in basic Earnings per share: Mainly due to the increase in net income in 2021.
- An increase in cash flow ratio: Mainly due to the increase in Net cash flow from operating activities in 2021.
- An increase in cash reinvestment ratio: Mainly due to the increase in Net cash flow from operating activities in 2021.

Note 1: Please refer to page 126 to 127 of this annual report for the calculation formula.

2. Parent Company Only Statements of Financial Analysis-IFRS

Items analyzed (Note 2) \ Year		Financial analysis for the Most Recent Five fiscal years				
		2017	2018	2019	2020	2021
Financial Structure Analysis (%)	Debt ratio	44.23	46.89	46.32	44.96	38.96
	Long-term capital to property, plant and equipment ratio	197.27	206.56	154.97	158.80	184.94
Liquidity Analysis (%)	Current ratio	180.26	176.10	162.09	173.46	210.10
	Quick ratio	103.95	85.16	79.50	94.62	135.10
	Interest coverage multiples	26.59	65.44	16.46	24.94	58.01
Operating Performance Analysis	Accounts receivable turnover (times)	6.71	7.02	7.56	7.83	7.85
	Days Sales Outstanding	54.39	51.99	48.28	46.61	46.49
	Inventory turnover (times)	2.56	1.66	1.65	2.05	2.26
	Average payable turnover (times)	4.34	2.59	2.76	3.78	3.93
	Average inventory turnover days	142.57	219.87	221.21	178.04	161.50
	Property, plant and equipment turnover (times)	2.18	2.10	1.43	1.30	1.58
	Total assets turnover (times)	0.84	0.70	0.57	0.62	0.70
Profitability Analysis	Return on total assets (%)	14.29	17.64	5.30	8.74	17.07
	Return on equity (%)	25.68	32.11	9.43	15.51	28.85
	Pre-tax income to paid-in capital ratio (%)	30.57	50.20	16.37	31.30	71.45
	Net income ratio (%)	16.47	24.79	8.80	13.66	24.12
	Basic Earnings per share (NT$)	3.06	4.94	1.64	2.90	6.48
Cash Flow	Cash flow ratio (%)	52.50	51.59	27.54	56.68	85.20
	Cash flow adequacy ratio (%)	88.36	104.79	78.34	82.83	91.64
	Cash reinvestment ratio (%)	5.19	6.07	1.44	4.60	8.39
Leverage	Operating leverage	1.36	1.33	1.90	1.65	1.40
	Financial leverage	1.04	1.02	1.07	1.04	1.02

Analysis of deviation over 20% for the most recent two years:

- An increase in current ratio: Mainly due to the increase in cash and cash equivalents in 2021.
- An increase in quick ratio: Mainly due to the increase in cash and cash equivalents in 2021.
- An increase in interest coverage multiples: Mainly due to the increase in Pre-tax income in 2021.
- An increase in property, plant and equipment turnover: Mainly due to the increase in net sales in 2021.
- An increase in return on total assets: Mainly due to the increase in net Income in 2021.
- An increase in return on equity: Mainly due to the increase in net Income in 2021.
- An increase in pre-tax income to paid-in capital ratio: Mainly due to the increase in Pre-tax income in 2021.
- An increase in net income ratio: Mainly due to the increase in net income in 2021.
- An increase in basic Earnings per share: Mainly due to the increase in net income in 2021.
- An increase in cash flow ratio: Mainly due to the increase in Net cash flow from operating activities in 2021.
- An increase in cash reinvestment ratio: Mainly due to the increase in Net cash flow from operating activities in 2021.

Note1: The formula for calculation of the preceding table are as follows:

1. Financial structure
   (1) Debt-asset Ratio = Total Liabilities / Total Assets.
   (2) Long-term Capital to Property, Plant, and Equipment ratio = (Total Equity + Non-current Liabilities) / Net Property, Plant, and Equipment.
2. Solvency
   (1) Current Ratio = Current Assets / Current Liabilities.
   (2) Quick Ratio = (Current Assets - Inventories - Prepaid Expenses) / Current Liabilities.
   (3) Interest coverage multiples = Net income before Tax and Interest / Interest Expenses.

3. Operating Performance
   (1) Receivables turnover rate (including bills receivable resulting from accounts receivable and business operations) = Net sales / Average accounts receivable in various periods (including bills receivable resulting from accounts receivable and business operations).
   (2) Days Sales Outstanding = 365 / Receivables Turnover Rate.
   (3) Inventory Turnover Rate = Cost of Sales / Average Inventory.
   (4) Payables turnover rate (including bills payable resulting from accounts payable and business operations) = Cost of sales / Average accounts payable in various periods (including bills payable resulting from accounts payable and business operations).
   (5) Average Inventory Turnover Days = 365 / Inventory Turnover Rate.
   (6) Property, Plant, and Equipment Turnover Rate = Net Sales / Average Net Property, Plant, and Equipment.
   (7) Total Asset Turnover Rate = Net Sales / Average Total Assets.
4. Profitability
   (1) Return on assets (ROA) = [Net income + Interest expenses x (1 - interest rates)] / Average total asset.
   (2) Return on Equity = Net Income / Average Total Equity.
   (3) Net Income ratio = Net Income / Net Sales.
   (4) Basic Earnings per Share = (Income Attributable to Owners of Parent Company – Dividends on Preferred Stock) / Weighted Average Number of Shares Issued. (Note 2)
5. Cash flow
   (1) Cash Flow Ratio = Net Cash Flow from Operating Activities / Current Liabilities.
   (2) Cash Flow Adequacy Ratio = Net cash flow from operating activities for the most recent five years / (capital expenditures + inventory increase + cash dividend) for the most recent five years.
   (3) Cash Reinvestment Ratio = (Net cash flow from operating activities － cash dividend) ／(gross property, plant, and equipment + long-term investment + other non-current assets + working capital). (Note 3)
6. Leverage
   (1) Operating Leverage = (Net Operating Revenue - Variable Operating Costs and Expenses) / Operating Income (Note 4).
   (2) Financial Leverage = Operating Income / (Operating Income - Interest Expenses).

Note 2: Special attention shall be paid to the following matters when using the calculation formula of earning per share above:
1. The calculation should be based on the weighted average shares of common stock, rather than the number of issued shares at the end of the year.
2. For any cash capital increase or transaction of treasury stock, the circulation period should be taken into consideration when calculating the weighted average number of shares.
3. For capital increase by retained earnings or capital surplus, the Company shall retrospectively adjust the earnings per share for the past fiscal year and the semi-annual earnings according to the ratio of the capital increase, without considering the issuance period of the capital increase.
4. If the preferred share is a non-convertible cumulative preferred share, the dividend of the year (whether it is issued or not) shall be deducted from net income after tax (NIAT), or net loss after tax. If the preferred stock is non-cumulative, the dividend of the preferred stock should be deducted from the net profit after tax if the Company has net profit after tax. If the Company has a deficit, no adjustment is necessary.

Note 3: Special attention should be paid to the following matters when measuring cash flow analysis:
1. Net cash flow from operating activities is the net cash inflow from operating activities in the cash flow statement.
2. Capital expenditure is the annual cash outflow of capital investment.
3. The increase in inventory is calculated only when the balance at the end of the period is greater than the balance at the beginning of the period. If the inventory decreases at the end of the year, it is counted as zero.
4. Cash dividends include cash dividends from ordinary shares and preferred stocks.
5. The gross property, plant, and equipment refer to the total value of PP&E prior to accumulated depreciation.

Note 4: The issuer shall classify the operating costs and operating expenses as fixed or variable in accordance with their nature. If it involves estimation or subjective judgment, the classification shall remain reasonable and consistent.

Note 5: If the Company's shares have no par value or a par value other than NT$10, this value shall be replaced in any calculations that involve the paid-in capital ratio with the equity ratio attributable to owners of parent Company as shown in the balance sheet.

III. Audit Committee's Report for the Most Recent Fiscal Year

Audit Committee's Report of 2021

To: 2022 Annual Shareholders' Meeting of Macronix International Co., Ltd.

The 2021 Financial Statements of the Company (including the parent company only financial statements), the 2021 Business Report, and the proposed 2021 Distribution Plan have been duly reviewed and concluded by the undersigned as accurate. According to Article 14-4 of Securities and Exchange Act and Article 219 of the Company Act, it is hereby reported as above.

Independent director: Yan-Kuin Su

Independent director: Tyzz-Jiun Duh

Independent director: Chiang Kao

Independent director: John C.F. Chen

Dated: February 25, 2022

IV. Financial Statements for the Most Recent Fiscal Year: Please refer to pages 143 to 215 of this annual report.

V. Stand-Alone Financial Statements for the Most Recent Fiscal Year Certified by the Accountant: Please refer to pages 216 to 282 of this annual report.

VI. Financial Difficulties Encountered by the Company and its Affiliated Companies in the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report: None.

Chapter VII. Review, Analysis, and Risks of Financial Position and Performance

I. Analysis of Financial Status

Unit: NT$ thousands

Item	2021	2020	Difference	Increase/Decrease (%)
Current Assets	38,932,255	30,161,824	8,770,431	29.08%
Non-current Assets	37,775,893	35,730,394	2,045,499	5.72%
Total Assets	76,708,148	65,892,218	10,815,930	16.41%
Current Liabilities	17,860,670	16,568,758	1,291,912	7.80%
Non-current Liabilities	12,122,001	13,129,068	(1,007,067)	(7.67%)
Total Liabilities	29,982,671	29,697,826	284,845	0.96%
Equity Attributed to Shareholders of the Parent	46,724,791	36,193,592	10,531,199	29.10%
Non-controlling Interest	686	800	(114)	(14.25%)
Total Equity	46,725,477	36,194,392	10,531,085	29.10%

If the difference in comparison with the previous period exceeds 20%, and the main reason and the impact are analyzed as follows:

- Current Assets: The increase compared to 2020 was mainly due to cash and cash equivalents in 2021.
- Equity Attributed to Shareholders of the Parent: The increase compared to 2020 was mainly due the net income in 2021.
- Total Equity: The increase compared to 2020 was mainly due the net income in 2021.

II. Analysis of Financial Performance

Unit: NT$ thousands

Item	2021	2020	Difference	%
Net Operating Revenue	$50,572,991	$39,800,947	$10,772,044	27.06%
Operating Costs	29,523,012	26,391,592	3,131,420	11.87%
Gross Profit	21,049,979	13,409,355	7,640,624	56.98%
Realized (Unrealized) Gains from the Affiliated Companies	-	-	-	-
Realized Gross Profit	21,049,979	13,409,355	7,640,624	56.98%
Operating Expenses	9,985,874	7,542,878	2,442,996	32.39%
Income from Operations	11,064,105	5,866,477	5,197,628	88.60%
Non-operating Income and Expenses	2,263,584	(25,431)	2,289,015	9000.88%
Net Income before Tax	13,327,689	5,841,046	7,486,643	128.17%
Income Tax Expenses	1,364,850	515,434	849,416	164.80%
Net Income for the Year	11,962,839	5,325,612	$6,637,227	124.63%
Other Comprehensive Income (Loss)	678,177	288,014	390,163	135.47%
Total Comprehensive Income for the Year	$12,641,016	$5,613,626	$7,027,390	125.18%

Analysis of any increase/decrease in ratio exceeding 20%:

- Net Operating Revenue: The increase compared to 2020 was mainly due the customer need in 2021.
- Income from Operations / Realized Gross Profit: The increase compared to 2020 was mainly due to higher gross profit in 2021.
- Operating Expenses: The increase compared to 2020 was mainly due to the R&D expenses in 2021.
- Net Operating Profit: The increase compared to 2020 was mainly due to gross profit in 2021.
- Non-operating Income and Expense: The increase compared to 2020 was mainly due to the disposal of the 6-inch wafer fab in 2021.
- Net Income before Tax: The increase compared to 2020 was mainly due to higher gross profit in 2021.
- Income Tax Expenses: The increase compared to 2020 was mainly due the net income in 2021.
- Net Income for the Year: The increase compared to 2020 was mainly due to higher gross profit in 2021.
- Total Comprehensive Income for the Year: The increase compared to 2020 was mainly due to higher gross profit in 2021.

III. Analysis of Cash Flow

(I) Cash Flow Analysis and Remedy for Liquidity Shortfall

Unit: NT$ thousands

Cash Balance 12/31/2020①	Net Cash Provided by Operating Activities in 2021②	Net Cash used in Investing and Financing Activities in 2021③	Cash Balance 12/31/2021 ①+② -③	Remedy for Liquidity Shortfall	
				Investing Plan	Financing Plan
11,879,299	16,116,231	(9,430,309)	18,565,221	None	None

Note 1: Analysis of net cash change in 2021:

(1) NT$16,116.231 million net cash generated by operating activities; mainly from net income and depreciation expenses.

(2) NT$2,622.881 million net cash used in investing activities; mainly due to the expansion of plant operations, expenditures for purchasing machinery, and income from sale of plant and equipment.

(3) NT$6,262.035 million net cash used in financing activities; primarily for long-term loans repayment and cash dividend payment.

(4) NT$545.393 million net decrease was effect of exchange rate changes

Note 2: Remedial Actions for Liquidity shortfall: Not applicable.

(II) Cash Flow Projection for Next Year:

The Company plan to pay capital expenditures and cash dividends by bank financing and cash on hand.

IV. Major Capital Expenditures and Impact on Financial and Business in the Most Recent Fiscal Year

(I) Capital Expenditure and Source of Funds

Unit: NT$ thousands

Project	Actual or Planned Source of Capital	Actual use of Capital			Total Amount
		2019	2020	2021	
Facility engineering, production equipment and advanced process equipment	Self-owned funds, bank borrowings	12,752,517	6,036,935	4,706,096	23,495,548

(II) Expected Benefits

The capital expenditure mentioned above is for expanding capacity of high-end production and accelerating the development of advanced processes (including 3D NAND); its aim is lowering unit costs and enhancing product competitiveness.

V. Reinvestment Policy for the Most Recent Fiscal Year, the Main Reasons for the Profits/Losses Generated Thereby, the Plan for Improving Re-Investment Profitability, and Investment Plans for the Coming Year

The Company's reinvestment policy is in line with its operating policies and long-term strategic purposes. Most of the investee companies are consolidated financial statements entities. The value of non-consolidated entities accounts for 4.4% of the total assets. The dividend income for fiscal year 2021 was NT$124,741 thousand on a consolidated basis.

VI. Analysis of Risk Management in the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report

(I) Effects of Changes in Interest Rates, Foreign Exchange Rates and Inflation on Corporate Finance, and Future Response Measures

1. Interest rate

The COVID variants have caused repeated epidemics, geopolitical tensions, international raw materials price surge, and intensified climate change, pushing up global inflation, affecting economic activities and adding downside risks to the global economy. In addition, monetary easing policies of major economies are gradually being removed, and the United States, the United Kingdom, and other countries have started to raise their interest rates. It is expected that this year's (2022) global economic growth will become mild. The Central Bank of Taiwan held its joint supervisors meeting on March 17, 2022, where it made the decision to raise the interest rate by 0.25 percentage points to lower expectations of domestic inflation This will also maintain price stability and achieve the goal of sound overall economic and financial development.

The Company regularly assesses the changes in bank loan rates. It negotiates with banks to reduce interest rates, and allocate project loans to obtain financing credits with more favorable interest rates, the aim of which is to reduce the impact of interest rate fluctuations on the Company's overall operations.

2. Foreign exchange rate

As more than 90% of the Company's revenue is denominated in US dollars and Japanese Yen, and about 40% of manufacturing cost as well as 60% of capital expenditure are paid in US dollars and Japanese Yen, exchange rate fluctuations in New Taiwan Dollar against the US Dollar (and Japanese Yen) will have a certain impact on the Company's financial position. The Company takes hedging actions such as disposing US dollars (Japanese Yen) and pre-selling forward foreign exchange based on the account exchange rate, and will continue to implement these measures in the future in the hope of reducing the impact of exchange rate fluctuations on the Company's profit and loss. In addition, the USD has depreciated from 28.48 to 27.68 and the Japanese Yen has depreciated from 0.2763 to 0.2405. With respect to the net assets of USD and JPY held by the Company, the net loss from foreign currency exchange was NT$164,905 thousand in 2021.

3. Inflation

Benefiting from the active global economy, application of emerging technologies and continued business opportunities of digital transformation, Taiwan's export momentum is strong, and import of capital and equipment continues to expand. Although Taiwan was affected domestically by the virus variants, there has been a limited impact on the consumer buying intentions. Turnover of the retail and food and beverage industries continues to increase, and the economy is steadily expanding. The Central Bank estimates Taiwan's economic growth rate at 4.05% this year (2022). It is expected that the supply bottleneck will continue for some time. The military conflict between Russia and Ukraine has resulted in a rise of the global energy and other commodities prices. The domestic inflationary trend will continue to be affected by changes in raw material prices. The forecasted inflation rate for this year (2022) is 2.37%, which is still mild compared to that in major economies and will have limited impact on the Company's profits and losses.

(II) Policies, Main Causes of Gain or Loss and Future Response Measures with Respect to High-risk, High-leveraged Investments, Loans of funds to Others or Endorsement Guarantees, and Derivatives Transactions

1. As of the beginning of 2021 to the printing date of this Annual Report, the Company has not engaged in high-risk and leveraged financial investments. Neither did the Company loan any funds or provide any endorsements/guarantees to other parties.
2. The Company's derivative trading transactions are mainly hedged. The choice of the option for commodity trading is aimed at avoiding risks arising from the Company's business operations and hedging for the expected foreign exchange net position. In addition, the transaction and settlement difference contributed to the profit and loss of the transaction.
3. The Company has established the Procedures for Loaning of Funds to Others, the Operating Procedures for Endorsements and Guarantees, the Procedures for Handling Derivatives Transactions, and the Procedures for Acquisition and Disposal of Assets. All processes adhere strictly to these procedures in order to keep operation and financial risks under control.

(III) Future R&D Projects and the Expected Expenditure

※ Four Domains of the R&D Plan:

1. Advanced technology
   (1) The core technology and patents of the new-generation memory PCM (Phase Change Memory).
   (2) The core technology and patents of the new-generation memory ReRAM.
2. Manufacturing process
   (1) The manufacturing process of the 3D NAND Flash and subsequent derivative developments.
   (2) The manufacturing process of the 45 nm NOR Flash and subsequent derivative developments.
3. Product
   (1) High-capacity 3D NAND Flash.
   (2) Encryption protected NOR Flash.
   (3) Ultra-low power consumption NOR Flash.
4. Quality and Testing
   (1) Development of quality certification and management processes for automobiles.

※ Expected Expenditure for R&D:

The estimated R&D expenditure for 2022 is approximately NT$5.8 billion. (The expenditure includes personnel costs, equipment royalty, patent rights, trademark application fee, etc.)

(IV) Changes in Domestic and Overseas Policies and Laws That Have an Impact on the Company’s Financial and Business and the Countermeasures:

The Company has always complied with policies and laws and keeps a close eye on significant changes in policies and laws that may affect the Company’s financial position and business performance, and makes adjustments accordingly. There were no changes to policies and laws that had a material impact on the Company's financial position and business performance in 2021 and up to the date of report.

(V) Impact of Changes in Technology and Industry to the Company's Finance and Business and the Countermeasures

The impact of COVID-19 on the global economy has not subsided in 2021, but it has accelerated the progress of digitalization and created strong demand in fields of application, such as 5G, data centers, and automotive electronics, which has driven continued price hikes of high quality and high-capacity products. Thanks to the collective efforts of all employees, Macronix has become the market leader with its advanced process technology and highest quality, and it has achieved excellent revenue, gross profit, and EPS growth in 2021.

Artificial intelligence activated the next industrial revolution, and new applications are driving the continued growth of demand on memory. In the future, we will focus on expanding automotive, medical, industrial, 5G, and server applications, which will become the main source of our business growth. Big data and artificial intelligence are highly dependent on data extraction and processing so the bandwidth of memory storage will become a major challenge. In the future, memory will transform from simple data storage to a part of the calculating function and form a new memory-centric processing framework. This new solution could even combine with logic chips for more diverse applications and thoroughly transform memory from a supporting role to a leading role. Hence, Macronix's development strategy will also transition from memory alone to system applications and from 2D to 3D structures as we actively develop the next generation of memory products. Macronix has always been widely recognized in the industry for the outstanding stability and reliability of its products and for focusing on the development of high quality and large capacity memory with low power consumption. For example, Macronix NOR Flash products have been employed in Low Earth orbit satellites because they can meet the strict temperature requirements of space. We also launched 1.2V NOR Flash products with low power consumption, which conforms to the trend of low carbon applications. Our new generation Internet security solution ArmorFlash™ has been employed in new generation automated driving platforms and has been honored with the Taiwan Excellence Award–Gold Award. These achievements show that Macronix has captured the market's attention with its excellent innovation capabilities and is thus able to secure a place in the highly competitive memory market.

Technological breakthroughs and innovations are the key elements to maintaining international competitiveness. On that aspect, Macronix's research results in 2021 were once again affirmed by the selected papers of the International Solid-State Circuits Conference (ISSCC). We have obtained a total of 334 patents in various countries in 2021. As of the end of 2021, Macronix has a total of 8,654 patents worldwide, showing stable growth while providing Macronix with a strong power of intellectual property rights. This has allowed us to secure a leading position in the global non-volatile memory market.

In recent years, the ever-innovating technology applications, such as mobile devices and the Internet, has greatly improved convenience and efficiency for individuals and corporations but accompanied by potential threats of information security of corporations. Once a major information security incident occurs, the Company's information assets will be under internal, external, intentional, or accidental threats and damage, which could harm the confidentiality, usability, and integrity of the Company's confidential information. In addition, it will damage the Company's competitiveness, sales and operations, and even further affect the Company's financial results, image, and reputation.

To lower the incidence of information security incidents, mitigate risks arising from the incidents to an acceptable level and thus ensure the normal operation of the company, Macronix has established the Information Security Committee, Information Security Core Team, and Information Security Task Force to implement the information security policy and review and revise the information security policy and management specifications in order to meet managements requirements and ensure the suitability and effectiveness.

To block the ever-changing information security threats, Macronix has employed a variety of information security mechanisms and system architecture designs. The preventative measures include establishing appropriate safety control mechanisms for the use of computers, regulatory information devices, and network resources, and classification, labeling, and external delivery control for confidential information. In order to prevent malicious software attacks and reduce the accompanied damage, the Company has established enhancement mechanisms and systems as follows: mandating that equipment sent to the factory should undergo virus scanning to prevent malicious software from entering the Company network; strengthening firewalls and network controls to prevent computer viruses from spreading into other regions; the establishments of endpoint anti-virus and anti-hacking measures; introducing advanced solutions to detect and process malware; the establishment of integrated network security monitoring center; regular information security assessments from outside experts . Besides, the Company requires suppliers to comply with requirements of confidentiality and information security in collaboration.

With comprehensive network and computer protection measures to ensure information security, Macronix is still under the potential risks of being affected by information security threats and cyberattacks. As a result, Macronix has established the information security events reporting and handling procedures to respond to information security events with immediate action. In addition, the Company has bought information security insurance to reduce resulting damage and impact. Only with employees' awareness of information security can the expensive and complicated management measures and tools work effectively, therefore, Macronix has launched educational training in raising the awareness of information security and protection of trade secrets, and issued monthly information security e-newsletters.

(VI) Impact of Corporate Image Change on Risk Management and Response Measures:

Not applicable.

(VII) Expected Benefits and Potential Risks of Merger and Acquisition: Not applicable.

(VIII) Expected Benefits, Potential Risks, and Countermeasures of Factory Expansion

Macronix adheres to the principle of pursuing innovation and high quality; it is committed to R&D of both products and technology. Mass production of 48-layer 3D NAND Flash products began in the third quarter of 2021 and is expected to contribute to revenue in 2022. We will continue to develop 192-layer stacking technology to meet customers' need and expectation for high-capacity products. Starting in the third quarter of 2021, the 12-inch fab 3D NAND and advanced NOR production capacity expansion plan was rolled out in stages. We will continue to monitor changes in product applications, market, and customer demand, and will use the forecast and production and sales management mechanisms we established to make adjustments in response to our business situation and possible changes so as to lower our operation risks.

(IX) Risks Relating to the Concentration of Purchasing or Sales and the Countermeasures

The Company's primary raw materials are silicon wafers, raw chemicals, and gases used for processing. For purposes of ensuring the recognition and trust of our customers, the Company's procurement policy complies with the principle of smooth supply chain information with stable supply. It adopts a strategy of establishing long-term and excellent collaborative relationships with suppliers and decentralized sources for purchasing. In order to avoid the impact of fluctuations in supplier capacity, we continue to improve our inventory monitoring system, increase the accuracy of demand forecasting, and ensure that the supply chain maintains sufficient inventory levels to reduce unpredictable risks.

Our main customers are all world-class. To mitigate the risks of changing in customer needs, closely collaborate with customers, and foster long-term partnerships with them have always been our sales strategies. The largest customers accounted for 27% and 40% of total revenue in 2021 and 2020 respectively. To reduce the impact of cyclical fluctuations in end demand on overall operations and the risk of sales concentration and demand changes, the Company actively expands new customers in various application fields, especially in high-quality applications such as automotive, medical, industrial, 5G, etc.

(X) The Impact of Mass Transfer or Change of Equity by Directors, Supervisors, or Shareholders Holding More than 10% of Shares on the Company, Associated Risks and Response Measures: Not applicable.

(XI) The Impact of Change of Operating Rights on the Company, Associated Risk and Response Measures: Not applicable.

(XII) Litigious or Non-litigious Events

Major Disputes of the Company in 2022

1. The theft in FAB 5:

(1) Criminal action: The Taiwan Hsinchu District Court found the defendant guilty. The defendant has lodged an appeal to the Taiwan High Court. The Taiwan High Court denied the appeal on September 07, 2021 and upheld a verdict of guilty.(2) Civil action supplemental to a criminal action: Macronix has filed a lawsuit regarding the ancillary

civil action under the criminal procedure. The Taiwan High Court pronounced a verdict that the defendant should pay damages to Macronix.

2. Macronix has filed a lawsuit against the case of breach of contract of Ta-Wei Lin, a former employee, and received a payment order, which was compulsory executed. Macronix has received prestation on March 12, 2021.
3. The case, in which New Ray Innovation Inc. asked the payment on goods and Macronix refused to pay due to a dispute over product defects, is still pending in the Taiwan High Court.

(XIII) Other Important Risks and Countermeasures:

Tax risks

Tax Policy: Macronix seeks to best manage its tax risks, and devotes itself to information transparency and compliance. We also support government tax policy to drive economic development and sustainability, Macronix's 6 guidelines for tax management are as follows:

(1) All operations comply with tax laws and regulations of Taiwan.

(2) Transactions between affiliated enterprises comply with the internationally recognized pricing principles announced by the OECD, and BEPS related regulations, so that the pricing policy of related parties complies with the arm's length principle.

(3) In response to the global trend of anti-tax evasion, avoid using countries with low tax rates in tax planning with the purpose of tax evasion.

(4) Make information in tax reports transparent, submit the Country-by-Country Report, Master File, and Local File to the tax authority, so that tax disclosure complies with laws, regulations, and guidelines.

(5) The Company's tax planning and decisions all take into consideration the effect of tax risks.

(6) Establish a good interaction with the tax authority based on the principles of mutual trust and information transparency.

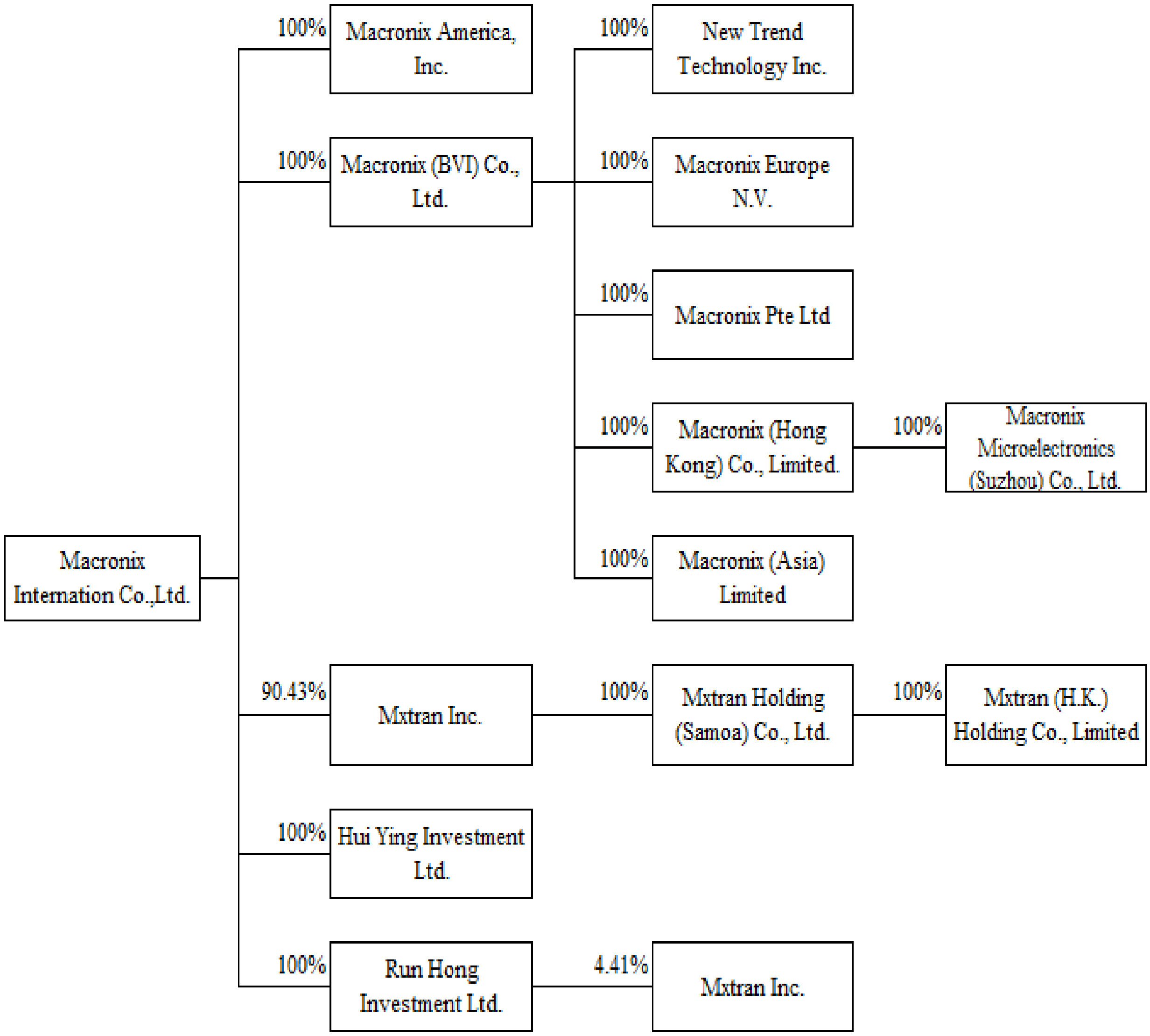
VII. Other Significant Events: None.

Chapter VIII. Special Disclosure

I. Summary of Affiliated Companies (Ended on December 31, 2021)

(I) Consolidated Business Report

1. Corporate Affiliation Chart



2. Basic Information of Affiliated Companies

Unit: NT$ thousands

Company Name	Establishment Date	Address	Paid-in Capital	Primary Business or Production
Macronix America, Inc.	March,1994	680 N. McCarthy Blvd Suite 200, Milpitas, CA 95035	2,640	Sales and marketing
Macronix (BVI) Co., Ltd.	February,1997	Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG1110,British Virgin Islands	6,977,791	Investment holding company
Hui Ying Investment Ltd.	May,1998	20F, 4, Min-Chuan E. Road, Sec.3, Taipei, Taiwan, R.O.C	150,000	Investment
Run Hong Investment Ltd.	October,2001	19F, 4, Min-Chuan E. Road, Sec. 3, Taipei, Taiwan, R.O.C	150,000	Investment
Mxtran Inc.	August.2006	9F, 16, Li-Hsin Road, Science Park, Hsinchu, Taiwan, R.O.C	770,000	IC design
Mxtran Holding (Samoa) Co., Ltd.	May,2009	Portcullis Chambers, P.O. Box 1225, Apia, Samoa	35,979	Investment holding company
Mxtran (H.K.) Holding Co., Limited	June,2009	Rm 1702, Sino Centre 582-592 Nathan Road, Mongkok, Hong Kong	23,880	Investment holding company
New Trend Technology Inc.	January,1999	680 N. McCarthy Blvd Suite 200, Milpitas, CA95035	911,049	IC design
Macronix Europe N.V.	July,1999	Koningin Astridlaan 49 Bus 6 1780 Wemmel, Belgium	2,106	After-sales services
Macronix Pte Ltd	August,2000	133 Cecil Street #05-02 Keck Seng Tower Singapore (069535)	3,291	After-sales services
Macronix (Hong Kong) Co., Limited.	March,2003	702-703, 7/F, Building 9, Hong Kong Science Park, 5 Science Park West Avenue, Sha Tin, N.T.	378,427	Sales and marketing
Macronix Microelectronics (Suzhou) Co., Ltd.	September,2005	No.55, Su Hong Xi Street, Suzhou Industrial Park, SuZhou City, Jiangsu, China	296,160	development of integrated circuit system and software
Macronix (Asia) Limited	October,2004	P.O. Box 31119 Grand Pavilion, Hibiscus Way, 802 West Bay Road, Grand Cayman, KY1-1205, Cayman Islands	23,035	After-sales services

3.Presumed to be in Effective Control of the Same Shareholder Information with the Affiliate: None.

4.Overall Business Scope of Affiliated Companies

The business scope of the Company and its affiliated companies include the research and development, design, manufacture, testing, sales, consultancy of integrated circuits, various semiconductor components, and their system applications, and general investment.

5. Directors, Supervisors, and President in all Affiliated Companies:

Company Name	Directors, Supervisors, and President		Shares Held	
	Title	Name or Representative	Number of Shares	Percentage of Shares
Macronix America, Inc.	Chairman of the Board	C. Y. Lu	0	0%
	Director	Miin Wu	0	0%
	Director	Tom Yiu	0	0%
	President	Ya-Sheng Yang	0	0%
Macronix (BVI) Co., Ltd.	Director	Miin Wu	0	0%
Hui Ying Investment Ltd.	Director	Macronix International Co., Ltd. Representative: Miin Wu	-	100%
Run Hong Investment Ltd.	Director	Macronix International Co., Ltd. Representative: Miin Wu	-	100%
Mxtran Inc.	Chairman of the Board	Miin Wu	120,000	0.16%
	Director	Macronix International Co., Ltd. Representative: Tom Yiu	69,627,323	90.43%
	Director/President	Macronix International Co., Ltd. Representative: Showen Huang	69,627,323	90.43%
	Director	Achi Capital Limited	90,000	0.12%
	Supervisor	Run Hong Investment Ltd. Representative: Paul Yeh	3,393,200	4.41%
Mxtran Holding (Samoa) Co., Ltd.	Director	Showen Huang	0	0%
Mxtran (H.K.) Holding Co., Limited	Director	Showen Huang	0	0%
New Trend Technology Inc.	Director	Paul Yeh	0	0%
Macronix Europe N.V.	Chairman of the Board	F. L. Ni	0	0%
	Director	Miin Wu	1	0%
	Director	C. Y. Lu	0	0%
	Director	Paul Yeh	0	0%
	Director	Jon-Ten Chung	0	0%
	President	Timothy Pusey	0	0%
Macronix Pte Ltd	Director	Jon-Ten Chung	0	0%
	Director	F. L. Ni	0	0%
	Director/President	Tan Siah Cheae	0	0%
Macronix (Hong Kong) Co., Limited.	Director	Miin Wu	0	0%
	Director	C. Y. Lu	0	0%
	Director	F. L. Ni	0	0%
	Director	Paul Yeh	0	0%
	Director	Jon-Ten Chung	0	0%
	President	Hao-Wei Hsieh	0	0%
Macronix Microelectronics (Suzhou) Co., Ltd.	Executive Director	Miin Wu	-	0%
	President	Hsieng-Hung Chang	-	0%
	Supervisor	Hsiu-Mei Lin	-	0%
Macronix (Asia) Limited	Director	Miin Wu	0	0%

6. Operational Highlights of Affiliated Companies

Unit: NT$ thousands

Company Name	Capital	Total Assets	Total Liabilities	Net Value	Operating Revenue	Operating Profit	Net Profit (Loss) (after tax)	Earnings per Share (NT$) (after tax)
Macronix America, Inc.	2,640	699,507	447,683	251,824	2,635,527	101,722	79,885	798.85
Macronix (BVI) Co., Ltd.	6,977,791	2,557,974	285	2,557,689	-	(523)	191,446	0.90
Hui Ying Investment Ltd.	150,000	177,383	150	177,233	-	(237)	9,759	NA
Run Hong Investment Ltd.	150,000	43,983	150	43,833	-	(237)	(279)	NA
Mxtran Inc.	770,000	14,963	1,668	13,295	10,330	(4,544)	(2,172)	(0.03)
Mxtran Holding (Samoa) Co., Ltd.	35,979	956	-	956	-	-	-	-
Mxtran (H.K.) Holding Co., Limited	23,880	407	-	407	-	-	-	-
New Trend Technology Inc.	911,049	272,627	-	272,627	-	(9,080)	(9,103)	(0.33)
Macronix Europe N.V.	2,106	145,515	18,537	126,978	146,917	10,310	8,008	8,008
Macronix Pte Ltd	3,291	23,250	1,355	21,895	23,383	1,113	1,108	6.37
Macronix (Hong Kong) Co., Limited.	378,427	2,779,016	1,686,733	1,092,283	9,625,986	215,400	194,035	2.16
Macronix Microelectronics (Suzhou) Co., Ltd.	296,160	509,244	95,237	414,007	365,878	13,807	16,568	NA
Macronix (Asia) Limited	23,035	81,385	12,754	68,631	113,349	6,716	5,230	7.47

(II) Consolidated Financial Statements: please refer to page 144 of this annual report.

(III) Affiliation Report: None.

II. Private Placement Securities of the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report: None.

III. Subsidiaries' Holding or Disposing the Company's Shares in the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report

Unit: NT$ thousands; Shares; %

Name of Subsidiary	Stock Capital Collected	Fund Source	Shareholding Ratio of the Company	Date of Acquisition or Disposition	Shares and Amount Acquired	Shares and Amount Disposed of	Investment Gain (Loss)	Shareholdings and Amount Up to the Printing Date of this Annual Report	Mortgage	Endorsement Amount Made for the Subsidiary	Amount Loaned to the Subsidiary
Hui Ying Investment Ltd.	NT$150,000	Parent company	100%	2021	None	None	None	1,956,619 shares NT$79,439 (Note)	None	None	None
				This fiscal year up to the date of publication of the annual report	None	None	None		None	None	None

Note: The amount is calculated based on the closing price of the common shares at NT$ 40.6 per share on March 29, 2022.

IV. Other Necessary Supplements: None.

V. The Events Resulting in Significant Impact to Shareholders' Equity or Stock Prices Under Article 36(3)(ii) of Securities and Exchange Act in the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report: None.

Macronix International Co., Ltd. and Subsidiaries

Consolidated Financial Statements for the Years Ended December 31, 2021 and 2020 and Independent Auditors' Report

DECLARATION OF CONSOLIDATION OF FINANCIAL STATEMENTS OF AFFILIATES

The entities that are required to be included in the consolidated financial statements of Macronix International Co., Ltd. as of and for the year ended December 31, 2021 under the “Criteria Governing Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises” are all the same as those included in the consolidated financial statements prepared in conformity with International Financial Reporting Standard 10 “Consolidated Financial Statements”. In addition, all the relevant information required to be disclosed in the consolidated financial statements have been disclosed. Hence, we do not prepare a separate set of consolidated financial statements.

Very truly yours,

Macronix International Co., Ltd.

By

____

Miin Wu
Chairman

February 25, 2022

INDEPENDENT AUDITORS' REPORT

The Board of Directors and the Shareholders
Macronix International Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Macronix International Co., Ltd. (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated balance sheets as of December 31, 2021 and 2020, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the 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 Group in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. 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 the consolidated financial statements for the year ended December 31, 2021. 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.

Key audit matters for the Group's consolidated financial statements for the year ended December 31, 2021 are stated as follows:

Valuation of inventory

The Group manufactures and sells ROM products, NOR Flash, and NAND Flash, which are widely used in consumer electronics. As of December 31, 2021, inventory was NT$13,156,387 thousand, accounting for 17% of the total assets in the consolidated balance sheet. With the current rapid changes in technology and the improvements in manufacturing technologies, market demand for memory chip could change significantly and result in inventory obsolescence. Since inventory valuation and estimates of net realizable value of inventory are subject to management's judgment, they are considered as accounting estimates with relatively high uncertainty. Therefore, valuation of inventory has been identified as a key audit matter. Refer to notes 4 (f), 5 (a), and 11 to the consolidated financial statements for the details of accounting policy, accounting judgment, key sources of estimation uncertainty and the related information about the valuation of inventory.

Our key audit procedures performed in respect of the above area included the following:

1. We understood and assessed the adequacy of the policy and procedures for the inventory valuation adopted by the management.

2. We obtained data on the assessment of inventory at the lower of cost or net realizable value and selected sample data, and we tested the reasonableness of net realizable value by comparing inventory carrying amounts to recent selling prices; we tested the accuracy of allowance for inventory loss by comparing net realizable value with carrying amounts. We obtained the inventory aging report, and we tested the accuracy and completeness of the report by agreeing the age interval, quantity, and amount to the supporting documents of inbound inventory. We assessed the reasonableness of allowance for inventory loss by recalculating the amount in accordance with the stated valuation policy for the inventory.

3. We performed a retrospective review of inventory movements to evaluate the reasonableness of inventory obsolescence reserve policy and policy on scrapping of inventories.

Other Matter

We have also audited the parent company only financial statements of the Company as of and for the years ended December 31, 2021 and 2020 on which we have issued an unmodified opinion.

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 Regulations Governing the Preparation of Financial Reports by Securities Issuers, and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the 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 Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Group's financial reporting process.

Auditors' 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 auditors' 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 the 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 the 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 Group's internal control.

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 Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' 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 auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

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

6. Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the Group 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 the consolidated financial statements for the year ended December 31, 2021 and are therefore the key audit matters. We describe these matters in our auditors' 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.

The engagement partners on the audit resulting in this independent auditors' report are Tung Hui Yeh and Kuo Tyan Hong.

Deloitte & Touche
Taipei, Taiwan
Republic of China

February 25, 2022

Notice to Readers

The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance 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 applied in the Republic of China.

For the convenience of readers, the independent auditors' report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and consolidated financial statements shall prevail.

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	2021		2020	
ASSETS	**Amount**	**%**	**Amount**	**%**
CURRENT ASSETS				
Cash and cash equivalents (Notes 4, 6 and 32)	$ 18,565,221	24	$ 11,879,299	18
Notes receivable and trade receivables, net (Notes 4, 10 and 32)	5,690,688	8	3,454,719	5
Receivables from related parties, net (Notes 4, 32 and 33)	961,722	1	1,647,427	3
Other receivables (Notes 4, 10, 27 and 32)	366,048	1	116,930	-
Inventories (Notes 4, 5 and 11)	13,156,387	17	12,945,267	20
Other current assets (Note 17)	192,189	-	118,182	-
Total current assets	38,932,255	51	30,161,824	46
NON-CURRENT ASSETS				
Financial assets at fair value through profit or loss - non-current (Notes 4, 7 and 32)	153,840	-	-	-
Financial assets at fair value through other comprehensive income (FVTOCI) - non-current (Notes 4, 8 and 32)	3,223,593	4	2,336,074	3
Financial assets measured at amortized cost - non-current (Notes 4, 9 and 32)	43,440	-	-	-
Property, plant and equipment (Notes 4, 13, 18, 30, 34 and 35)	32,218,383	42	31,462,800	48
Right-of-use assets (Notes 4 and 14)	837,427	1	1,042,394	2
Intangible assets (Notes 4 and 15)	96,873	-	57,280	-
Deferred tax assets (Notes 4 and 27)	648,077	1	660,294	1
Other financial assets - non-current (Notes 4, 16, 32 and 34)	221,113	-	171,552	-
Other non-current (Note 17)	333,147	1	-	-
Total non-current assets	37,775,893	49	35,730,394	54
TOTAL	$ 76,708,148	100	$ 65,892,218	100
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Contract liabilities (Note 25)	$ 36,263	-	$ 92,195	-
Notes payable and trade payables (Notes 19 and 32)	3,403,696	4	2,940,531	5
Payables to related parties (Notes 32 and 33)	4,509,196	6	4,161,427	6
Accrued employees' compensation and remuneration of directors (Notes 26, 32 and 33)	3,134,490	4	1,403,624	2
Payables for purchases of equipment (Note 32)	757,658	1	554,266	1
Other payables (Notes 20 and 32)	1,773,716	2	1,481,794	2
Other payables to related parties (Notes 32 and 33)	360	-	-	-
Current tax liabilities (Notes 4 and 27)	686,210	1	63,359	-
Provisions - current (Notes 4 and 22)	23,290	-	22,687	-
Lease liabilities - current (Notes 4 and 14)	90,092	-	104,598	-
Current portion of long-term borrowings (Notes 4, 18, 30, 32 and 34)	3,094,739	4	5,412,007	8
Other current liabilities (Note 21)	350,960	1	332,270	1
Total current liabilities	17,860,670	23	16,568,758	25
NON-CURRENT LIABILITIES				
Long-term borrowings (Notes 4, 18, 30, 32 and 34)	9,250,335	12	10,736,875	16
Deferred tax liabilities (Notes 4 and 27)	644,221	1	-	-
Lease liabilities - non-current (Notes 4 and 14)	753,991	1	940,302	2
Net defined benefit liabilities (Notes 4 and 23)	1,407,473	2	1,432,473	2
Other non-current liabilities (Notes 4, 21 and 30)	65,981	-	19,418	-
Total non-current liabilities	12,122,001	16	13,129,068	20
Total liabilities	29,982,671	39	29,697,826	45
EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT (Notes 4, 24 and 29)				
Share capital				
Ordinary shares	18,560,178	24	18,563,017	28
Share capital to be cancelled	(410)	-	(1,153)	-
Total share capital	18,559,768	24	18,561,864	28
Capital surplus	399,210	1	384,772	1
Retained earnings				
Legal reserve	2,271,266	3	1,741,857	3
Special reserve	291,361	-	621,195	1
Unappropriated earnings	24,532,500	32	15,408,584	23
Total retained earnings	27,095,127	35	17,771,636	27
Other equity	829,747	1	(365,619)	(1)
Treasury shares	(159,061)	-	(159,061)	-
Equity attributable to shareholders of the parent	46,724,791	61	36,193,592	55
NON-CONTROLLING INTERESTS (Note 24)	686	-	800	-
Total equity	46,725,477	61	36,194,392	55
TOTAL	$ 76,708,148	100	$ 65,892,218	100

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

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2021		2020	
	Amount	**%**	**Amount**	**%**
NET OPERATING REVENUE (Notes 4, 25, 33 and 38)	$ 50,572,991	100	$ 39,800,947	100
OPERATING COSTS (Notes 4, 11, 23, 26 and 33)	29,523,012	58	26,391,592	66
GROSS PROFIT	21,049,979	42	13,409,355	34
OPERATING EXPENSES (Notes 4, 23, 26 and 33)				
Selling and marketing expenses	1,789,142	4	1,538,615	4
General and administrative expenses	2,581,068	5	1,888,419	5
Research and development expenses	5,615,664	11	4,115,844	10
Total operating expenses	9,985,874	20	7,542,878	19
INCOME FROM OPERATIONS	11,064,105	22	5,866,477	15
NON-OPERATING INCOME AND EXPENSES				
Interest income (Note 26)	25,730	-	30,858	-
Other income (Notes 4, 8, 14, 26 and 30)	174,215	-	130,386	-
Other gains and losses (Note 26)	(204,967)	-	60,281	-
Gains on disposal of property, plant and equipment (Notes 4, 13, 26 and 37)	2,505,176	5	-	-
Finance costs (Notes 4, 26 and 30)	(236,570)	-	(246,956)	(1)
Total non-operating income and expenses	2,263,584	5	(25,431)	(1)
INCOME BEFORE INCOME TAX FROM CONTINUING OPERATIONS	13,327,689	27	5,841,046	14
INCOME TAX EXPENSE (Notes 4 and 27)	(1,364,850)	(3)	(515,434)	(1)
NET INCOME FOR THE YEAR	11,962,839	24	5,325,612	13
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit plans	(153,365)	(1)	(2,737)	-
Unrealized gain on investments in equity instruments at FVTOCI (Notes 24 and 32)	944,505	2	440,966	1
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translation of the financial statements of foreign operations (Note 24)	(112,963)	-	(150,215)	-
Other comprehensive income (loss) for the year, net of income tax	678,177	1	288,014	1
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 12,641,016	25	$ 5,613,626	14

(Continued)

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2021		2020	
	Amount	**%**	**Amount**	**%**
NET INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	$ 11,962,952	24	$ 5,326,083	13
Non-controlling interests	(113)	-	(471)	-
	$ 11,962,839	24	$ 5,325,612	13
TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	$ 12,641,130	25	$ 5,614,102	14
Non-controlling interests	(114)	-	(476)	-
	$ 12,641,016	25	$ 5,613,626	14
EARNINGS PER SHARE (Note 28)				
Basic	$ 6.48		$ 2.90	
Diluted	$ 6.25		$ 2.84	

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

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	Equity Attributable to Shareholders of the Parent													
	Share Capital				Retained Earnings			Other Equity						
	Shares (Thousands)	Ordinary Shares	Share Capital to be Cancelled	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings	Exchange Differences on Translation of the Financial Statements of Foreign Operations	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Unearned Compensation of Employees	Treasury Shares	Total	Non-controlling Interests	Total Equity
BALANCE AT JANUARY 1, 2020	1,839,927	$ 18,399,271	$ (182)	$ 543,920	$ 1,440,661	$ 1,007,052	$ 12,237,717	$ (235,880)	$ (299,040)	$ (443,066)	$ (159,061)	$ 32,491,392	$ 1,276	$ 32,492,668
Legal reserve	-	-	-	-	301,196	-	(301,196)	-	-	-	-	-	-	-
Special reserve	-	-	-	-	-	(385,857)	385,857	-	-	-	-	-	-	-
Cash dividends distributed by the Company - $1.20 per share	-	-	-	-	-	-	(2,207,891)	-	-	-	-	(2,207,891)	-	(2,207,891)
Net income (loss) for the year ended December 31, 2020	-	-	-	-	-	-	5,326,083	-	-	-	-	5,326,083	(471)	5,325,612
Other comprehensive income (loss) for the year ended December 31, 2020, net of income tax	-	-	-	-	-	-	(2,737)	(150,210)	440,966	-	-	288,019	(5)	288,014
Total comprehensive income (loss) for the year ended December 31, 2020	-	-	-	-	-	-	5,323,346	(150,210)	440,966	-	-	5,614,102	(476)	5,613,626
Disposal of investments in equity instruments designated as at fair value through other comprehensive income	-	-	-	-	-	-	(29,100)	-	29,100	-	-	-	-	-
Issuance of restricted shares for employees	16,400	164,002	-	(164,002)	-	-	-	-	-	-	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	1,300	-	-	(149)	-	-	292,511	-	293,662	-	293,662
Retirement of restricted shares for employees	(25)	(256)	(971)	1,227	-	-	-	-	-	-	-	-	-	-
Dividends paid to subsidiaries to adjust capital surplus	-	-	-	2,327	-	-	-	-	-	-	-	2,327	-	2,327
BALANCE AT DECEMBER 31, 2020	1,856,302	18,563,017	(1,153)	384,772	1,741,857	621,195	15,408,584	(386,090)	171,026	(150,555)	(159,061)	36,193,592	800	36,194,392
Legal reserve	-	-	-	-	529,409	-	(529,409)	-	-	-	-	-	-	-
Special reserve	-	-	-	-	-	(329,834)	329,834	-	-	-	-	-	-	-
Cash dividends distributed by the Company - $1.20 per share	-	-	-	-	-	-	(2,227,424)	-	-	-	-	(2,227,424)	-	(2,227,424)
Net income (loss) for the year ended December 31, 2021	-	-	-	-	-	-	11,962,952	-	-	-	-	11,962,952	(113)	11,962,839
Other comprehensive income (loss) for the year ended December 31, 2021, net of income tax	-	-	-	-	-	-	(153,365)	(112,962)	944,505	-	-	678,178	(1)	678,177
Total comprehensive income (loss) for the year ended December 31, 2021	-	-	-	-	-	-	11,809,587	(112,962)	944,505	-	-	12,641,130	(114)	12,641,016
Disposal of investments in equity instruments designated as at fair value through other comprehensive income	-	-	-	-	-	-	(258,672)	-	258,672	-	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	9,994	-	-	-	-	-	105,151	-	115,145	-	115,145
Retirement of restricted shares for employees	(284)	(2,839)	743	2,096	-	-	-	-	-	-	-	-	-	-
Dividends paid to subsidiaries to adjust capital surplus	-	-	-	2,348	-	-	-	-	-	-	-	2,348	-	2,348
BALANCE AT DECEMBER 31, 2021	1,856,018	$ 18,560,178	$ (410)	$ 399,210	$ 2,271,266	$ 291,361	$ 24,532,500	$ (499,052)	$ 1,374,203	$ (45,404)	$ (159,061)	$ 46,724,791	$ 686	$ 46,725,477

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

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 13,327,689	$ 5,841,046
Adjustments for:		
Depreciation expense	4,238,607	3,713,338
Amortization expense	45,625	32,989
Expected credit loss (reversed) recognized on trade receivables	(63)	223
Net loss on fair value changes of financial assets at fair value through profit or loss	12,280	-
Finance costs	236,570	246,956
Interest income	(25,730)	(30,858)
Dividend income	(124,741)	(101,174)
Compensation cost of employee restricted shares	115,145	293,662
Gain on disposal of property, plant and equipment	(2,566,001)	(6,822)
Net loss on foreign currency exchange	205,944	8,608
Gain from lease modifications	(2,213)	-
Amortization of government grants deferred revenue	(1,357)	-
Changes in operating assets and liabilities		
Trade receivables	(2,225,842)	519,076
Receivables from related parties	657,512	(637,329)
Other receivables	(71,905)	21,095
Inventories	(211,120)	(134,830)
Prepayments	(333,147)	-
Other current assets	(93,518)	130,401
Contract liabilities	(55,932)	(6,362)
Notes payable and trade payables	461,480	795,312
Payables to related parties	653,350	(582,175)
Payables for employees' compensation and director's remuneration	1,730,866	117,850
Other payables	300,009	7,663
Other payables to related parties	4,038	(3,098)
Provisions	603	2,227
Other current liabilities	177,693	(58,591)
Net defined benefit liabilities	(178,365)	(181,826)
Cash generated from operations	16,277,477	9,987,381
Interest received	20,716	31,167
Dividend received	124,741	101,174
Interest paid	(242,011)	(270,217)
Income tax (paid) return	(64,692)	5,714
Net cash generated from operating activities	16,116,231	9,855,219
CASH FLOWS FROM INVESTING ACTIVITIES		
Financial assets at fair value through other comprehensive income	(84,006)	-
Proceeds from the disposal of financial assets at fair value through other comprehensive income	95,880	8,626
Purchase of financial assets at amortized cost	(43,840)	-
Financial assets at amortized cost after maturity	-	20,955
Acquisition of financial assets at fair value through profit or loss	(168,645)	-
Payments for property, plant and equipment	(4,706,096)	(6,036,935)
Proceeds from disposal of property, plant and equipment	2,418,597	7,623
Increase in refundable deposits	-	(71)

(Continued)

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	2021	2020
Decrease in refundable deposits	$ 171	$ 98
Payments for intangible assets	(84,339)	(43,201)
Increase in other financial assets	(50,603)	-
Net cash used in investing activities	(2,622,881)	(6,042,905)
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayments of short-term borrowings	-	(1,550,000)
Proceeds from long-term borrowings	3,330,000	7,300,000
Repayments of long-term borrowings	(7,077,225)	(4,192,648)
Proceeds from guarantee deposits received	2,094	193,798
Payments of guarantee deposits received	(177,656)	(16,946)
Repayment of leased liabilities	(111,824)	(107,963)
Distribution of cash dividends	(2,227,424)	(2,205,564)
Net cash used in financing activities	(6,262,035)	(579,323)
EFFECT OF EXCHANGE RATE CHANGES ON THE BALANCE OF CASH AND CASH EQUIVALENTS HELD IN FOREIGN CURRENCIES	(545,393)	(78,781)
NET INCREASE IN CASH AND CASH EQUIVALENTS	6,685,922	3,154,210
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR	11,879,299	8,725,089
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	$ 18,565,221	$ 11,879,299

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

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

1. GENERAL INFORMATION

Macronix International Co., Ltd. (the "Company") was incorporated in the Republic of China (ROC) on December 9, 1989 and commenced business in December 1989. The Company operates principally as a designer, manufacturer and supplier of integrated circuits (ICs) and memory chips. The Company also performs design, research and development, consultation and trade of relevant products.

The Company's shares have been listed on the Taiwan Stock Exchange (TWSE) since March 15, 1995.

The consolidated financial statements are presented in the Company's functional currency, the New Taiwan dollar.

2. APPROVAL OF FINANCIAL STATEMENTS

The consolidated financial statements were approved by the Company's board of directors and were authorized for issue on February 25, 2022.

3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS AND INTERPRETATIONS

a. Initial application of the amendments to the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) (collectively, the "IFRSs") endorsed and issued into effect by the Financial Supervisory Commission (FSC)

   The initial application of the amendments to the IFRSs endorsed and issued into effect by the FSC did not have any material impact on the Group's accounting policies.

b. The IFRSs endorsed by the FSC for application starting from 2022

New IFRSs	Effective Date Announced by IASB
"Annual Improvements to IFRS Standards 2018-2020"	January 1, 2022 (Note 1)
Amendments to IFRS 3 "Reference to the Conceptual Framework"	January 1, 2022 (Note 2)
Amendments to IAS 16 "Property, Plant and Equipment - Proceeds before Intended Use"	January 1, 2022 (Note 3)
Amendments to IAS 37 "Onerous Contracts-Cost of Fulfilling a Contract"	January 1, 2022 (Note 4)

Note 1: The amendments to IFRS 9 will be applied prospectively to modifications and exchanges of financial liabilities that occur on or after the annual reporting periods beginning on or after January 1, 2022.

Note 2: The amendments are applicable to business combinations for which the acquisition date is on or after the beginning of the annual reporting period beginning on or after January 1, 2022.

Note 3: The amendments are applicable to property, plant and equipment that are brought to the location and condition necessary for them to be capable of operating in the manner intended by management on or after January 1, 2021.

Note 4: The amendments are applicable to contracts for which the entity has not yet fulfilled all its obligations on January 1, 2022.

As of the date the consolidated financial statements were authorized for issue, the Group is continuously assessing the possible impact that the application of other standards and interpretations will have on the Group's financial position and financial performance, and will disclose the relevant impact when the assessment is completed.

c. New IFRSs in issue but not yet endorsed and issued into effect by the FSC

New IFRSs	Effective Date Announced by IASB (Note 1)
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between An Investor and Its Associate or Joint Venture"	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2023
Amendments to IFRS 17	January 1, 2023
Amendments to IFRS 17 "Initial Application of IFRS 9 and IFRS 17—Comparative Information"	January 1, 2023
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	January 1, 2023
Amendments to IAS 1 "Disclosure of Accounting Policies"	January 1, 2023 (Note 2)
Amendments to IAS 8 "Definition of Accounting Estimates"	January 1, 2023 (Note 3)
Amendments to IAS 12 "Deferred Tax related to Assets and Liabilities arising from a Single Transaction"	January 1, 2023 (Note 4)

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual reporting periods beginning on or after their respective effective dates.

Note 2: The amendments will be applied prospectively for annual reporting periods beginning on or after January 1, 2023.

Note 3: The amendments are applicable to changes in accounting estimates and changes in accounting policies that occur on or after the beginning of the annual reporting period beginning on or after January 1, 2023.

Note 4: Except for deferred taxes that will be recognized on January 1, 2022 for temporary differences associated with leases and decommissioning obligations, the amendments will be applied prospectively to transactions that occur on or after January 1, 2022.

As of the date the consolidated financial statements were authorized for issue, the Group is continuously assessing the possible impact that the application of other standards and interpretations will have on the Group's financial position and financial performance, and will disclose the relevant impact when the assessment is completed.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICY

a. Statement of compliance

The consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRSs as endorsed and issued into effect by the FSC.

b. Basis of preparation

The consolidated financial statements have been prepared on the historical cost basis except for financial instruments which are measured at fair value and defined benefit liabilities.

The fair value measurements, which are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and based on the significance of the inputs to the fair value measurement in its entirety, are described as follows:

1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;

2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and

3) Level 3 inputs are unobservable inputs for an asset or liability.

c. Classification of current and non-current assets and liabilities

Current assets include:

1) Assets held primarily for the purpose of trading;

2) Assets expected to be realized within 12 months after the reporting period; and

3) Cash and cash equivalents unless the asset is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period.

Current liabilities include:

1) Liabilities held primarily for the purpose of trading;

2) Liabilities due to be settled within 12 months after the reporting period, even if an agreement to refinance, or to reschedule payments, on a long-term basis is completed after the reporting period and before the consolidated financial statements are authorized for issue; and

3) Liabilities for which the Group does not have an unconditional right to defer settlement for at least 12 months after the reporting period. 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.

Assets and liabilities that are not classified as current are classified as non-current.

d. Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and the entities controlled by the Company (i.e. its subsidiaries).

Income and expenses of subsidiaries acquired or disposed of during the period are included in the consolidated statement of comprehensive income from the effective dates of acquisitions up to the effective dates of disposals, as appropriate.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Group.

All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the interests of the Group and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Company.

When the Group loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and any investment retained in the former subsidiary at its fair value at the date when control is lost and (ii) the assets (including any goodwill) and liabilities and any non-controlling interests of the former subsidiary at their carrying amounts at the date when control is lost. The Group accounts for all amounts recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

The fair value of any investment retained in a former subsidiary at the date when control is lost is regarded as the fair value on initial recognition of financial assets at fair value through profit or loss or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

See Note 12 and Table 6 for the detailed information of subsidiaries (including the percentage of ownership and main business).

e. Foreign currencies

In preparing the financial statements of each individual group, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising from the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences arising from the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which cases, the exchange differences are also recognized directly in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are not retranslated.

For the purpose of presenting consolidated financial statements, the functional currencies of the Company and the Group (including subsidiaries and associates that use currency different from the currency of the Company) are translated into the presentation currency - the New Taiwan dollar as follows: Assets and liabilities are translated at the exchange rates prevailing at the end of the reporting period; income and expense items are translated at the average exchange rates for the period. The resulting currency translation differences are recognized in other comprehensive income (attributed to the owners of the Company and non-controlling interests as appropriate).

f. Inventories

Inventories consist of raw materials, supplies, finished goods, merchandise and work-in-process and are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except where it may be appropriate to group similar or related items. Net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at standard cost and adjusted to approximate weighted - average cost on the balance sheet date.

g. Property, plant, and equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and accumulated impairment loss.

Depreciation on property, plant and equipment is recognized using the straight-line method. Each significant part is depreciated separately. The estimated useful lives, residual values and depreciation methods are reviewed at the end of each reporting period, with the effects of any changes in estimates accounted for on a prospective basis.

On derecognition of an item of property, plant and equipment, the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

h. Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment loss. Amortization is recognized on a straight-line basis. The estimated useful life, residual value, and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are measured at cost less accumulated impairment loss.

2) Internally-generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from the development phase of an internal project is recognized if, and only if, all of the following have been demonstrated:

a) The technical feasibility of completing the intangible asset so that it will be available for use or sale;

b) The intention to complete the intangible asset and use or sell it;

c) The ability to use or sell the intangible asset;

d) How the intangible asset will generate probable future economic benefits;

e) The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and

f) The ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

3) Derecognition of intangible assets

On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss.

i. Impairment of property, plant and equipment, right-of-use asset, intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use asset and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the smallest group of cash-generating units on a reasonable and consistent basis of allocation.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

When an impairment loss is subsequently reversed, the carrying amount of the corresponding asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized on the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized in profit or loss.

j. Financial instruments

Financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the instruments.

Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

1) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a settlement date basis.

a) Measurement category

Financial assets are classified into the following categories: Financial assets at FVTPL, financial assets at amortized cost and investments in debt instruments and equity instruments at FVTOCI.

i. Financial assets at FVTPL

Financial assets is classified as at FVTPL when such financial assets is mandatorily classified as at FVTPL. Financial assets mandatorily classified as at FVTPL include investments in equity instruments which are not designated as at FVTOCI and debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria.

Financial assets at FVTPL are subsequently measured at fair value, and any dividends or interest earned on such financial assets are recognized in other income and interest income, respectively; any remeasurement gains or losses on such financial assets are recognized in other gains or losses. Fair value is determined in the manner described in Note 32: Financial Instruments.

ii. Financial assets measured at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

i) The financial assets are 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 assets 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, financial assets measured at amortized cost, including cash and cash equivalents and trade receivables measured at amortized cost, are measured at amortized cost, which equals the gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for:

i) Purchased or originated credit-impaired financial assets, for which interest income is calculated by applying the credit-adjusted effective interest rate to the amortized cost of such a financial asset; and

ii) Financial assets that have subsequently become credit-impaired, for which interest income is calculated by applying the effective interest rate to the amortized cost of such a financial asset.

A financial asset is credit impaired when one or more of the following events have occurred:

i) Significant financial difficulty of the issuer or the borrower;

ii) Breach of contract, such as a default;

iii) It is becoming probable that the borrower will enter bankruptcy or undergo a financial reorganization; or

iv) The disappearance of an active market for that financial asset because of financial difficulties.

Cash equivalents include time deposits with original maturities, which are highly liquid, readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These cash equivalents are held for the purpose of meeting short-term cash commitments.

iii. Investments in equity instruments at FVTOCI

On initial recognition, the Group may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on the disposal of the equity investments; instead, they will be transferred to retained earnings.

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

b) Impairment of financial assets

The Group recognizes a loss allowance for expected credit losses on financial assets measured at amortized cost (including trade receivables).

The Group always recognizes lifetime expected credit losses (i.e. ECLs) for trade receivables and lease receivables. For all other financial instruments, the Group recognizes lifetime ECLs when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on such a financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

Expected credit losses reflect the weighted average of credit losses with the respective risks of a default occurring as the weights. Lifetime ECLs represent the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECLs represent the portion of lifetime ECLs that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

For internal credit risk management purposes, the Group determines that the following situations indicate that a financial asset is in default (without taking into account any collateral held by the Group):

i Internal or external information show that the debtor is unlikely to pay its creditors.

ii When a financial asset is more than 90 days past due unless the Group has reasonable and corroborative information to support a more lagged default criterion.

The Group recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and does not reduce the carrying amount of the financial asset.

c) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party.

If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and any associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss which had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

2) Equity instruments

Equity instruments issued by the Group are recognized at the proceeds received, net of direct issue costs.

The repurchase of the Company's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issuance or cancellation of the Company's own equity instruments.

3) Financial liabilities

a) Subsequent measurement

All financial liabilities are measured at amortized cost using the effective interest method.

b) Derecognition of financial liabilities

The difference between the carrying amount of the financial liability derecognized and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

k. Provisions

Provisions are measured at the best estimate of the discounted cash flows of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

l. Revenue recognition

The Group identifies contracts with customers, allocates the transaction price to the performance obligations and recognizes revenue when performance obligations are satisfied.

For contracts entered into with the same customer (or related parties of the customer) at or near the same time, those contracts are accounted for as a single contract if the goods or services promised in the contracts are a single performance obligation.

1) Revenue from the sale of goods

Revenue from the sale of goods comes from sales of Memory products and wafer fabrication. Sales of Memory products and wafer fabrication are recognized as revenue when the goods are delivered to the customer's specific location because it is the time when the customer has full discretion over the manner of distribution and price to sell the goods, and has the primary responsibility for sales to future customers and bears the risks of obsolescence. Trade receivables are recognized concurrently. For Memory products and wafer fabrication, revenue is recognized when the goods are delivered to the customer's specific location, and the transaction price received is recognized as a contract liability until the goods have been delivered to the customer.

The Group does not recognize revenue on materials delivered to subcontractors because this delivery does not involve a transfer of control.

2) Revenue from the rendering of services

As the Group provides rendering services, the related revenue is recognized when services are rendered. Payment for installation services is not due from the customer until the installation services are complete, and therefore, contract assets are recognized over the period in which the installation services are performed. The contract assets are reclassified to trade receivables when the installation is complete.

m. Leases

At the inception of a contract, the Group assesses whether the contract is, or contains, a lease.

For a contract that contains a lease component and non-lease components, the Group allocates the consideration in the contract to each component on the basis of the relative stand-alone price and accounts for each component separately.

1) The Group as lessor

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

When the Group subleases right-of-use assets, the sublease is classified by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. However, if the head lease is a short-term lease that the Group, as a lessee, has accounted for applying recognition exemption, the sublease is classified as an operating lease.

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases. Initial direct costs incurred in obtaining operating leases are added to the carrying amounts of the underlying assets and recognized as expenses on a straight-line basis over the lease terms. Lease modification that resulted from a negotiation with a lessee is accounted for as a new lease from the effective date of modification.

2) The Group as lessee

The Group recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs needed to restore the underlying assets, and less any lease incentives received. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the consolidated balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms.

Lease liabilities are initially measured at the present value of the lease payments, which comprise fixed payments, in-substance fixed payments, variable lease payments which depend on an index or a rate, residual value guarantees, the exercise price of a purchase option if the Group is reasonably certain to exercise that option, and payments of penalties for terminating a lease if the lease term reflects such termination, less any lease incentives receivable. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Group uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, a change in the amounts expected to be payable under a residual value guarantee, a change in the assessment of an option to purchase an underlying asset, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Group remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. For a lease modification that is not accounted for as a separate lease, the Group accounts for the remeasurement of the lease liability by (a) decreasing the carrying amount of the right-of-use asset of lease modifications that decreased the scope of the lease, and recognizing in profit or loss any gain or loss on the partial or full termination of the lease; (b) making a corresponding adjustment to the right-of-use asset of all other lease modifications. Lease liabilities are presented on a separate line in the consolidated balance sheets.

n. Borrowing costs

Borrowing costs directly attributable to an acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Other than stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

o. Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attached to such grants and that the grants will be received.

Government grants related to income are recognized in other income on a systematic basis during the period when the related costs in which the government intends to compensate are recognized by the Group as expenses. Specifically, the primary condition of government grants is that the Group should purchase, construct or otherwise acquire non-current assets that are recognized as deferred revenue and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

The benefit of a government loan received below the market interest rate is treated as a government grant, which is measured as the difference between the proceeds received and the fair value of the loan based on the prevailing market interest rate.

p. Employee benefits

1) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

2) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as an expense when employees have rendered services entitling them to the contributions.

Defined benefit costs (including service cost, net interest and remeasurement) under defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost (including current service cost) and net interest on the net defined benefit liability are recognized as employee benefit expenses in the period they occur. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retain earnings and will not be reclassified to profit or loss.

Net defined benefit liability represents the actual deficit in the Group's defined benefit plan. Any surplus resulting from this calculation is limited to the present value of any refunds from the plans or reductions in future contributions to the plans.

3) Other long-term employee benefits

Other long-term employee benefits are accounted for in the same way as the accounting required for defined benefit plan except that remeasurement is recognized in profit or loss.

4) Termination benefits

A liability for a termination benefit is recognized at the earlier of when the Group can no longer withdraw the offer of the termination benefit and when the Group recognizes any related restructuring costs.

q. Share-based payment arrangements

The fair value at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's best estimates of the number of shares or options that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options or other equity - employees' unearned compensation. It is recognized as an expense in full at the grant date if vesting immediately.

When restricted shares for employees are issued, other equity - employees' unearned compensation are recognized on the grant date, with a corresponding increase in capital surplus - restricted shares for employees.

At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the capital surplus - employee share options or capital surplus-restricted share option.

r. Treasury shares

The parent company's shares held by subsidiaries is reclassified to treasury shares from investment accounted for using equity method and recognized with the original investment cost. Cash dividends earned by subsidiaries are write-off with investment income and adjust capital surplus-treasury share transaction.

s. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

Income tax payable (recoverable) is based on taxable profit (loss) for the year determined according to the applicable tax laws of each tax jurisdiction.

According to the Income Tax Law in the ROC, an additional tax on unappropriated earnings is provided for in the year the shareholders approve to retain earnings.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, unused loss carry forward and unused tax credits for purchases of machinery, equipment and technology, research and development expenditures and personnel training expenditures to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. A previously unrecognized deferred tax asset is also reviewed at the end of each reporting period and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the year which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

3) Current and deferred taxes

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, management is required to make judgments, estimates and assumptions on the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered relevant. Actual results may differ from these estimates.

The Group considers the possible impact of the recent development of the COVID-19 in Taiwan and its economic environment implications when making its critical accounting estimates in cash flow projections, growth rate, discount rate, profitability, etc. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimate is revised if the revision affects only that period or in the period of the revision and future years if the revision affects both current and future years.

a. Write-down of inventory

The net realizable value of inventory is the estimated selling price in the ordinary course of business less the estimated costs of completion and disposal. The estimation of net realizable value was based on current market conditions and historical experience with product sales of a similar nature. Changes in market conditions may have a material impact on the estimation of the net realizable value.

b. Recognition and measurement of defined benefit plans

The net defined liabilities (assets) and the resulting defined benefit costs under the defined benefit pension plans are calculated using the projected unit credit method. Actuarial assumptions comprise the discount rates, rates of employee turnover, future salary increases, etc. Changes in economic circumstances and market conditions will affect these assumptions and may have a material impact on the amount of related expenses and the liabilities.

6. CASH AND CASH EQUIVALENTS

	December 31	
	2021	**2020**
Cash on hand	$ 10	$ 11
Checking accounts and demand deposits	7,048,266	9,730,077
Cash equivalents		
Time deposits	11,516,945	2,149,211
	$ 18,565,221	$ 11,879,299

7. FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

	December 31	
	2021	2020
Financial assets at FVTPL - non-current		
Financial assets mandatorily classified as at FVTPL		
Hybrid financial assets		
Foreign convertible preference shares	$ 153,840	$ -

8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	December 31	
	2021	2020
Non-current		
Investments in equity instruments		
Domestic investments		
Listed shares	$ 2,067,920	$ 1,461,804
Unlisted shares	614,379	420,699
	2,682,299	1,882,503
Foreign investments		
Listed shares	541,294	453,571
	$ 3,223,593	$ 2,336,074

These investments in equity instruments are not held for trading. Instead, they are held for medium to long-term strategic purposes. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Group's strategy of holding these investments for long-term purposes.

The Group sold its ordinary shares in Tower Semiconductor Ltd. at a fair value of $95,880 thousand and $4,827 thousand for the years ended December 31, 2021 and 2020, respectively. The related unrealized loss of financial assets at FVTOCI of $258,672 thousand and $16,050 thousand under other equity was transferred to retained earnings.

Due to the liquidation and dissolution of Global Strategic Investment Inc. (Cayman) and Global Strategic Investment Inc. (Samoa), cash in the amount of $33,280 thousand and 49,116 shares of Amphastar Pharmaceuticals, Inc. at fair value were allocated to the Group in August 2020 based on the shareholding ratio. The related unrealized loss on financial assets at FVTOCI of NT$13,050 thousand under other equity was transferred to retained earnings.

The Group recognized dividend income of NT$124,741 thousand and NT$101,174 thousand for the years ended December 31, 2021 and 2020, respectively. As of December 31, 2021 and 2020, the Group's related investments still held amounted to NT$2,598,293 thousand and NT$1,882,503 thousand, respectively.

9. FINANCIAL ASSETS MEASURED AT AMORTIZED COST

	December 31	
	2021	2020
Non-Current		
Time deposits with original maturities exceeding 1 year	$ 43,440	$ -

The interest rate for time deposits with original maturities exceeding 1 year was 3.15% per annum as of December 31, 2021.

10. NOTES RECEIVABLE, TRADE RECEIVABLES AND OTHER RECEIVABLES

	December 31	
	2021	2020
Trade receivables		
Total amount of trade receivables measured at amortized cost	$ 5,707,643	$ 3,471,737
Less: Allowance for impairment loss	(16,955)	(17,018)
	$ 5,690,688	$ 3,454,719
Other receivables		
Tax receivable	$ 179,499	$ 110,103
Receivables from disposal of property, plant and equipment	173,565	-
Others	12,984	6,827
	$ 366,048	$ 116,930

a. Trade receivables

The average credit period for sales of goods was 60 days.

In determining the recoverability of a trade receivable, the Group evaluates each customer's credibility and financial position and considers any change in the credit quality of the trade receivable since the date credit was initially granted to the end of the reporting period.

The Group measures the loss allowance for trade receivables at an amount equal to lifetime ECLs.

The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience with the respective debtors and an analysis of the debtors' current financial positions, adjusted for factors that are specific to the debtors, general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecasted direction of conditions at the reporting date. The Group estimates expected credit losses based on the number of days for which receivables are past due. As the Group's historical credit loss experience shows significantly different loss patterns for different customer segments, the provision for losses based on past due status of receivables is not further distinguished according to different segments of the Group's customer base.

The aging of trade receivables is as follows:

	December 31	
	2021	2020
Neither past due nor impaired	$ 5,413,261	$ 3,384,849
Past due but not impaired		
Within 60 days	276,675	69,837
61-120 days	752	33
Over 120 days	-	-
	$ 5,690,688	$ 3,454,719

The above aging schedule was based on the past due days from the end of the credit term.

As of December 31, 2021 and 2020, the Group did not hold collateral for most of its receivables.

The movements of the allowance for doubtful trade receivables are as follows:

	For the Year Ended December 31	
	2021	2020
Balance at January 1	$ 17,018	$ 16,795
Add: Amounts recovered	-	223
Less: Amounts reversed	(63)	-
Balance at December 31	$ 16,955	$ 17,018

b. Other receivables

No allowance for impairment loss of other receivables was recognized since the other receivables of the Group were not past due and the Group assessed that there was no uncertainty of recoverability.

11. INVENTORIES

	December 31	
	2021	2020
Finished goods and merchandise	$ 1,326,783	$ 932,686
Work in progress	11,064,802	11,327,960
Raw materials	764,802	684,621
	$ 13,156,387	$ 12,945,267

The costs of inventories recognized as cost of goods sold included reversal of inventory loss due to sold part of the written-down inventory. The amounts were as follows:

	For the Year Ended December 31	
	2021	2020
Reversal of inventory loss	$ 1,548,422	$ 99,103

12. SUBSIDIARIES

Subsidiaries included in the consolidated financial statements

As of December 31, 2021 and 2020, the Company has direct and indirect majority ownership in the following subsidiaries: Run Hong Investment Ltd. (Run Hong), Hui Ying Investment Ltd. (Hui Ying), Mxtran Inc. (Mxtran), Macronix America, Inc. (MXA), Macronix (BVI) Co., Ltd. (MXBVI), Mxtran Holding (Samoa) Co., Ltd. (Mxtran Samoa), Mxtran (H.K.) Holding Co., Limited (MxtranHK), New Trend Technology Inc. (NTTI), Macronix (Asia) Limited (MX Asia), Macronix Pte Ltd (MPL), Macronix Europe N.V. (MXE), Macronix (Hong Kong) Co., Limited (MXHK) and Macronix Microelectronics (Suzhou) Co., Ltd. (MXm).

			% of Ownership	
			December 31	
Investor	Investee	Nature of Activities	2021	2020
The Company	Run Hong	Investment company	100.00	100.00
The Company	Hui Ying	Investment company	100.00	100.00
The Company and Run Hong	Mxtran	IC design	94.84	94.84
The Company	MXA	Sales and marketing	100.00	100.00
The Company	MXBVI	Investment holding company	100.00	100.00
Mxtran	Mxtran Samoa	Investment holding company	100.00	100.00
Mxtran Samoa	Mxtran HK	Investment holding company	100.00	100.00
MXBVI	NTTI	IC design	100.00	100.00
MXBVI	MX Asia	After-sales service	100.00	100.00
MXBVI	MPL	After-sales service	100.00	100.00
MXBVI	MXE	After-sales service	100.00	100.00
MXBVI	MXHK	Sales and marketing	100.00	100.00
MXHK	MXm	Development of integrated circuit system and software	100.00	100.00

13. PROPERTY, PLANT AND EQUIPMENT

	December 31	
	2021	2020
Assets used by the Group	$ 32,218,383	$ 31,462,800

	Years Ended December 31, 2021					
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Reclassification	Balance, End of Year
Cost						
Freehold land	$ 1,224,746	$ -	$ -	$ (17,603)	$ -	$ 1,207,143
Buildings	25,439,896	-	4,319,859	(1,633)	312,968	21,431,372
Machinery equipment	100,853,676	-	10,721,370	-	1,207,367	91,339,673
Research and development equipment	4,236,751	-	20,582	(288)	2,600,194	6,816,075
Transportation equipment	22,633	-	3,365	(14)	6,905	26,159
Leasehold improvements	15,045	-	-	(852)	-	14,193
Miscellaneous equipment	1,188,858	2,642	119,698	(3,560)	81,494	1,149,736
Advance payments and construction in progress	5,090,704	4,908,877	-	-	(4,212,812)	5,786,769
	138,072,309	$ 4,911,519	$ 15,184,874	$ (23,950)	$ (3,884)	127,771,120
Accumulated depreciation and impairment						
Freehold land	353,863	$ -	$ -	$ (9,940)	$ -	343,923
Buildings	20,992,618	432,550	4,312,258	(531)	-	17,112,379
Machinery equipment	82,255,045	3,162,587	10,708,360	-	-	74,709,272
Research and development equipment	1,962,791	433,152	20,506	(215)	-	2,375,222
Transportation equipment	14,037	4,001	3,365	(7)	-	14,666
Leasehold improvements	13,990	378	-	(795)	-	13,573
Miscellaneous equipment	1,017,165	86,929	116,837	(3,177)	(378)	983,702
	106,609,509	$ 4,119,597	$ 15,161,326	$ (14,665)	$ (378)	95,552,737
Carrying amount at December 31, 2021	$ 31,462,800					$ 32,218,383

	Years Ended December 31, 2020					
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Reclassification	Balance, End of Year
Cost						
Freehold land	$ 1,257,751	$ -	$ -	$ (33,005)	$ -	$ 1,224,746
Buildings	25,161,752	-	750	3,564	275,330	25,439,896
Machinery equipment	91,635,490	-	204,065	-	9,422,251	100,853,676
Research and development equipment	3,634,881	2,457	14,672	611	613,474	4,236,751
Transportation equipment	28,642	-	7,240	31	1,200	22,633
Leasehold improvements	18,057	272	3,106	(262)	84	15,045
Miscellaneous equipment	1,225,083	8,556	151,224	(108)	106,551	1,188,858
Advance payments and construction in progress	9,822,103	5,692,111	63	2	(10,423,449)	5,090,704
	132,783,759	$ 5,703,396	$ 381,120	$ (29,167)	$ (4,559)	138,072,309
Accumulated depreciation and impairment						
Freehold land	372,499	$ -	$ -	$ (18,636)	$ -	353,863
Buildings	20,577,580	414,583	750	1,205	-	20,992,618
Machinery equipment	79,413,703	2,845,771	204,065	-	199,636	82,255,045
Research and development equipment	1,921,379	259,279	14,672	492	(203,687)	1,962,791
Transportation equipment	17,637	3,042	6,660	18	-	14,037
Leasehold improvements	16,359	752	2,956	(249)	84	13,990
Miscellaneous equipment	1,099,095	69,805	151,201	10	(544)	1,017,165
	103,418,252	$ 3,593,232	$ 380,304	$ (17,160)	$ (4,511)	106,609,509
Carrying amount at December 31, 2020	$ 29,365,507					$ 31,462,800

For the years ended December 31, 2021 and 2020, the Group assessed that no indication of an impairment loss was present; therefore, no impairment assessment was performed.

The carrying amount of the freehold land in the United States which was unutilized by the Group as of December 31, 2021 and 2020 was US$9,579 thousand, respectively.

The Group's 6-inch fab ceased production in May 2021 and was disposed of in September 2021. The related gain on disposal of NT$2,505,176 thousand was recognized as gain on disposal of property, plant and equipment under non-operating income and expenses.

The above items of property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives as follows:

Buildings	
Main buildings	31-40 years
Electronic equipment	11-20 years
Facility equipment	15 years
Landscape engineering	20 years
Machinery equipment	11 years
Research and development equipment	5-11 years
Transportation equipment	5 years
Leasehold improvements	6-16 years
Miscellaneous equipment	2-16 years

Property, plant and equipment pledged as collateral for bank borrowings are set out in Note 34.

14. LEASE ARRANGEMENTS

a. Right-of-use assets

	December 31	
	2021	2020
Carrying amounts		
Freehold land	$ 752,951	$ 919,621
Buildings	81,212	107,825
Machinery equipment	-	9,445
Transportation equipment	2,764	5,003
Miscellaneous equipment	500	500
	$ 837,427	$ 1,042,394

	For the Year Ended December 31	
	2021	2020
Additions to right-of-use assets	$ 25,376	$ 76,762
Depreciation charge for right-of-use assets		
Freehold land	$ 65,972	$ 70,126
Buildings	38,015	39,729
Machinery equipment	10,050	4,861
Transportation equipment	2,973	3,390
Miscellaneous equipment	2,000	2,000
	$ 119,010	$ 120,106
Income from the subleasing of right-of-use assets (included in other income)	$ (4,006)	$ (4,036)

Except for the recognized depreciation, the Group did not have impairment of right-of-use assets for the years ended December 31, 2021 and 2020.

b. Lease liabilities

	December 31	
	2021	2020
Carrying amounts		
Current	$ 90,092	$ 104,598
Non-current	$ 753,991	$ 940,302

Range of discount rate for lease liabilities was as follows:

	December 31	
	2021	2020
Freehold land	1.67%-1.73%	1.67%-1.73%
Buildings	1.03%-6.00%	1.03%-6.00%
Machinery equipment	1.18%-1.28%	1.05%
Transportation equipment	1.03%-1.22%	1.03%-1.22%
Miscellaneous equipment	1.19%	1.03%-1.22%

c. Material lease-in activities and terms

The Group also leased certain land and buildings for the use as plant and office in a period of one to twenty years. The Group does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms. In addition, the Group is prohibited from subleasing or transferring all or any portion of the underlying assets without the lessor's consent.

d. Other lease information

	For the Year Ended December 31	
	2021	2020
Expenses relating to short-term leases	$ 754	$ -
Expenses relating to low-value asset leases	$ 207	$ 299
Expenses relating to variable lease payments not included in the measurement of lease liabilities	$ 12,948	$ 10,529
Total cash outflow for leases	$ (144,298)	$ (139,223)

The Group leases certain office buildings which qualify as short-term leases and certain office equipment which qualifies as low-value asset leases. The Group has elected to apply the recognition exemption and thus, did not recognize right-of-use assets and lease liabilities for these leases.

15. INTANGIBLE ASSETS

	Years Ended December 31, 2021					
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Reclassified	Balance, End of Year
Cost						
Software	$ 108,622	$ 84,339	$ 19,383	$ (292)	$ 5,781	$ 179,067
Accumulated amortization						
Software	51,342	$ 45,625	$ 19,383	$ (278)	$ 4,888	82,194
Carrying amount at December 31, 2021	$ 57,280					$ 96,873

	Years Ended December 31, 2020				
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Balance, End of Year
Cost					
Software	$ 108,386	$ 43,201	$ 43,323	$ 358	$ 108,622
Others	13,000	-	13,000	-	-
	121,386	$ 43,201	$ 56,323	$ 358	108,622
Accumulated amortization					
Software	62,447	$ 31,906	$ 43,323	$ 312	51,342
Others	11,917	1,083	13,000	-	-
	74,364	$ 32,989	$ 56,323	$ 312	51,342
Carrying amount at December 31, 2020	$ 47,022				$ 57,280

Intangible assets are amortized on a straight-line basis over their estimated useful lives as follows:

Software	3 years
Others	3 years

16. OTHER FINANCIAL ASSETS

	December 31	
	2021	2020
Non-current		
Restricted time deposits (Note 34)	$ 208,268	$ 157,665
Refundable deposits	12,845	13,887
	$ 221,113	$ 171,552

17. OTHER ASSETS

	December 31	
	2021	2020
Current		
Prepayments	$ 192,087	$ 118,182
Others	102	-
	$ 192,189	$ 118,182
Non-current		
Prepayments	$ 333,147	$ -

The non-current prepayments were made according to the production capacity cooperation agreement signed between the Company and its suppliers; the prepayments were paid in accordance with the contract.

18. BORROWINGS

Long-term borrowings

	December 31	
	2021	2020
Secured borrowings from financial institutions	$ 6,737,500	$ 10,291,437
Unsecured borrowings from financial institutions	5,670,625	5,880,000
	12,408,125	16,171,437
Less: Current portion	3,094,739	5,412,007
Less: Arrangement fee	10,000	22,555
Less: Government loan discount	53,051	-
Long-term borrowings	$ 9,250,335	$ 10,736,875
Interest rate	0.50%-1.79%	0.93%-1.79%

Borrowing Type	Repayment Terms	December 31 2021	December 31 2020
Secured syndicated loan denominated in NT$	From June 2019 to February 2024	$ 6,737,500	$ 7,700,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	978,000	-
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	649,000	-
Unsecured bank borrowings denominated in NT$	From December 2020 to December 2023	600,000	600,000
Unsecured bank borrowings denominated in NT$	From August 2020 to February 2023	600,000	600,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	556,000	-
Unsecured bank borrowings denominated in NT$	From December 2021 to December 2024	500,000	-
Unsecured bank borrowings denominated in NT$	From August 2020 to August 2023	437,500	500,000
Unsecured bank borrowings denominated in NT$	From June 2020 to June 2023	375,000	500,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2031	329,000	-
Unsecured bank borrowings denominated in NT$	From August 2020 to August 2023	328,125	500,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	318,000	-
Unsecured bank borrowings denominated in NT$	Pay off in December 2021	-	1,200,000
Unsecured bank borrowings denominated in NT$	Pay off in December 2021	-	450,000
Unsecured bank borrowings denominated in NT$	Pay off in December 2021	-	300,000
Secured bank borrowings denominated in NT$	Pay off in December 2021	-	218,750
Secured bank borrowings denominated in NT$	Pay off in September 2021	-	196,875
Unsecured bank borrowings denominated in NT$	Pay off in September 2021	-	120,000
Unsecured bank borrowings denominated in NT$	Pay off in July 2021	-	150,000
Unsecured bank borrowings denominated in NT$	Pay off in June 2021	-	960,000
Secured syndicated loan denominated in NT$	Pay off in January 2021	-	2,175,812
Less: Current portion		3,094,739	5,412,007
Less: Arrangement fee		10,000	22,555
Less: Government loan discount		53,051	-
Total long-term borrowings		$ 9,250,335	$ 10,736,875

To repay the vested liabilities, purchase equipment and machinery and increase operating funds, the Group signed a 5-year syndicated loan agreement with 7 financial institutions in November 2017 with a total amount of NT$7.7 billion. In January 2021, the Group repaid all of the loan in advance.

To purchase equipment or machinery, the Group has entered into a 5-year syndicated loan agreement with 9 financial institutions including the Taiwan Cooperative Bank in January 2019 with the total amount of NT$8 billion. The Group provided notes used as refundable guarantees for syndicated loan mentioned above that will be cancelled upon termination of the guarantee.

The Ministry of Economic Affairs implemented the “Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan” on January 1, 2019, which provided enterprises to make compliant investments with financial institutions at preferential interest rates. The Group has obtained the approval of the Ministry of Economic Affairs to qualify for the project loan and signed a loan contract with a financial institution to obtain a financing line of NT$6.7 billion, with a credit period of 7 to 10 years. The funds obtained are used for factory expansion, purchased machinery and equipment, buildings and operating turnover, etc. The details of government grants are set out in Note 30.

In addition, the Group’s floating borrowing rate on the above borrowing is reset every one to three months.

The loan agreement requires the maintenance of a current ratio, debt ratio, and interest coverage ratio based on the Group’s semi-annual and annual consolidated financial statements. For the year ended December 31, 2021 and 2020, the Group had met the financial ratio covenants.

The details of assets pledged as collateral for long-term loans are set in Note 34.

19. NOTES PAYABLE AND TRADE PAYABLES

	December 31	
	2021	**2020**
Trade payables	$ 3,403,696	$ 2,940,531

The Group has financial risk management policies in place to ensure that all payables are paid within the pre-agreed upon credit terms.

20. OTHER PAYABLES

	December 31	
	2021	**2020**
Payables for bonuses	$ 343,085	$ 260,131
Payables for donations	218,872	177,957
Payables for maintenance and repairs	211,542	192,006
Payables for patents	122,327	129,333
Others	877,890	722,367
	$ 1,773,716	$ 1,481,794

21. OTHER LIABILITIES

	December 31	
	2021	2020
Current		
Refund liabilities	$ 307,035	$ 128,992
Receipts under custody	36,767	35,032
Temporary credits	7,158	7,525
Guarantee deposits	-	160,721
	$ 350,960	$ 332,270
Non-current		
Government grants deferred revenue (Note 30)	$ 55,226	$ -
Guarantee deposits	10,755	19,409
Others	-	9
	$ 65,981	$ 19,418

22. PROVISIONS

	December 31	
	2021	2020
Current		
Employee benefits (a)	$ 23,290	$ 22,687

a. The provision for employee benefits represents vested long service leave entitlements accrued.

23. RETIREMENT BENEFIT PLANS

a. Defined contribution plans

The Company and the subsidiary Mxtran adopted a pension plan under the Labor Pension Act (LPA), which is a state-managed defined contribution plan. Under on the LPA, the Group makes monthly contributions to employees' individual pension accounts at 6% of monthly salaries and wages.

The Group's subsidiaries in Hong Kong, the USA, Europe, Japan, Korea, Singapore and China are required to contribute a specified percentage of payroll costs to the retirement benefit scheme to fund the benefits. The only obligation of the Group with respect to the retirement benefit plan is to make the specified contributions.

b. Defined benefit plans

The defined benefit plan adopted by the Company in accordance with the Labor Standards Act is operated by the government. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the 6 months before retirement. The Company contributes amounts equal to 2% of total monthly salaries and wages to a pension fund administered by the pension fund monitoring committee. Pension contributions are deposited in the Bank of Taiwan in the committee's name. Before the end of each year, the Group assesses the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Group is required to fund the difference in one appropriation that should be made before the end of March of the next year. The pension fund is managed by the Bureau of Labor Funds, Ministry of Labor (the "Bureau"); the Group has no right to influence the investment policy and strategy.

The amounts in the consolidated balance sheets in respect of the Group's defined benefit plans were as follows:

	December 31	
	2021	**2020**
Present value of defined benefit obligation	$ 1,874,741	$ 1,898,790
Fair value of plan assets	(1,021,636)	(942,837)
Net defined benefit liability	$ 853,105	$ 955,953

Movements in net defined benefit liability were as follows:

	Present Value of Defined Benefit Obligation	**Fair Value of the Plan Assets**	**Net Defined Benefit Liabilities (Assets)**
Balance at January 1, 2020	$ 1,903,616	$ 791,902	$ 1,111,714
Service cost			
Current service cost	5,015	-	5,015
Net interest expense	15,013	-	15,013
Return on plan assets	-	6,241	(6,241)
Recognized in profit or loss	20,028	6,241	13,787
Remeasurement			
Return on plan assets	-	26,677	(26,677)
Actuarial loss - experience adjustments	26,798	-	26,798
Actuarial loss - change in financial assumptions	39,079	-	39,079
Actuarial loss - change in demographic assumptions	(5,967)	-	(5,967)
Recognized in other comprehensive income	59,910	26,677	33,233
Contributions from the employer	-	202,781	(202,781)
Benefits paid	(84,764)	(84,764)	-
Balance at December 31, 2020	1,898,790	942,837	955,953
Service cost			
Current service cost	3,601	-	3,601
Net interest expense	9,359	-	9,359
Return on plan assets	-	4,662	(4,662)
Recognized in profit or loss	12,960	4,662	8,298
Remeasurement			
Return on plan assets	-	12,094	(12,094)
Actuarial loss - experience adjustments	53,453	-	53,453
Actuarial loss - change in demographic assumptions	39,519	-	39,519
Recognized in other comprehensive income	92,972	12,094	80,878
Contributions from the employer	-	192,024	(192,024)
Benefits paid	(129,981)	(129,981)	-
Balance at December 31, 2021	$ 1,874,741	$ 1,021,636	$ 853,105

An analysis by function of the amounts recognized in profit or loss in respect of the defined benefit plans is as follows:

	For the Year Ended December 31	
	2021	2020
Operating costs	$ 4,307	$ 7,381
Selling and marketing expenses	528	797
General and administration expenses	1,552	2,478
Research and development expenses	1,911	3,131
	$ 8,298	$ 13,787

Through the defined benefit plans under the Labor Standards Act, the Group is exposed to the following risks:

1) Investment risk: The plan assets are invested in domestic and foreign equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the Bureau or under the mandated management. However, in accordance with relevant regulations, the return generated by plan assets should not be below the interest rate for a 2-year time deposit with local banks.

2) Interest risk: A decrease in the government/corporate bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the plan's debt investments.

3) Salary risk: The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The significant assumptions used for the purposes of the actuarial valuations were as follows:

	December 31	
	2021	2020
Discount rate	0.50%	0.50%
Expected rate of salary increase	3.00%	3.00%
Expected return on plan assets increase	0.50%	0.50%

If possible reasonable change in each of the significant actuarial assumptions will occur and all other assumptions will remain constant, the present value of the defined benefit obligation would increase (decrease) as follows:

	For the Year Ended December 31	
	2021	2020
Discount rate		
0.50% increase	$ (62,796)	$ (67,172)
0.50% decrease	$ 66,474	$ 71,260
Expected rate of salary increase		
0.50% increase	$ 102,481	$ 97,993
0.50% decrease	$ (96,601)	$ (92,509)

The sensitivity analysis presented above may not be representative of the actual change in the present value of the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

	December 31	
	2021	2020
The expected contributions to the plan for the next year	$ 87,610	$ 56,154
The average duration of the defined benefit obligation	6.9 years	7.3 years

The Group maintains a separate executive pension plan and the net periodic pension costs were NT$5,218 thousand and NT$6,835 thousand for the years ended December 31, 2021 and 2020, respectively.

Movements in net defined benefit liability were as follows:

	Present Value of Defined Benefit Obligation
Balance at January 1, 2020	$ 498,861
Service cost	
Current service cost	2,860
Net interest expense	3,975
Recognized in profit or loss	6,835
Remeasurement	
Actuarial loss (gain) - experience adjustments	(34,790)
Actuarial loss - changes in assumptions	4,294
Recognized in other comprehensive income	(30,496)
Balance at December 31, 2020	475,200
Service cost	
Current service cost	2,851
Net interest expense	2,367
Recognized in profit or loss	5,218
Remeasurement	
Actuarial loss - experience adjustments	52,255
Actuarial loss - changes in assumptions	20,233
Recognized in other comprehensive income	72,488
Balance at December 31, 2021	$ 552,906

An analysis by function of the amounts recognized in profit or loss in respect of the defined benefit plans is as follows:

	For the Year Ended December 31	
	2021	2020
General and administration expenses	$ 5,218	$ 6,835

The actuarial valuations of the present value of the defined benefit obligation of executive pension plan were carried out by qualified actuaries. The significant assumptions used for the purposes of the actuarial valuations were as follows:

	December 31	
	2021	2020
Discount rate	0.50%	0.50%
Expected rate of salary increase	-	-
Expected return on plan assets increase	0.50%	0.50%

24. EQUITY

a. Share capital

Ordinary shares

	December 31	
	2021	2020
Number of shares authorized (in thousands)	6,550,000	6,550,000
Shares authorized	$ 65,500,000	$ 65,500,000
Number of shares issued and fully paid (in thousands)	1,856,018	1,856,302
Shares issued	$ 18,560,178	$ 18,563,017

Fully paid ordinary shares, which have a par value of $10, carry one vote per share and carry a right to dividends.

A total of 864,704 thousand shares and 650,000 thousand shares of the Company's authorized shares were reserved for the issuance of convertible bonds and employee share options.

b. Capital surplus

	December 31	
	2021	2020
May be used to offset a deficit, distributed as cash dividends, or transferred to share capital (1)		
Issuance of ordinary shares	$ 253,624	$ 145,378
Donations	37	37
Treasury share transactions	35,444	33,096
	$ 289,105	$ 178,511
May be used to offset a deficit only		
Changes in percentage of ownership interests in subsidiaries (2)	$ 4,609	$ 4,609
May not be used for any purpose		
Employee restricted shares	$ 105,496	$ 201,652

1) Such capital surplus may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Company's paid-in capital and once a year).

2) Such capital surplus arises from changes in capital surplus of subsidiaries accounted for by using the equity method.

c. Retained earnings and dividend policy

The Company's Articles of Incorporation, state that, where the Company made profit in a fiscal year, the profit shall be first utilized for paying taxes, offsetting losses of previous years, setting aside a legal reserve 10% of the remaining profit (until the amount of the legal reserve equals the amount of the Company's paid-in capital), setting aside or reversing a special reserve in accordance with the laws and regulations, and then any remaining profit together with any undistributed retained earnings shall be used by the Company's board of directors as the basis for proposing a distribution plan, which should be resolved in the shareholders' meeting for the distribution of dividends and bonuses to shareholders. The Company state the policies on the distribution of employees' compensation and remuneration of directors state by the Company's Articles of Incorporation refer to "Employees' compensation and remuneration of directors" in Note 26 (h).

The Company is classified under the capital intensive industry. In accordance with the long-term financial program of the Company, the above shareholders' dividends can be retained as undistributed earnings, and then be distributed in the future, as determined by the shareholders at the Annual General Meeting.

Distributions shall be prioritized to take the form of cash dividends. Nevertheless, it still depends on the Company's financial, sales or operating condition. The Company's Articles of Incorporation provide that no more than 50% of the current year's total amount of distributable earnings can be distributed in the form of share dividends.

The appropriation of earnings to a legal reserve shall be made until the legal reserve equals the Company's paid-in capital. The legal reserve may be used to offset any deficit. If the Company has no deficit and the legal reserve has exceeded 25% of the Company's paid-in capital, the excess may be transferred to capital or distributed in cash.

The appropriation of earnings for 2020 and 2019, which had been proposed by the Company's general meeting of shareholders on August 17, 2021 and May 27, 2020, respectively. The appropriation and dividends per share were as follows:

	For the Year Ended December 31	
	2020	**2019**
Legal reserve	$ 529,409	$ 301,196
Special reserve	$ (329,834)	$ (385,857)
Cash dividends	$ 2,227,424	$ 2,207,891
Cash dividends per share	$ 1.2	$ 1.2

The appropriation of earnings for 2021, which were proposed by the Company's board of directors on February 25, 2022, were as follows:

	For the Year Ended December 31, 2021
Legal reserve	$ 1,155,091
Special reserve	$ (214,869)
Cash dividends	$ 3,340,758
Cash dividends per share	$ 1.8

The above appropriation for cash dividends had been resolved by the Company's board of directors; the other proposed appropriations will be resolved by the shareholders in their meeting to be held on May 27, 2022.

d. Special reserve

	For the Year Ended December 31	
	2021	2020
Beginning at January 1	$ 621,195	$ 1,007,052
Appropriations in respect of		
Treasury shares reversal	(9,979)	(36,882)
Reversal of the debits to other equity items	(319,855)	(348,975)
Balance at December 31	$ 291,361	$ 621,195

According to the shareholding ratio, the special reserve is calculated based on the difference between the market value of the parent company's stock holdings and the book value, and the special reserve will be partially reversed on market price.

e. Other equity items

1) Exchange differences on translating foreign operations

	For the Year Ended December 31	
	2021	2020
Balance at January 1	$ (386,090)	$ (235,880)
Exchange differences on translating foreign operations	(112,962)	(150,210)
Balance at December 31	$ (499,052)	$ (386,090)

2) Unrealized valuation gain on/(loss) on financial assets at FVTOCI

	For the Year Ended December 31	
	2021	2020
Balance at January 1	$ 171,026	$ (299,040)
Recognized for the year		
Unrealized gain - equity instrument	944,505	440,966
Other comprehensive income recognized for the year	1,115,531	141,926
Cumulative unrealized gain/(loss) of equity instruments transferred to retained earnings due to disposal	258,672	29,100
Balance at December 31	$ 1,374,203	$ 171,026

3) Employee unearned benefit

In the meeting of shareholders on June 16, 2016 and June 18, 2019, the shareholders approved a restricted share plan for employees. Refer to Note 29 for the information of restricted shares issued.

	For the Year Ended December 31	
	2021	**2020**
Balance at January 1	$ (150,555)	$ (443,066)
Share-based payment expenses recognized	115,145	293,662
Adjustments for change of turnover rate	(9,994)	(1,151)
Balance at December 31	$ (45,404)	$ (150,555)

f. Non-controlling interests

	For the Year Ended December 31	
	2021	**2020**
Balance at January 1	$ 800	$ 1,276
Share of loss for the year	(113)	(471)
Other comprehensive income (loss) for the year		
Exchange difference on translating the financial statements of foreign operations	(1)	(5)
Balance at December 31	$ 686	$ 800

g. Treasury shares

The Company's shares held by its subsidiaries at December 31, 2021 and 2020 were as follows:

Name of Subsidiary	**Number of Shares Held (In Thousands)**	**Carrying Amount**	**Market Price**
December 31, 2021			
Hui Ying	1,957	$ 159,061	$ 82,569
December 31, 2020			
Hui Ying	1,957	$ 159,061	$ 82,765

The Company's shares held by subsidiaries are regarded as treasury shares; shareholder's rights are retained, except for the rights to participate in any share issuances for cash and to vote.

25. REVENUE

a. Segmentation of revenue from contracts with customers

	For the Year Ended December 31	
	2021	2020
Product type		
Flash	$ 33,504,267	$ 20,953,865
ROM	13,556,983	16,022,159
Foundry	3,501,876	2,794,731
Others	9,865	30,192
	$ 50,572,991	$ 39,800,947

b. Contract balances

	For the Year Ended December 31	
	2021	2020
Contract liabilities (classified as current liabilities)	$ 36,263	$ 92,195

The changes in the contract liability balances primarily result from the timing difference between the satisfaction of the performance obligations and the customer's payment.

The Group recognized revenue from the beginning balance of contract liabilities as follows:

	For the Year Ended December 31	
	2021	2020
From the beginning balance of contract liabilities		
Sale of goods	$ 89,081	$ 97,447

26. NET PROFIT (LOSS) FROM CONTINUING OPERATIONS

a. Interest income

	For the Year Ended December 31	
	2021	2020
Bank deposits	$ 25,730	$ 30,858

b. Other income

	For the Year Ended December 31	
	2021	2020
Dividend income	$ 124,741	$ 101,174
Others	49,474	29,212
	$ 174,215	$ 130,386

c. Gain on disposal of property, plant and equipment

	For the Year Ended December 31	
	2021	**2020**
Gain on disposal of idle assets	$ 2,505,176	$ -

d. Other gains and losses

	For the Year Ended December 31	
	2021	**2020**
Net foreign exchange (losses) gains	$ (164,905)	$ 95,298
Financial assets at fair value through profit or loss	(12,280)	-
Other losses	(27,782)	(35,017)
	$ (204,967)	$ 60,281

e. Finance costs

	For the Year Ended December 31	
	2021	**2020**
Interest on loans	$ 220,856	$ 248,416
Interest on lease liabilities	18,565	20,432
Less: Amounts included in the cost of qualifying assets	(2,851)	(21,892)
	$ 236,570	$ 246,956

Information about capitalized interest was as follows:

	For the Year Ended December 31	
	2021	**2020**
Capitalized interest	$ 2,851	$ 21,892
Capitalization rate	1.20%	1.79%

f. Depreciation and amortization

	For the Year Ended December 31	
	2021	**2020**
An analysis of depreciation by function		
Operating costs	$ 3,598,190	$ 3,255,402
Operating expenses	640,417	457,936
	$ 4,238,607	$ 3,713,338
An analysis of amortization by function		
Operating costs	$ 18,342	$ 14,039
Operating expenses	27,283	18,950
	$ 45,625	$ 32,989

g. Employee benefits expense

	For the Year Ended December 31	
	2021	2020
Post-employment benefits (Note 23)		
Defined contribution plans	$ 240,792	$ 205,546
Defined benefit plans	13,516	20,622
	254,308	226,168
Share-based payments		
Equity-settled	115,145	293,662
Other employee benefits	9,161,053	6,973,495
Total employee benefits expense	$ 9,530,506	$ 7,493,325
An analysis of employee benefits expense by function		
Operating costs	$ 4,069,134	$ 3,296,709
Operating expenses	5,461,372	4,196,616
	$ 9,530,506	$ 7,493,325

h. Employees' compensation and remuneration of directors

In compliance with the Articles of Incorporation, the Company accrued employees' compensation and remuneration of directors at the rates of 15% and no higher than 2%, respectively, of net profit before income tax, employees' compensation, and remuneration of directors. For the years ended December 31, 2021 and 2020, the estimated employees' compensation and the remuneration of directors resolved by the board of directors on February 25, 2022 and February 26, 2021, respectively, were as follows:

Amount

	For the Year Ended December 31	
	2021	2020
Employees' compensation	$ 2,396,656	$ 1,050,180
Remuneration of directors	$ 319,554	$ 140,024

If there is a change in the amounts after the annual consolidated financial statements are authorized for issue, the differences are recorded as a change in the accounting estimate.

There is no difference between the actual amount of employees' compensation and remuneration of directors paid and the amount recognized in the consolidated financial statements for the years ended December 31, 2020 and 2019.

Information on the employees' compensation and remuneration of directors resolved by the Company's board of directors in 2021 and 2020 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

27. INCOME TAXES RELATING TO CONTINUING OPERATIONS

a. Major components of income tax expense recognized in profit or loss

	For the Year Ended December 31	
	2021	2020
Current tax		
In respect of the current year	$ 693,758	$ 65,707
Overseas income tax	1,793	4,274
Adjustments for prior year	12,861	(1,619)
Deferred tax		
In respect of the current year	656,438	447,072
Income tax expense recognized in profit or loss	$ 1,364,850	$ 515,434

A reconciliation of accounting loss and income tax expenses is as follows:

	For the Year Ended December 31	
	2021	2020
Income before tax from continuing operations	$ 13,327,689	$ 5,841,046
Income tax expense calculated at the statutory rate	$ 2,716,358	$ 1,189,038
Non-deductible expenses in determining taxable income	7,969	7,083
Non-taxable income	(132,173)	(18,946)
Realized investment losses	(242,886)	-
Deductible temporary differences	(1,236,665)	(1,085,296)
Deductible tax-exemptions income credits	(83,349)	-
Unrecognized investment credits	(337,368)	(25,666)
Recognized loss carryforwards	658,310	446,566
Overseas income tax	1,793	4,274
Adjustments for prior year	12,861	(1,619)
Income tax expense recognized in profit or loss	$ 1,364,850	$ 515,434

b. Current tax assets and liabilities

	December 31	
	2021	2020
Current tax assets		
Tax refund receivable	$ 1,072	$ 3,818
Current tax liabilities		
Income tax payable	$ 686,210	$ 63,359

c. Deferred tax assets and liabilities

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2021

	Opening Balance	Recognized in Profit or Loss	Closing Balance
Deferred tax assets			
Temporary differences			
Unrealized inventory losses	$ -	$ 483,271	$ 483,271
Net defined benefit liabilities	-	83,127	83,127
Unrealized refund liabilities	-	35,569	35,569
Recognized loss carryforwards	658,310	(658,310)	-
Others	1,984	44,126	46,110
	$ 660,294	$ (12,217)	$ 648,077
Deferred tax liabilities			
Temporary differences			
Depreciation	$ -	$ (603,554)	$ (603,554)
Unrealized exchange gains	-	(40,667)	(40,667)
	$ -	$ (644,221)	$ (644,221)

For the year ended December 31, 2020

	Opening Balance	Recognized in Profit or Loss	Closing Balance
Deferred tax assets			
Temporary differences			
Recognized loss carryforwards	$ 1,104,876	$ (446,566)	$ 658,310
Others	2,490	(506)	1,984
	$ 1,107,366	$ (447,072)	$ 660,294

d. Deductible temporary differences, unused loss carryforwards and unused investment credits for which no deferred assets have been recognized in the consolidated balance sheets

	December 31	
	2021	2020
Loss carryforwards		
Expire in 2021	$ -	$ 131,050
Expire in 2022	184,390	184,390
Expire in 2023	97,389	97,389
Expire in 2024	141,421	147,183

(Continued)

	December 31 2021	December 31 2020
Expire in 2025	$ 67,634	$ 67,634
Expire in 2026	28,806	28,806
Expire in 2027	66,966	66,966
Expire in 2028	31,408	31,408
Expire in 2029	17	17
Expire in 2030	8,677	8,677
Expire in 2031	11,803	-
	$ 638,511	$ 763,520
Investment credits		
Research and development expenditures	$ 141,281	$ 200,880
Purchase of smart machines expenditures	30,000	23,538
	$ 171,281	$ 224,418
Deductible temporary differences	$ 6,773,449	$ 9,527,337

(Concluded)

The unrecognized investment credits will expire in 2022.

e. Information about unused investment credits, unused loss carry-forwards and tax-exemptions

As of December 31, 2021, investment credits comprised of:

Law and Statutes	Tax Credit Source	Remaining Creditable Amount	Expiry Year
Statute for Industrial Innovation	Research and development expenditures	$ 141,281	2022
Statute for Industrial Innovation	Purchase of smart machines expenditures	30,000	2022
		$ 171,281	

Loss carryforwards as of December 31, 2021 comprised of:

Unused Tax Amount	Expiry Year
$ 36,878	2022
19,478	2023
28,284	2024
13,527	2025
5,761	2026
13,393	2027
6,282	2028
3	2029
1,735	2030
2,361	2031
$ 127,702	

As of December 31, 2021, profit attributable to the following expansion projects is exempted from income tax for a 5-year period:

Expansion of Construction Project	Tax-exemption Period
Construction and expansion of 2008	2017 to 2021

f. Income tax assessments

The Company's and Mxtran Inc.' tax returns through 2019 and Run Hong Investment Ltd. and Hui Ying Investment Ltd. ' tax returns through 2020 have been assessed by the tax authorities.

28. EARNINGS PER SHARE

Unit: NT$ Per Share

	For the Year Ended December 31	
	2021	2020
Basic earnings per share	$ 6.48	$ 2.90
Diluted earnings per share	$ 6.25	$ 2.84

The income and weighted average number of ordinary shares outstanding in the computation of earnings per share from continuing operations were as follows:

Net Income for the Year

	For the Year Ended December 31	
	2021	2020
Income for the year attributable to owners of the Company	$ 11,962,952	$ 5,326,083

Weighted average number of ordinary shares outstanding (in thousand shares):

	For the Year Ended December 31	
	2021	2020
Weighted average number of ordinary shares in computation of basic earnings per share	1,845,347	1,839,322
Effect of potentially dilutive ordinary shares:		
Restricted shares to employees	7,704	10,105
Employees' compensation or bonus issue to employees	60,181	27,631
Weighted average number of ordinary shares in computation of diluted earnings per share	1,913,232	1,877,058

Since the Group offered to settle compensation or bonuses paid to employees in cash or shares, the Group assumed the entire amount of the compensation or bonus will be settled in shares and the resulting potential shares were included in the weighted average number of shares outstanding used in the computation of diluted earnings per share, as the effect is dilutive. Such dilutive effect of the potential shares is included in the computation of diluted earnings per share until the number of shares to be distributed to employees is resolved in the following year.

29. SHARE-BASED PAYMENT ARRANGEMENTS

Restricted share plan for employees

Information on share plan for employees were as follows:

Approved Date	Grant Shares (Thousand)	Board of Directors Approved Grant Shares (Thousand)	Grant Date	Issued Date	Issued Shares (Thousand)	Fair Value
2016/06/16	123,535	58,971	2016/10/25	2017/01/03	57,476	$ 4.73
2019/06/18	35,294	16,815	2019/10/21	2020/06/16	16,400	32.55

To meet the vesting conditions, an employee has to meet performance and other conditions over the vesting period listed as follows:

a. If an employee remains employed by the Company for one year after the grant date; and has a current year's performance rating of "successful" (or higher) /A0 or A1, 40% of the restricted shares will be vested;

b. If an employee remains employed by the Company for two years after the grant date; and has a current year's performance rating of "successful" (or higher) /A0 or A1, 30% of the restricted shares will be vested;

c. If an employee remains employed by the Company for three years after grant date; and has a current year's performance rating of "successful" (or higher) /A0 or A1, 30% of the restricted shares will be vested.

In addition to the vesting conditions, the limitations are as follows:

a. Employees, except for inheritance, should not sell, transfer, pledge, donate or in any other way dispose of the shares.

b. The shares should be held in stock trust.

c. Except for the above two paragraphs, the other rights of the restricted share plan for employees, which include, but are not limited to, dividends, bonuses, the distribution rights of the legal reserve and capital surplus, share options of cash capital voting rights of shareholders, etc., are the same as the Group's issued ordinary shares.

d. The dividends of restricted share plan for employees are not restricted by existing conditions.

e. When a new share is returned in cash due to the Company's capital reduction, the refund of the vested capital loss shall be under custodian trust. In accordance with the issuance method, such capital and shares shall be granted if the vesting conditions for new restricted employee shares are met. The vested shares are granted to employees without interests; if the vested conditions are not met, such cash will be recovered by the Company (applicable to the shareholders' resolution of restricted share plan in the 2019 shareholders' meeting).

When employees do not reach the vesting conditions of restricted share plan for employees during the year, the Company will recover and cancel the shares.

Information on restricted share plan for employees was as follows:

	Number of Shares (In Thousands)	
	For the Year Ended December 31	
	2021	2020
Balance at January 1	9,836	23
Issued	-	16,400
Vested	(4,800)	(6,465)
Forfeited (Note)	(210)	(122)
Balance at December 31	4,826	9,836

Note: The forfeited shares for the years ended December 31, 2021 include 41 thousand shares which will be cancelled and 169 thousand shares which were already cancelled, and the forfeited shares for the years ended December 31, 2020 include 115 thousand shares which will be cancelled and 7 thousand shares which were already cancelled.

For the years ended December 31, 2021 and 2020, the compensation costs recognized were NT$115,145 thousand and NT$293,662 thousand, respectively.

30. GOVERNMENT GRANTS

As of December 31, 2021, the Company obtained a government preferential interest rate loan of $2,830,000 thousand from the “Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan”. The loan will be repaid on an average monthly basis after the date of expiry. At the time of the borrowing, the fair value of the borrowing was estimated based on the market interest rate. The difference between the amount obtained and the fair value of the loan is $56,583 thousand, which is regarded as a government low interest loan and recognized as deferred income. For the year ended December 31, 2021, the Company recognized other income of $1,357 thousand and the interest expense of the loan of $3,532 thousand, respectively.

31. CAPITAL MANAGEMENT

The Group manages its capital to ensure that the Group will be able to operate under the premises of going concerns and growth while maximizing the return to shareholders through the optimization of the debt and equity balance.

The Group’s strategy for managing the capital structure is to lay out the plan of product development and expand the market share considering the growth and the magnitude of industry and further developing an integral plan founded on the required capacity, capital outlay, and magnitude of assets in long-term development. Ultimately, considering the risk factors such as the fluctuation of the industry cycle and the life cycle of products, the Group determines the optimal capital structure by estimating the profitability of products, operating profit ratio, and cash flow based on the competitiveness of products.

The management of the Group periodically examines the capital structure and contemplates on the potential costs and risks involved while exerting different financial tools. In general, the Group implements prudent strategy of risk management.

32. FINANCIAL INSTRUMENTS

a. Fair value of financial instruments not measured at fair value

The management considers that the carrying amounts of financial assets and financial liabilities recognized in the consolidated financial statements approximate their fair values or their fair values cannot be reliably measured.

b. Fair value of financial instruments measured at fair value on a recurring basis

1) Fair value hierarchy

December 31, 2021

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Foreign convertible preference shares	$ -	$ -	$ 153,840	$ 153,840
Financial assets at FVTOCI				
Equity securities				
Securities listed in the ROC	$ 2,067,920	$ -	$ -	$ 2,067,920
Securities listed in other countries	541,294	-	-	541,294
Securities unlisted	-	-	614,379	614,379
	$ 2,609,214	$ -	$ 614,379	$ 3,223,593

December 31, 2020

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Equity securities				
Securities listed in the ROC	$ 1,461,804	$ -	$ -	$ 1,461,804
Securities listed in other countries	453,571	-	-	453,571
Securities unlisted	-	-	420,699	420,699
	$ 1,915,375	$ -	$ 420,699	$ 2,336,074

There were no transfers between Level 1 and Level 2 in the current and prior years.

2) Reconciliation of Level 3 fair value measurements of financial assets

For the Year Ended December 31, 2021

Financial Assets	**Financial Assets at FVTPL - Foreign Convertible Preference Shares**	**Financial Assets at FVTOCI - Equity Instruments**	**Total**
Balance at January 1	$ -	$ 420,699	$ 420,699
Additions	168,645	84,006	252,651

(Continued)

Financial Assets	Financial Assets at FVTPL - Foreign Convertible Preference Shares	Financial Assets at FVTOCI - Equity Instruments	Total
Total loss recognized in profit or loss	$ (12,280)	$ -	$ (12,280)
Total gain recognized in other comprehensive income (unrealized gain (loss) on financial assets at FVTOCI)	-	109,674	109,674
Effects of foreign currency exchange differences	(2,525)	-	(2,525)
Balance at December 31	$ 153,840	$ 614,379	$ 768,219

(Concluded)

For the Year Ended December 31, 2020

Financial Assets	Financial Assets at FVTPL - Foreign Convertible Preference Shares	Financial Assets at FVTOCI - Equity Instruments	Total
Balance at January 1	$ -	$ 396,986	$ 396,986
Total gain (loss) recognized in other comprehensive income (unrealized gain (loss) on financial assets at FVTOCI)	-	23,713	23,713
Balance at December 31	$ -	$ 420,699	$ 420,699

3) Valuation used in Level 3 fair value measurement

The fair values of equity securities listed in the ROC and other countries and foreign convertible preference shares was arrived at using either the asset-based approach or based on the multiplier evaluated in the active market by the market approach and adjustments of liquidity.

c. Categories of financial instruments

	December 31	
	2021	2020
Financial assets		
Measured at amortized costs (1)	$ 25,668,734	$ 17,159,824
Measured at FVTPL	153,840	-
Measured at FVTOCI	3,223,593	2,336,074
Financial liabilities		
Measured at amortized cost (2)	22,411,418	25,167,034

1) The balances included financial assets measured at amortized cost, which comprise cash and cash equivalents, trade receivables (including receivables from related parties), other receivables and other financial assets.

2) The balances included financial liabilities measured at amortized cost, which comprise, notes payable and trade payables (including payables to related parties), other payables (including other payables to related parties), payable for purchases of equipment, guarantee deposits and long-term loans (including current portion).

d. Financial risk management objectives and policies

The Group manages its exposure to risks relating to the operations through market risk, credit risk, and liquidity risk with the objective to reduce the potentially adverse effects the market uncertainties may have on its financial performance.

The plans for material treasury activities are reviewed by management in accordance with procedures required by relevant regulations or internal controls. During the implementation of such plans, the Group must comply with certain treasury procedures that provide guiding principles for overall financial risk management.

1) Market risk

The Group's activities exposed it primarily to the financial risks of changes in foreign currency exchange rates (see (a) below), interest rates (see (b) below), and other price risk (see (c) below).

a) Foreign currency risk

The Group had foreign currency sales and purchases, which exposed the Group to foreign currency risk. Exchange rate exposures were managed within approved policy parameters utilizing foreign exchange forward contracts.

Sensitivity analysis

The Group was mainly exposed to the USD and JPY.

The sensitivity analysis of foreign currency risk focuses mainly on exchange rates for transactions in currencies other than the entity's functional currency (i.e. foreign currencies) which are recognized at the rates of exchange prevailing at the end of each reporting period.

The following table details the Group's sensitivity to a 3% and 10% increase in the New Taiwan dollars (i.e. the functional currency) against the USD and JPY, respectively. The sensitivity rates used are 3% and 10% when reporting foreign currency risk internally to key management personnel.

	USD Impact		**JPY Impact**	
	For the Year Ended December 31		**For the Year Ended December 31**	
	2021	**2020**	**2021**	**2020**
Pre-tax profit decrease	$ 113,995	$ 93,594	$ 1,079	$ 160,081

b) Interest rate risk

The Group is exposed to interest rate risk from outstanding bank loans. Interest rates of the Group's long-term bank loans are floating, and changes in interest rates would affect the future cash flows but not the fair value.

The sensitivity analysis of interest is performed based on the financial liabilities exposed to cash flow interest rate risk at the end of each reporting period.

If interest rates had been 50 basis points higher/lower, the Group's pre-tax loss for the years ended December 31, 2021 and 2020 would decrease/increase by NT$61,725 thousand and NT$80,744 thousand, respectively.

c) Other price risk

The Group was exposed to equity price risk through its investments in equity securities. Equity investments are held for strategic rather than trading purposes. The Group does not actively trade these investments.

Sensitivity analysis

A sensitivity analysis of equity prices is performed based on the fair values of equity investments at the end of each reporting period.

If equity prices had been 10% higher/lower, equity for the years ended December 31, 2021 and 2020 would have increase/decrease by NT$322,359 thousand and NT$233,607 thousand, respectively, as a result of the changes in fair value of available-for-sale investments.

2) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group's exposure to credit risk mainly arises from trade receivables - operating, bank deposits, and other financial instruments. Credit risk is managed separately for business related and financial related exposures.

Business related credit risk

In order to maintain the credit quality of trade receivables, the Group has established procedures to monitor and limit exposure to credit risk on trade receivables.

Credit evaluation is performed in the consideration of the relevant factors, such as financial condition, external and internal credit scoring, historical experience, and economic conditions, which may affect the customer's paying ability. The Group holds some of the credit enhancements such as prepayments and collateral to mitigate its credit risks.

Trade receivables consisted of a large number of customers, spread across diverse industries and geographical areas.

As of December 31, 2021 and 2020, the Group's ten largest customers accounted for 41% and 57% of its total trade receivables (including receivables from related parties), respectively. The Group believed that the concentration of credit risk is relatively insignificant for the remaining trade receivables.

Financial credit risk

The Group's exposure to financial credit risk which pertained to bank deposits and other financial instruments were evaluated and monitored by Corporate Treasury function. The Group only deals with creditworthy counterparties and banks so that no significant credit risk was identified.

3) Liquidity risk

The objective of liquidity risk management is to ensure the Group has sufficient liquidity to fund its business requirements of cash and cash equivalents and the unused of financing facilities associated with existing operations.

The table below summarizes the maturity profile of the Group's financial liabilities based on contractual and undiscounted payments, including principal and estimated interest.

December 31, 2021

	On Demand or Less than 1 Year	**1-3 Years**	**3-5 Years**	**5+ Years**	**Total**
Non-derivative financial liabilities					
Non-interest bearing	$ 13,579,116	$ -	$ -	$ -	$ 13,579,116
Lease liabilities	105,175	176,860	140,834	512,042	934,911
Interest bearing	3,272,506	7,076,478	1,371,007	1,036,924	12,756,915
	$ 16,956,797	$ 7,253,338	$ 1,511,841	$ 1,548,966	$ 27,270,942

Additional information about the maturity analysis for lease liabilities:

	Less than 1 Year	**1-5 Years**	**5-10 Years**	**10-15 Years**	**15-20 Years**	**20+ Years**
Lease liabilities	$ 105,175	$ 317,694	$ 320,221	$ 185,202	$ 6,619	$ -

December 31, 2020

	On Demand or Less than 1 Year	**1-3 Years**	**3-5 Years**	**5+ Years**	**Total**
Non-derivative financial liabilities					
Non-interest bearing	$ 10,702,363	$ -	$ -	$ -	$ 10,702,363
Lease liabilities	128,813	227,291	188,559	630,296	1,174,959
Interest bearing	5,626,283	8,046,662	2,891,576	-	16,564,521
	$ 16,457,459	$ 8,273,953	$ 3,080,135	$ 630,296	$ 28,441,843

Additional information about the maturity analysis for lease liabilities:

	Less than 1 Year	**1-5 Years**	**5-10 Years**	**10-15 Years**	**15-20 Years**	**20+ Years**
Lease liabilities	$ 128,813	$ 415,850	$ 376,402	$ 245,069	$ 8,825	$ -

The amounts included above for variable interest rate instruments for both non-derivative financial assets and liabilities was subject to change if changes in variable interest rates were to differ from those estimates of interest rates determined at the end of the reporting period.

33. TRANSACTIONS WITH RELATED PARTIES

Balances and transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Besides information disclosed elsewhere in the other notes, details of transactions between the Group and other related parties are disclosed below.

a. Related parties and their relationships associated with the Company:

Related Parties	Relationship with the Company
MegaChips Corporation (MegaChips)	Key management personnel
Ardentec Corporation (Ardentec)	The Group is its major management authority
Etron Technology, Inc. (Etron)	Others
Macronix Education Foundation (MXIC Foundation)	Others
NCKUEE Alumni Foundation (NCKUEE Foundation)	Others

b. Operating revenues

Line Items	Related Parties Categories/Name	For the Year Ended December 31	
		2021	2020
Sales	Key management personnel		
	MegaChips	$ 13,704,352	$ 16,101,433

Sales prices for the related parties were not comparable to those for external customers as the Group was the sole provider of these customers. The sales terms for the related parties was 30 days.

c. Purchases

Related Parties Categories/Name	For the Year Ended December 31	
	2021	2020
Key management personnel		
MegaChips	$ 5,895,828	$ 6,209,245

Materials purchased from related parties were for manufacturing process. The payment term was 30 days after monthly closing and after acceptance of materials.

d. Receivables from related parties

Line Items	Related Parties Categories/Name	December 31	
		2021	2020
Receivables from related parties, net	Key management personnel MegaChips	$ 961,722	$ 1,647,427

The outstanding trade receivables from related parties are unsecured. For the years ended December 31, 2021 and 2020, no impairment loss was recognized for trade receivables from related parties.

e. Payables to related parties

Line Items	Related Parties Categories/Name	December 31 2021	December 31 2020
Payables to related parties	Key management personnel		
	MegaChips	$ 4,388,398	$ 4,062,278
	The Group is its major management authority	120,798	99,149
		$ 4,509,196	$ 4,161,427
Other payables to related parties	Others		
	NCKUEE Foundation	$ 300	$ -
	Other	60	-
		$ 360	$ -

The outstanding trade payables from related parties are unsecured and will be settled in cash.

f. Other transactions with related parties

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2021	For the Year Ended December 31 2020
Manufacturing expenses	The Group is its major management authority		
	Ardentec	$ 387,057	$ 306,514
Operating expenses	Others		
	MXIC Foundation	$ 21,628	$ 23,028
	Other	300	91
		$ 21,928	$ 23,119

The manufacturing expenses of related parties were comparable to those with other vendors. The payment term was 75 days after monthly closing.

g. Compensation of key management personnel

	For the Year Ended December 31 2021	For the Year Ended December 31 2020
Short-term benefits	$ 905,782	$ 504,012
Post-employment benefits	5,218	6,835
Share-based payments	18,545	48,751
Other long-term employee benefits	(11)	(14)
	$ 929,534	$ 559,584

The remuneration of key executives was determined by the remuneration committee based on the performance of individuals and market trends.

34. ASSETS PLEDGED AS COLLATERAL OR FOR SECURITY

The following assets were provided as collateral for bank borrowings, the tariff of imported raw materials guarantees, natural gas agreements, and land lease agreements:

	December 31	
	2021	**2020**
Property, plant and equipment, net	$ 9,758,877	$ 12,915,218
Pledge deposits (classified as other financial assets - non-current)	208,268	157,665
	$ 9,967,145	$ 13,072,883

35. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

In addition to those disclosed in other notes, significant commitments and contingencies of the Group as of December 31, 2021 and 2020 were as follows:

a. As of December 31, 2021 and 2020, unused letters of credit amounted to approximately NT$395,425 thousand and NT$0 thousand, respectively.

b. Unrecognized commitments are as follows:

	December 31	
	2021	**2020**
Acquisition of property, plant and equipment	$ 11,312,421	$ 2,137,663

c. The Company's board of directors passed a resolution to donate to National Cheng Kung University to establish the "School of Computing" to cultivate cross domain innovative talents with dual expertise "specific discipline" and "computing" to contribute to the society, and to fulfill Company's social responsibilities with a donation amount of $100,000 thousand per year for the following ten years. As of December 31, 2021, the Company has allocated $200,000 thousand.

d. On October 26, 2021, the board of directors of the Company approved to continue participating in the joint development plan of IBM "Phase Change Memory" and obtain the authorization of specific analog artificial intelligence technology. The period is from January 2022 to January 2025. The two parties jointly bear the related technology development fees, and the unrecognized contract amount is US$21,000 thousand.

e. The Company signed a long-term purchase contract with suppliers. The contract is valid up to December 31, 2024. The Company must prepay a certain amount of money as a guarantee according to the contract, and these suppliers must deliver the purchased items to the Company according to the supply quantity and price agreed in the contract. As of December 31, 2021, the Company recorded prepayments of US$11,994 thousand and the unpaid contract amount was US$47,978 thousand.

36. SIGNIFICANT ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The Group's significant financial assets and liabilities denominated in foreign currencies aggregated by the foreign currencies other than functional currencies and the related exchange rates between foreign currencies and respective functional currencies were as follows:

December 31, 2021

	Foreign Currencies (In Thousands)	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 18,356,915	0.2405	$ 4,414,838
USD	200,501	27.68	5,549,865
			$ 9,964,703
Financial liabilities			
Monetary items			
JPY	18,312,040	0.2405	$ 4,404,046
USD	63,224	27.68	1,750,043
			$ 6,154,089

December 31, 2020

	Foreign Currencies (In Thousands)	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 20,790,537	0.2763	$ 5,744,425
USD	155,570	28.48	4,430,634
			$ 10,175,059
Financial liabilities			
Monetary items			
JPY	14,996,812	0.2763	$ 4,143,619
USD	46,026	28.48	1,310,820
			$ 5,454,439

For the years ended December 31, 2021 and 2020, realized and unrealized net foreign exchange (losses) gains were NT$(164,905) thousand and NT$95,298 thousand, respectively. It is impractical to disclose net foreign exchange losses by each significant foreign currency due to the variety of the foreign currency transactions and functional currencies of the Group.

37. SEPARATELY DISCLOSED ITEMS

a. Information about significant transactions:

   1) Financing provided to others: None

   2) Endorsements/guarantees provided: None

   3) Marketable securities held (excluding investment in subsidiaries, associates and joint ventures): Table 1 (attached)

   4) Marketable securities acquired and disposed of at costs or prices of at least NT$300 million or 20% of the paid-in capital: None

   5) Acquisition of individual real estate at costs of at least NT $300 million or 20% of the paid-in capital: None

   6) Disposal of individual real estate at prices of at least NT$300 million or 20% of the paid-in capital: Table 2 (attached)

   7) Total purchases from or sales to related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 3 (attached)

   8) Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 4 (attached)

   9) Trading in derivative instruments: None

   10) Intercompany relationships and significant intercompany transactions: Table 5 (attached)

b. Information on investees: Table 6 (attached)

c. Information on investments in mainland China:

   1) Information on any investee company in mainland China, showing the name, principal business activities, paid-in capital, method of investment, inward and outward remittance of funds, shareholding ratio, investment gains or losses, carrying amount of the investment at the end of the period, repatriation of investment gains or losses, and limit on the amount of investment in the mainland China area: Table 7 (attached)

   2) Any of the significant transactions with investee companies in mainland China, either directly or indirectly through a third area, and their prices, payment terms, and unrealized gains or losses: Table 5 (attached)

d. Information of major shareholders: List all shareholders with ownership of 5% or greater showing the name of the shareholder, the number of shares owned, and percentage of ownership of each shareholder: None

38. SEGMENT INFORMATION

Information reported to the chief operating decision maker for the purposes of resource allocation and assessment of segment performance emphasizes on the types of goods or services delivered or provided. Considering the nature of the product and the process of manufacture, the management integrated those divisions of similar operation functions into one operation segment. The reporting segments of the Group were as follows:

Memory products and wafer fabrication

IC design

There was no material difference between the accounting policies of the reportable segment and those described in Note 4.

a. Segment revenues and results

The following was an analysis of the Group's revenue and results from continuing operations by reportable segment.

	Segment Net Operating Revenue	
	For the Year Ended December 31	
	2021	**2020**
Memory products and wafer fabrication	$ 50,569,261	$ 39,800,902
IC design	3,730	45
Total	$ 50,572,991	$ 39,800,947

	Segment Income (Loss) from Operations and Net Income	
	For the Year Ended December 31	
	2021	**2020**
Memory products and wafer fabrication	$ 11,075,249	$ 5,875,847
IC design	(11,144)	(9,370)
Total	11,064,105	5,866,477
Interest income	25,730	30,858
Other income	174,215	130,386
Other gains and losses	(204,967)	60,281
Gains on disposal of property, plant and equipment	2,505,176	-
Finance costs	(236,570)	(246,956)
Income before tax (continuing operations)	$ 13,327,689	$ 5,841,046

b. Segment total assets and liabilities

	December 31	
	2021	2020
Segment assets		
Memory products and wafer fabrication	$ 75,823,994	$ 65,040,620
IC design	14,963	19,751
Total segment assets	75,838,957	65,060,371
Uncollected assets	869,191	831,847
Consolidated total assets	$ 76,708,148	$ 65,892,218
Segment liabilities		
Memory products and wafer fabrication	$ 16,305,498	$ 13,481,320
IC design	1,668	4,256
Total segment liabilities	16,307,166	13,485,576
Uncollected liabilities	13,675,505	16,212,250
Consolidated total liabilities	$ 29,982,671	$ 29,697,826

For the purpose of monitoring segment performance and allocating resources between segments:

1) All assets were allocated to reportable segments other than interests in associates accounted for using the equity method, other financial assets, and current and deferred tax assets. Assets used jointly by reportable segments were allocated on the basis of the revenue earned by individual reportable segments; and

2) All liabilities were allocated to reportable segments other than borrowings and other financial liabilities. Liabilities for which reportable segments are jointly liable were allocated in proportion to segment assets.

c. Geographical information

The Group operates in two principal geographical areas - Taiwan and China.

The Group's net operating revenue from external customers by location of operations and information about its non-current assets by location of assets are detailed below.

	Revenue from External Customers		Non-current Assets	
	Year Ended December 31		December 31	
	2021	2020	2021	2020
Taiwan	$ 38,520,916	$ 31,960,513	$ 32,972,749	$ 32,009,324
China	9,631,521	6,398,649	184,487	192,056
Others	2,420,554	1,441,785	328,594	361,094
	$ 50,572,991	$ 39,800,947	$ 33,485,830	$ 32,562,474

Non-current assets exclude financial instruments and deferred tax assets.

d. Information about major customers

Single customers who contributed 10% or more to the Group's revenue were as follows:

	For the Year Ended December 31	
	2021	**2020**
Customer A	$ 13,704,352	$ 16,101,433

TABLE 1

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

MARKETABLE SECURITIES HELD
DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Holding Company Name	Type and Name of Marketable Securities	Relationship with the Holding Company	Financial Statement Account	December 31, 2021				Shares as Collateral
				Shares/Units (In Thousands)	Carrying Amount	Percentage of Ownership (%)	Fair Value	
The Company	Shares							
	Ardentec Corporation	The Company serves as member of its board of directors	Financial assets at FVTOCI - non current	35,951,871	$ 1,995,329	7.33	$ 1,995,329	None
	United Industrial Gases Co., Ltd.	None	”	6,671,877	498,055	3.06	498,055	None
	Zowie Technology Co., Ltd.	None	”	20,426	-	0.07	-	None
MXBVI	Shares							
	Chipbond Technology Corporation	None	Financial assets at FVTOCI - non current	1,088,319	72,591	0.15	72,591	None
	Tower Semiconductor Ltd.	None	”	464,000	509,631	0.43	509,631	None
	Amphastar Pharmaceuticals, Inc.	None	”	49,116	31,663	0.10	31,663	None
	Foreign Convertible Preference Shares							
	Kneron Holding Corporation	None	Financial assets at FVTPL - non current	566,711	70,800	0.99	70,800	None
	Wolley Inc.	Associate (Note)	”	2,400,000	83,040	18.19	83,040	None
Hui Ying	Shares							
	Macronix International Co., Ltd.	The Company	Financial assets at FVTOCI - non current	1,956,619	82,569	0.11	82,569	None
	Raio Technology Co., Ltd.	None	”	1,247,288	32,318	10.03	32,318	None
	Genovior Biotech Corporation	None	”	6,270,000	48,906	6.14	48,906	None
Run Hong	Shares							
	Genovior Biotech Corporation	None	Financial assets at FVTOCI - non current	4,500,000	35,100	4.41	35,100	None

Note: The Company has the ability to participate in the decision-making of the company’s financial and operating policies and has significant influence on the company.

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

DISPOSAL OF INDIVIDUAL REAL ESTATE AT PRICES OF AT LEAST NT$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Seller	Property	Event Date	Original Acquisition Date	Carrying Amount	Transaction Amount	Collection	Gain (Loss) on Disposal	Counterparty	Relationship	Purpose of Disposal	Price Reference	Other Terms
The Company	Buildings and affiliated factory facilities	August 5,2021	From June 1991 to February 2020	$ 6,192	$ 820,000	Collect the price according to the contract	$ 813,808	HON HAI PRECISION INDUSTRY CO., LTD.	None	In order to enhance advanced technology and international competitiveness, the Company will focus on the development of 12-inch fab and focus on the research, development and manufacturing of 3D NAND and advanced NOR Flash.	Based on the appraisal results of professional appraisal agencies as a reference for decision	None

TABLE 3

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Buyer	Related Party	Relationship	Transaction Details				Abnormal Transaction		Notes/Accounts Receivable (Payable)		Note
			Purchase/ Sale	Amount	% to Total	Payment Terms	Unit Price	Payment Term	Ending Balance	% to Total	
The Company	MegaChips	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Sales	$ 13,704,352	28	30 days after monthly closing	Note 33	Note 33	$ 961,722	13	-
	MXHK	Indirect subsidiary	Sales	8,919,103	18	45 days after monthly closing	Note 33	Note 33	1,500,143	20	-
	MXA	Subsidiary	Sales	2,159,019	4	Net 60 days	Note 33	Note 33	326,248	4	-
	MegaChips	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Purchase	5,895,828	49	30 days after monthly closing and after acceptance of materials	Note 33	Note 33	4,388,398	55	-
MXHK	The Company	Indirect subsidiary	Purchase	US$ 319,733	100	45 days after monthly closing	No material difference	No material difference	US$ 54,196	100	-
MXA	The Company	Subsidiary	Purchase	US$ 77,323	100	Net 60 days	No material difference	No material difference	US$ 11,786	100	-

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Company Name	Related Party	Relationship	Ending Balance	Turnover Rate	Overdue		Amounts Received in Subsequent Period	Allowance for Impairment Loss
					Amount	Action Taken		
The Company	MegaChips	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	$ 961,722	10.50 times	$ -	-	$ 865,477 thousand	$ -
	MXHK	Indirect subsidiary	1,500,143	8.54 times	-	-	1,500,143 thousand	-
	MXA	Subsidiary	326,248	10.16 times	-	-	326,248 thousand	-

TABLE 5

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Counterparty	Relationship (Note 1)	Transaction Details			
			Financial Statement Accounts	Amount	Payment Terms	% to Total Revenues or Assets
The Company	MXHK	1	Sales	$ 8,919,103	Note 2	18
			Net receivable from related parties	1,500,143	-	2
	MXE	1	Operating expenses	146,596	-	-
			Other payables to related parties	45,069	-	-
	MXA	1	Sales	2,159,019	Note 2	4
			Operating expenses	215,187	-	-
			Net receivable from related parties	326,248	-	-
			Other payables to related parties	82,498	-	-
	Mxtran	1	Manufacturing costs	6,600	-	-
			Rental revenue	435	Note 3	-
			IT service revenue	324	-	-
	MX Asia	1	Operating expenses	113,092	-	-
			Other payables to related parties	22,908	-	-
MXHK	MXm	3	Operating expenses	360,755	-	-

Note 1: The transactions from the parent company to the subsidiary are denoted as 1.

The transactions from the subsidiary to the parent company are denoted as 2.

The transactions between two subsidiaries are denoted as 3.

Note 2: The sales price refers to the agreed upon product price for the end customer.

Note 3: The Company leased office space to related parties and collected rental revenue according to the floor space per month.

Note 4: The transaction terms with related parties were 30 to 60 days after monthly closing and were similar to those with third parties.

TABLE 6

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

INFORMATION ON INVESTEES
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2021			Net Income (Loss) of the Investee	Share of Profit (Loss)	Note
				December 31, 2021	December 31, 2020	Shares	%	Carrying Amount			
The Company	MXA	San Jose, California, USA.	Sales and marketing	$ 2,640	$ 2,640	100,000	100.00	$ 228,970	$ 79,885	$ 79,885	Subsidiary
	MXBVI	Tortola, British Virgin Islands	Investment holding company	7,348,057	7,348,057	212,048,000	100.00	2,548,353	191,446	191,398	Subsidiary
	Hui Ying	Taipei, Taiwan	Investment	500,000	500,000	-	100.00	94,664	9,759	7,411	Subsidiary
	Run Hong	Taipei, Taiwan	Investment	1,014,432	984,432	-	100.00	43,833	(279)	(279)	Subsidiary
	Mxtran	Hsinchu, Taiwan	IC design	755,287	755,287	69,627,323	90.43	12,028	(2,172)	(1,966)	Subsidiary
MXBVI	NTTI	San Jose, California, USA.	IC design	911,049	899,931	27,850,000	100.00	272,627	(9,103)	Note	Subsidiary
	MXE	Belgium	After-sales service	2,106	2,106	999	100.00	126,978	8,008	Note	Subsidiary
	MPL	Singapore	After-sales service	3,291	3,291	174,000	100.00	21,895	1,108	Note	Subsidiary
	MXHK	Hong Kong	Sales and marketing	378,427	378,427	89,700,000	100.00	1,092,282	194,035	Note	Subsidiary
	MX Asia	Cayman Island	After-sales service	23,035	23,035	700,000	100.00	68,631	5,230	Note	Subsidiary
Run Hong	Mxtran	Hsinchu, Taiwan	IC design	40,318	40,318	3,393,200	4.41	586	(2,172)	Note	Subsidiary
Mxtran	Mxtran Samoa	Samoa	Investment holding company	35,979	35,979	1,170,000	100.00	956	-	Note	Subsidiary
Mxtran Samoa	Mxtran HK	Hong Kong	Investment holding company	23,880	23,880	6,152,000	100.00	407	-	Note	Subsidiary

Note: Under relevant regulations, no disclosure of investment gain (loss) is needed.

TABLE 7

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

INFORMATION ON INVESTMENT IN MAINLAND CHINA
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Main Businesses and Products	Paid-in Capital	Method of Investment	Accumulated Outward Remittance for Investment from Taiwan as of January 1, 2021	Remittance of Funds		Accumulated Outward Remittance for Investment from Taiwan as of December 31, 2021	Net Income (Loss) of the Investee	% Ownership for Direct or Indirect Investment	Investment Gain (Loss) (Note 1)	Carrying Amount as of December 31, 2021	Accumulated Repatriation of Investment Income as of December 31, 2021
					Outward	Inward						
MXm	Development of integrated circuit system and software	$ 296,160	MXHK (Note 2)	$ 296,160	$ -	$ -	$ 296,160	$ 16,568	100	$ 16,568	$ 414,017	$ -

Accumulated Outward Remittance for Investment in Mainland China as of December 31, 2021	Investment Amount Authorized by the Investment Commission, MOEA	Upper Limit on the Amounts of Investment Stipulated by Investment Commission, MOEA
$ 296,160	$ 296,160	$ 28,034,874

Note 1: The amount was recognized based on the audited financial statements of the investee company.

Note 2: The Company invested in a company located in mainland China indirectly through the existing company in a third country.

Macronix International Co., Ltd.

Parent Company Only Financial Statements for the Years Ended December 31, 2021 and 2020 and Independent Auditors' Report

INDEPENDENT AUDITORS' REPORT

The Board of Directors and the Shareholders
Macronix International Co., Ltd.

Opinion

We have audited the accompanying financial statements of Macronix International Co., Ltd. (the "Company"), which comprise the balance sheets as of December 31, 2021 and 2020, and the statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and its financial performance and its cash flows for the years then ended in accordance with 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 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, and we have fulfilled our other ethical responsibilities in accordance with these requirements. 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 the financial statements for the year ended December 31, 2021. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters for the Company's parent company only financial statements for the year ended December 31, 2021 are stated as follows:

<u>Valuation of inventory</u>

The Company manufactures and sells ROM products, NOR Flash, and NAND Flash, which are widely used in consumer electronics. As of December 31, 2021, inventory was NT$13,134,844 thousand, accounting for 17% of the total assets. With the current rapid changes in technology and the improvements in manufacturing technologies, market demand for memory chip could change significantly and result in inventory obsolescence. Since inventory valuation and estimates of net realizable value of inventory are subject to management's judgment, they are considered as accounting estimates with relatively high uncertainty. Therefore, valuation of inventory has been identified as a key audit matter. Refer to Notes 4(e), 5(a) and 9 to the financial statements for the details of accounting policy, accounting judgment, key sources of estimation uncertainty and the related information about the valuation of inventory.

Our key audit procedures performed in respect of the above area included the following:

1. We understood and assessed the adequacy of the policy and procedures for the inventory valuation adopted by the management.

2. We obtained data on the assessment of inventory at the lower of cost or net realizable value and selected sample data, and we tested the reasonableness of net realizable value by comparing inventory carrying amounts to recent selling prices; we tested the reasonableness of allowance for inventory loss by comparing net realizable value with carrying amounts. We obtained the inventory aging report, and we tested the accuracy and completeness of the report by agreeing the age interval, quantity and amount to the supporting documents of inbound inventory. We assessed the reasonableness of allowance for inventory loss by recalculating the amount in accordance with the stated valuation policy for the inventory.

3. We performed a retrospective review of inventory movements to evaluate the reasonableness of inventory obsolescence reserve policy and policy on scrapping of inventories.

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

Management is responsible for the preparation and fair presentation of the financial statements in accordance with 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 financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, 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 the audit committee, are responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' 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 the 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 financial statements.

As part of an audit in accordance with the 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 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 Company's internal control.

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 Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the 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 auditors' 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 financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the 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 the financial statements for the year ended December 31, 2021 and are therefore the key audit matters. We describe these matters in our auditors' 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.

The engagement partners on the audit resulting in this independent auditors' report are Tung Hui Yeh and Kuo Tyan Hong.

Deloitte & Touche
Taipei, Taiwan
Republic of China

February 25, 2022

<u>*Notice to Readers*</u>

The accompanying financial statements are intended only to present the financial position, financial performance 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 financial statements are those generally applied in the Republic of China.

For the convenience of readers, the independent auditors' report and the accompanying financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and financial statements shall prevail.

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY BALANCE SHEETS
DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	2021		2020	
ASSETS	**Amount**	**%**	**Amount**	**%**
CURRENT ASSETS				
Cash and cash equivalents (Notes 4, 6 and 30)	$ 16,199,817	21	$ 10,297,465	16
Notes receivable and trade receivables, net (Notes 4, 8 and 30)	4,639,208	6	2,875,021	4
Receivables from related parties, net (Notes 4, 30 and 31)	2,788,113	4	2,333,551	4
Other receivables (Notes 4, 8, 25, 30 and 31)	359,611	1	110,939	-
Inventories (Notes 4, 5 and 9)	13,134,844	17	12,912,017	20
Other current assets (Note 15)	180,189	-	99,553	-
Total current assets	37,301,782	49	28,628,546	44
NON-CURRENT ASSETS				
Financial assets at fair value through other comprehensive income (FVTOCI) - non-current (Notes 4, 7 and 30)	2,493,384	3	1,779,044	3
Investments accounted for using equity method (Notes 4 and 10)	2,927,848	4	2,522,146	4
Property, plant and equipment (Notes 4, 11, 16, 28, 32 and 33)	31,792,537	42	31,016,511	47
Right-of use assets(Notes 4 and 12)	751,927	1	938,081	1
Intangible assets (Notes 4 and 13)	95,108	-	54,629	-
Deferred tax assets (Notes 4 and 25)	644,213	1	658,310	1
Other financial assets - non-current (Notes 4, 14, 30 and 32)	212,295	-	161,767	-
Other non-current assets (Note 15)	333,147	-	-	-
Total non-current assets	39,250,459	51	37,130,488	56
TOTAL	$ 76,552,241	100	$ 65,759,034	100
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Contract liabilities (Note 23)	$ 34,963	-	$ 87,155	-
Notes payable and trade payables (Notes 17 and 30)	3,403,530	5	2,940,247	5
Payables to related parties (Notes 30 and 31)	4,509,196	6	4,161,427	6
Accrued employees' compensation and remuneration of directors (Notes 24, 30 and 31)	3,134,490	4	1,403,624	2
Payables for purchases of equipment (Note 30)	755,900	1	552,400	1
Other payables (Notes 18 and 30)	1,619,880	2	1,366,096	2
Other payables to related parties (Notes 30 and 31)	157,772	-	136,825	-
Current tax liabilities (Notes 4 and 25)	640,237	1	38,349	-
Provisions - current (Notes 4 and 20)	3,282	-	3,283	-
Lease liabilities - current (Notes 4 and 12)	63,287	-	79,341	-
Current portion of long-term borrowings (Notes 4, 16, 28, 30 and 32)	3,094,739	4	5,412,007	8
Other current liabilities (Note 19)	337,162	-	323,549	1
Total current liabilities	17,754,438	23	16,504,303	25
NON-CURRENT LIABILITIES				
Long-term borrowings (Notes 4, 16, 28, 30 and 32)	9,250,335	12	10,736,875	17
Deferred tax liabilities (Notes 4 and 25)	644,213	1	-	-
Lease liabilities - non-current (Notes 4 and 12)	706,487	1	873,701	1
Net defined benefit liabilities (Notes 4 and 21)	1,405,996	2	1,431,153	2
Other non-current liabilities (Notes 4, 19 and 28)	65,981	-	19,410	-
Total non-current liabilities	12,073,012	16	13,061,139	20
Total liabilities	29,827,450	39	29,565,442	45
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY (Notes 4, 22 and 27)				
Share capital				
Ordinary shares	18,560,178	24	18,563,017	28
Share capital to be cancelled	(410)	-	(1,153)	-
Total share capital	18,559,768	24	18,561,864	28
Capital surplus	399,210	1	384,772	1
Retained earnings				
Legal reserve	2,271,266	3	1,741,857	3
Special reserve	291,361	-	621,195	1
Unappropriated earnings	24,532,500	32	15,408,584	23
Total retained earnings	27,095,127	35	17,771,636	27
Other equity	829,747	1	(365,619)	(1)
Treasury shares	(159,061)	-	(159,061)	-
Total equity	46,724,791	61	36,193,592	55
TOTAL	$ 76,552,241	100	$ 65,759,034	100

The accompanying notes are an integral part of the parent company only financial statements.

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2021		2020	
	Amount	**%**	**Amount**	**%**
NET OPERATING REVENUE (Notes 4, 23 and 31)	$ 49,598,199	100	$ 38,995,968	100
OPERATING COSTS (Notes 4, 9, 21, 24 and 31)	29,509,886	59	26,381,126	68
GROSS PROFIT	20,088,313	41	12,614,842	32
(UNREALIZED) REALIZED GAIN ON TRANSACTIONS WITH SUBSIDIARIES AND ASSOCIATES (Note 4)	(20,298)	-	16,242	-
REALIZED GROSS PROFIT	20,068,015	41	12,631,084	32
OPERATING EXPENSES (Notes 4, 21, 24 and 31)				
Selling and marketing expenses	1,117,311	2	935,687	2
General and administrative expenses	2,570,991	5	1,879,075	4
Research and development expenses	5,677,962	12	4,125,219	11
Total operating expenses	9,366,264	19	6,939,981	17
INCOME FROM OPERATIONS	10,701,751	22	5,691,103	15
NON-OPERATING INCOME AND EXPENSES				
Interest income (Note 24)	17,689	-	20,466	-
Other income (Notes 4, 7, 12, 24 and 28)	155,627	-	116,840	-
Other gains and losses (Note 24)	(162,561)	-	71,425	-
Gains on disposal of property, plant and equipment (Notes 4, 11, 24 and 35)	2,505,176	5	-	-
Finance costs (Notes 4, 24 and 28)	(232,632)	(1)	(242,735)	(1)
Share of profit of subsidiaries, associates and joint ventures (Notes 4 and 10)	276,449	1	153,899	1
Total non-operating income and expenses	2,559,748	5	119,895	-
INCOME BEFORE INCOME TAX FROM CONTINUING OPERATIONS	13,261,499	27	5,810,998	15
INCOME TAX EXPENSE (Notes 4 and 25)	(1,298,547)	(3)	(484,915)	(1)
NET INCOME FOR THE YEAR	11,962,952	24	5,326,083	14

(Continued)

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2021		2020	
	Amount	**%**	**Amount**	**%**
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit plans	$ (153,365)	-	$ (2,737)	-
Unrealized gain on investments in equity instruments at FVTOCI (Notes 22 and 30)	714,340	1	338,470	-
Share of other comprehensive gain of subsidiaries accounted for using the equity method	230,165	-	102,496	-
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations (Note 22)	(112,962)	-	(150,210)	-
Other comprehensive income for the year, net of income tax	678,178	1	288,019	-
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 12,641,130	25	$ 5,614,102	14
EARNINGS PER SHARE (Note 26)				
Basic	$ 6.48		$ 2.90	
Diluted	$ 6.25		$ 2.84	

The accompanying notes are an integral part of the parent company only financial statements. (Concluded)

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	Share Capital				Retained Earnings			Other Equity				
	Shares (In Thousands)	Ordinary Shares	Share Capital to be Cancelled	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings	Exchange Differences on Translation of the Financial Statements of Foreign Operations	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Unearned Compensation of Employees	Treasury Shares	Total Equity
BALANCE AT JANUARY 1, 2020	1,839,927	$ 18,399,271	$ (182)	$ 543,920	$ 1,440,661	$ 1,007,052	$ 12,237,717	$ (235,880)	$ (299,040)	$ (443,066)	$ (159,061)	$ 32,491,392
Legal reserve	-	-	-	-	301,196	-	(301,196)	-	-	-	-	-
Special reserve	-	-	-	-	-	(385,857)	385,857	-	-	-	-	-
Cash dividends distributed by the Company - $1.20 per share	-	-	-	-	-	-	(2,207,891)	-	-	-	-	(2,207,891)
Net income for the year ended December 31, 2020	-	-	-	-	-	-	5,326,083	-	-	-	-	5,326,083
Other comprehensive income (loss) for the year ended December 31, 2020, net of income tax	-	-	-	-	-	-	(2,737)	(150,210)	440,966	-	-	288,019
Total comprehensive income (loss) for the year ended December 31, 2020	-	-	-	-	-	-	5,323,346	(150,210)	440,966	-	-	5,614,102
Disposal of investments in equity instruments designated as at fair value through other comprehensive income	-	-	-	-	-	-	(29,100)	-	29,100	-	-	-
Issuance of restricted shares for employees	16,400	164,002	-	(164,002)	-	-	-	-	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	1,300	-	-	(149)	-	-	292,511	-	293,662
Retirement of restricted shares for employees	(25)	(256)	(971)	1,227	-	-	-	-	-	-	-	-
Dividends paid to subsidiaries to adjust capital surplus	-	-	-	2,327	-	-	-	-	-	-	-	2,327
BALANCE AT DECEMBER 31, 2020	1,856,302	18,563,017	(1,153)	384,772	1,741,857	621,195	15,408,584	(386,090)	171,026	(150,555)	(159,061)	36,193,592
Legal reserve	-	-	-	-	529,409	-	(529,409)	-	-	-	-	-
Special reserve	-	-	-	-	-	(329,834)	329,834	-	-	-	-	-
Cash dividends distributed by the Company - $1.20 per share	-	-	-	-	-	-	(2,227,424)	-	-	-	-	(2,227,424)
Net income for the year ended December 31, 2021	-	-	-	-	-	-	11,962,952	-	-	-	-	11,962,952
Other comprehensive income (loss) for the year ended December 31, 2021, net of income tax	-	-	-	-	-	-	(153,365)	(112,962)	944,505	-	-	678,178
Total comprehensive income (loss) for the year ended December 31, 2021	-	-	-	-	-	-	11,809,587	(112,962)	944,505	-	-	12,641,130
Disposal of investments in equity instruments designated as at fair value through other comprehensive income	-	-	-	-	-	-	(258,672)	-	258,672	-	-	-
Compensation cost of restricted shares for employees	-	-	-	9,994	-	-	-	-	-	105,151	-	115,145
Retirement of restricted shares for employees	(284)	(2,839)	743	2,096	-	-	-	-	-	-	-	-
Dividends paid to subsidiaries to adjust capital surplus	-	-	-	2,348	-	-	-	-	-	-	-	2,348
BALANCE AT DECEMBER 31, 2021	1,856,018	$ 18,560,178	$ (410)	$ 399,210	$ 2,271,266	$ 291,361	$ 24,532,500	$ (499,052)	$ 1,374,203	$ (45,404)	$ (159,061)	$ 46,724,791

The accompanying notes are an integral part of the parent company only financial statements.

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 13,261,499	$ 5,810,998
Adjustments for:		
Depreciation expense	4,190,129	3,663,325
Amortization expense	43,860	31,076
Expected credit loss (reversed) recognized on trade receivables	(63)	223
Finance costs	232,632	242,735
Interest income	(17,689)	(20,466)
Dividend income	(118,914)	(95,559)
Compensation cost of employee restricted shares	115,145	293,662
Share of gain of subsidiaries and associates	(276,449)	(153,899)
Gain on disposal of property, plant and equipment	(2,566,139)	(6,994)
Unrealized (realized) gain on transactions with associates and joint ventures	20,298	(16,242)
Net loss on foreign currency exchange	263,506	46,184
Gain from lease modifications	(2,213)	-
Amortization of government grants deferred revenue	(1,357)	-
Changes in operating assets and liabilities		
Notes receivable and trade receivables	(1,754,057)	62,395
Receivables from related parties	(482,755)	(454,857)
Other receivables	(72,588)	14,164
Inventories	(222,827)	(143,700)
Prepayments	(333,147)	-
Other current assets	(80,636)	126,562
Contract liabilities	(52,192)	(9,946)
Notes payable and trade payables	461,598	796,250
Payables to related parties	653,355	(582,175)
Payables for employees' compensation and director's remuneration	1,730,866	117,850
Other payables	259,513	42,656
Other payables to related parties	23,156	(15,681)
Provisions	(1)	(1,573)
Other current liabilities	172,612	(59,578)
Net defined benefit liabilities	(178,522)	(182,159)
Cash generated from operations	15,268,620	9,505,251
Interest received	14,099	21,450
Dividend received	118,914	95,559
Interest paid	(238,073)	(265,996)
Income tax paid	(37,277)	(838)
Net cash generated from operating activities	15,126,283	9,355,426

(Continued)

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars)

	2021	2020
CASH FLOWS FROM INVESTING ACTIVITIES		
Payments for investment properties	$ (30,000)	$ -
Payments for property, plant and equipment	(4,696,428)	(6,024,071)
Proceeds from disposal of property, plant and equipment	2,415,981	7,574
Increase in refundable deposits	-	(62)
Decrease in refundable deposits	67	98
Payments for intangible assets	(84,339)	(42,146)
Increase in other financial assets	(50,603)	-
Net cash used in investing activities	(2,445,322)	(6,058,607)
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayments of short-term borrowings	-	(1,550,000)
Proceeds from long-term borrowings	3,330,000	7,300,000
Repayments of long-term borrowings	(7,077,225)	(4,192,648)
Proceeds from guarantee deposits received	2,094	193,799
Refund of guarantee deposits received	(177,656)	(16,946)
Repayment of leased liabilities	(82,504)	(79,586)
Distribution of cash dividends	(2,227,424)	(2,207,891)
Net cash used in financing activities	(6,232,715)	(553,272)
EFFECT OF EXCHANGE RATE CHANGES ON THE BALANCE OF CASH AND CASH EQUIVALENTS HELD IN FOREIGN CURRENCIES	(545,894)	(78,030)
NET INCREASE IN CASH AND CASH EQUIVALENTS	5,902,352	2,665,517
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR	10,297,465	7,631,948
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	$ 16,199,817	$ 10,297,465

The accompanying notes are an integral part of the parent company only financial statements. (Concluded)

MACRONIX INTERNATIONAL CO., LTD.

NOTES TO PARENT COMPANY ONLY FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

1. GENERAL INFORMATION

Macronix International Co., Ltd. (the "Company") was incorporated in the Republic of China (ROC) on December 9, 1989 and commenced business in December 1989. The Company operates principally as a designer, manufacturer and supplier of integrated circuits (ICs) and memory chips. The Company also performs design, research and development, consultation and trade of relevant products.

The Company's shares have been listed on the Taiwan Stock Exchange (TWSE) since March 15, 1995.

The financial statements are presented in the Company's functional currency, the New Taiwan dollar.

2. APPROVAL OF FINANCIAL STATEMENTS

The financial statements were approved by the Company's board of directors and were authorized for issue on February 25, 2022.

3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS AND INTERPRETATIONS

a. Initial application of the amendments to the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) (collectively, the "IFRSs") endorsed and issued into effect by the Financial Supervisory Commission (FSC)

The initial application of the amendments to the IFRSs endorsed and issued into effect by the FSC did not have any material impact on the Company's accounting policies.

b. The IFRSs endorsed by the FSC for application starting from 2022

New IFRSs	Effective Date Announced by IASB
"Annual Improvements to IFRS Standards 2018-2020"	January 1, 2022 (Note 1)
Amendments to IFRS 3 "Reference to the Conceptual Framework"	January 1, 2022 (Note 2)
Amendments to IAS 16 "Property, Plant and Equipment - Proceeds before Intended Use"	January 1, 2022 (Note 3)
Amendments to IAS 37 "Onerous Contracts-Cost of Fulfilling a Contract"	January 1, 2022 (Note 4)

Note 1: The amendments to IFRS 9 will be applied prospectively to modifications and exchanges of financial liabilities that occur on or after the annual reporting periods beginning on or after January 1, 2022.

Note 2: The amendments are applicable to business combinations for which the acquisition date is on or after the beginning of the annual reporting period beginning on or after January 1, 2022.

Note 3: The amendments are applicable to property, plant and equipment that are brought to the location and condition necessary for them to be capable of operating in the manner intended by management on or after January 1, 2021.

Note 4: The amendments are applicable to contracts for which the entity has not yet fulfilled all its obligations on January 1, 2022.

As of the date the financial statements were authorized for issue, the Company is continuously assessing the possible impact that the application of other standards and interpretations will have on the Company's financial position and financial performance, and will disclose the relevant impact when the assessment is completed.

c. New IFRSs in issue but not yet endorsed and issued into effect by the FSC

New IFRSs	Effective Date Announced by IASB (Note 1)
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between An Investor and Its Associate or Joint Venture"	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2023
Amendments to IFRS 17	January 1, 2023
Amendments to IFRS 17 "Initial Application of IFRS 9 and IFRS 17-Comparative Information"	January 1, 2023
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	January 1, 2023
Amendments to IAS 1 "Disclosure of Accounting Policies"	January 1, 2023 (Note 2)
Amendments to IAS 8 "Definition of Accounting Estimates"	January 1, 2023 (Note 3)
Amendments to IAS 12 "Deferred Tax related to Assets and Liabilities arising from a Single Transaction"	January 1, 2023 (Note 4)

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual reporting periods beginning on or after their respective effective dates.

Note 2: The amendments will be applied prospectively for annual reporting periods beginning on or after January 1, 2023.

Note 3: The amendments are applicable to changes in accounting estimates and changes in accounting policies that occur on or after the beginning of the annual reporting period beginning on or after January 1, 2023.

Note 4: Except for deferred taxes that will be recognized on January 1, 2022 for temporary differences associated with leases and decommissioning obligations, the amendments will be applied prospectively to transactions that occur on or after January 1, 2022.

As of the date the financial statements were authorized for issue, the Company is continuously assessing the possible impact that the application of other standards and interpretations will have on the Company's financial position and financial performance, and will disclose the relevant impact when the assessment is completed.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICY

a. Statement of compliance

The parent company only financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

b. Basis of preparation

The financial statements have been prepared on the historical cost basis except for financial instruments which are measured at fair value and defined benefit liabilities.

The fair value measurements, which are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and based on the significance of the inputs to the fair value measurement in its entirety, are described as follows:

1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;

2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and

3) Level 3 inputs are unobservable inputs for an asset or liability.

When preparing its parent company only financial statements, the Company used equity method to account for its investment in subsidiaries and associates. In order for the amounts of the net profit for the year, other comprehensive income for the year and total equity in the parent company only financial statements to be the same with the amounts attributable to the owner of the Company in its consolidated financial statements, adjustments arising from the differences in accounting treatment between parent company only basis and consolidated basis were made to investments accounted for by equity method, share of profit or loss of subsidiaries, share of other comprehensive income of subsidiaries and related equity items, as appropriate, in the parent company only financial statements.

c. Classification of current and non-current assets and liabilities

Current assets include:

1) Assets held primarily for the purpose of trading;

2) Assets expected to be realized within 12 months after the reporting period; and

3) Cash and cash equivalents unless the asset is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period.

Current liabilities include:

1) Liabilities held primarily for the purpose of trading;

2) Liabilities due to be settled within 12 months after the reporting period, even if an agreement to refinance, or to reschedule payments, on a long-term basis is completed after the reporting period and before the financial statements are authorized for issue; and

3) Liabilities for which the Company does not have an unconditional right to defer settlement for at least 12 months after the reporting period. 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.

Assets and liabilities that are not classified as current are classified as non-current.

d. Foreign currencies

In preparing the financial statements of the Company, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising from the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences arising from the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which cases, the exchange differences are also recognized directly in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are not retranslated.

For the purpose of presenting parent company only financial statements, the functional currencies of the Company and the Group (including subsidiaries and associates that use currency different from the currency of the Company) are translated into the presentation currency - the New Taiwan dollar as follows: Assets and liabilities are translated at the exchange rates prevailing at the end of the reporting period; income and expense items are translated at the average exchange rates for the period. The resulting currency translation differences are recognized in other comprehensive income.

e. Inventories

Inventories consist of raw materials, supplies, finished goods, merchandise and work-in-process and are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except where it may be appropriate to group similar or related items. Net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at standard cost and adjusted to approximate weighted - average cost on the balance sheet date.

f. Investments in subsidiaries

The Company uses the equity method to account for its investments in subsidiaries.

Subsidiaries are the entities controlled by the Company.

Under the equity method, the investment in a subsidiary is initially recognized at cost and the carrying amount is increased or decreased to recognize the Company's share of the profit or loss and other comprehensive income of the subsidiary after the date of acquisition. Besides, the Company also recognizes the Company's share of the change in other equity of the subsidiary.

Changes in the Company's ownership interest in a subsidiary that do not result in the Company losing control of the subsidiary are equity transactions. The Company recognizes directly in equity any difference between the carrying amount of the investment and the fair value of the consideration paid or received.

When the Company's share of losses of a subsidiary exceeds its interest in that subsidiary (which includes any carrying amount of the investment accounted for by the equity method and long-term interests that, in substance, form part of the Company's net investment in the subsidiary), the Company continues recognizing its share of further losses.

Any excess of the cost of acquisition over the Company's share of the net fair value of the identifiable assets and liabilities of a subsidiary that constitutes a business at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Company's share of the net fair value of the identifiable assets and liabilities of a subsidiary that constitutes a business over the cost of acquisition is recognized immediately in profit or loss.

The Company assesses its investment for any impairment by comparing the carrying amount with the estimated recoverable amount as assessed based on the entire financial statements of the invested company. Impairment loss is recognized when the carrying amount exceeds the recoverable amount. If the recoverable amount of the investment subsequently increases, the Company recognizes the reversal of the impairment loss; the adjusted post-reversal carrying amount should not exceed the carrying amount that would have been recognized (net of amortization or depreciation) had no impairment loss been recognized in prior years. An impairment loss recognized on goodwill cannot be reversed in a subsequent period.

When the Company loses control of a subsidiary, it recognizes the investment retained in the former subsidiary at its fair value at the date when control is lost. The difference between the fair value of the retained investment plus any consideration received and the carrying amount of the previous investment at the date when control is lost is recognized as a gain or loss in profit or loss. Besides, the Company accounts for all amounts previously recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Company had directly disposed of the related assets or liabilities.

Profits or losses resulting from downstream transactions are eliminated in full only in the parent's company only financial statements. Profits and losses resulting from upstream transactions and transactions between subsidiaries are recognized only in the parent's company financial statements only to the extent of interests in the subsidiaries that are not related to the Company.

g. Property, plant and equipment

Property, plant and equipment are stated at cost, less recognized accumulated depreciation and accumulated impairment loss.

Depreciation on property, plant and equipment is recognized using the straight-line method. Each significant part is depreciated separately. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effects of any changes in estimates accounted for on a prospective basis.

On derecognition of an item of property, plant and equipment the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

h. Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment loss. Amortization is recognized on a straight-line basis. The estimated useful life, residual value, and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are measured at cost less accumulated impairment loss.

2) Internally-generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from the development phase of an internal project is recognized if, and only if, all of the following have been demonstrated:

a) The technical feasibility of completing the intangible asset so that it will be available for use or sale;

b) The intention to complete the intangible asset and use or sell it;

c) The ability to use or sell the intangible asset;

d) How the intangible asset will generate probable future economic benefits;

e) The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and

f) The ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

3) Derecognition of intangible assets

On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss.

i. Impairment of property, plant and equipment, right-of-use asset, intangible assets other than goodwill

At the end of each reporting period, the Company reviews the carrying amounts of its property, plant and equipment, right-of-use asset and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the smallest group of cash-generating units on a reasonable and consistent basis of allocation.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

When an impairment loss is subsequently reversed, the carrying amount of the corresponding asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized on the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized in profit or loss.

j. Financial instruments

Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of the instruments.

Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

1) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a settlement date basis.

a) Measurement category

Financial assets are classified into the following categories: Financial assets measured at amortized cost and investments in equity instruments at FVTOCI.

i. Financial assets measured at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

i) The financial assets are 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 assets 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, financial assets measured at amortized cost, including cash and cash equivalents and trade receivables measured at amortized cost, are measured at amortized cost, which equals the gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for:

i) Purchased or originated credit-impaired financial assets, for which interest income is calculated by applying the credit-adjusted effective interest rate to the amortized cost of such a financial asset; and

ii) Financial assets that have subsequently become credit-impaired, for which interest income is calculated by applying the effective interest rate to the amortized cost of such a financial asset.

A financial asset is credit impaired when one or more of the following events have occurred:

i) Significant financial difficulty of the issuer or the borrower;

ii) Breach of contract, such as a default;

iii) It is becoming probable that the borrower will enter bankruptcy or undergo a financial reorganization; or

iv) The disappearance of an active market for that financial asset because of financial difficulties.

Cash equivalents include time deposits with original maturities, which are highly liquid, readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These cash equivalents are held for the purpose of meeting short-term cash commitments.

ii Investments in equity instruments at FVTOCI

On initial recognition, the Company may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on the disposal of the equity investments; instead, they will be transferred to retained earnings.

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

b) Impairment of financial assets

The Company recognizes a loss allowance for expected credit losses on financial assets measured at amortized cost (including trade receivables).

The Company always recognizes lifetime expected credit losses (i.e. ECLs) for trade receivables and lease receivables. For all other financial instruments, the Company recognizes lifetime ECLs when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on such a financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

Expected credit losses reflect the weighted average of credit losses with the respective risks of a default occurring as the weights. Lifetime ECLs represent the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECLs represent the portion of lifetime ECLs that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

For internal credit risk management purposes, the Company determines that the following situations indicate that a financial asset is in default (without taking into account any collateral held by the Company):

i. Internal or external information show that the debtor is unlikely to pay its creditors.

ii. When a financial asset is more than 90 days past due unless the Company has reasonable and corroborative information to support a more lagged default criterion.

The Company recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and does not reduce the carrying amount of the financial asset.

c) Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the financial asset to another party.

If the Company neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Company recognizes its retained interest in the asset and any associated liability for amounts it may have to pay. If the Company retains substantially all the risks and rewards of ownership of a transferred financial asset, the Company continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss which had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

2) Equity instruments

Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

3) Financial liabilities

a) Subsequent measurement

All financial liabilities are measured at amortized cost using the effective interest method.

b) Derecognition of financial liabilities

The difference between the carrying amount of the financial liability derecognized and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

k. Provisions

Provisions are measured at the best estimate of the discounted cash flows of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

l. Revenue recognition

The Company identifies contracts with customers, allocates the transaction price to the performance obligations and recognizes revenue when performance obligations are satisfied.

For contracts entered into with the same customer (or related parties of the customer) at or near the same time, those contracts are accounted for as a single contract if the goods or services promised in the contracts are a single performance obligation.

1) Revenue from the sale of goods

Revenue from the sale of goods comes from sales of Memory products and wafer fabrication. Sales of Memory products and wafer fabrication are recognized as revenue when the goods are delivered to the customer's specific location because it is the time when the customer has full discretion over the manner of distribution and price to sell the goods, and has the primary responsibility for sales to future customers and bears the risks of obsolescence. Trade receivables are recognized concurrently. For Memory products and wafer fabrication, revenue is recognized when the goods are delivered to the customer's specific location, and the transaction price received is recognized as a contract liability until the goods have been delivered to the customer.

The Company does not recognize revenue on materials delivered to subcontractors because this delivery does not involve a transfer of control.

2) Revenue from the rendering of services

As the Company provides rendering services, the related revenue is recognized when services are rendered. Payment for installation services is not due from the customer until the installation services are complete and, therefore, contract assets are recognized over the period in which the installation services are performed. The contract assets are reclassified to trade receivables when the installation is complete.

m. Lease

At the inception of a contract, the Company assesses whether the contract is, or contains, a lease.

For a contract that contains a lease component and non-lease components, the Company allocates the consideration in the contract to each component on the basis of the relative stand-alone price and accounts for each component separately.

1) The Company as lessor

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

When the Company subleases right-of-use assets, the sublease is classified by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. However, if the head lease is a short-term lease that the Company, as a lessee, has accounted for applying recognition exemption, the sublease is classified as an operating lease.

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases. Initial direct costs incurred in obtaining operating leases are added to the carrying amounts of the underlying assets and recognized as expenses on a straight-line basis over the lease terms. Lease modification that resulted from a negotiation with a lessee is accounted for as a new lease from the effective date of modification.

2) The Company as lessee

The Company recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs needed to restore the underlying assets, and less any lease incentives received. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms.

Lease liabilities are initially measured at the present value of the lease payments, which comprise fixed payments, in-substance fixed payments, variable lease payments which depend on an index or a rate, residual value guarantees, the exercise price of a purchase option if the Company is reasonably certain to exercise that option, and payments of penalties for terminating a lease if the lease term reflects such termination, less any lease incentives receivable. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Company uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, a change in the amounts expected to be payable under a residual value guarantee, a change in the assessment of an option to purchase an underlying asset, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Group remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. For a lease modification that is not accounted for as a separate lease, the Company accounts for the remeasurement of the lease liability by (a) decreasing the carrying amount of the right-of-use asset of lease modifications that decreased the scope of the lease, and recognizing in profit or loss any gain or loss on the partial or full termination of the lease; (b) making a corresponding adjustment to the right-of-use asset of all other lease modifications. Lease liabilities are presented on a separate line in the balance sheets.

n. Borrowing costs

Borrowing costs directly attributable to an acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Other than stated above, all other borrowing costs are recognized in profit or loss in the year in which they are incurred.

o. Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attached to such grants and that the grants will be received.

Government grants related to income are recognized in other income on a systematic basis during the period when the related costs in which the government intends to compensate are recognized by the Group as expenses. Specifically, the primary condition of government grants is that the Group should purchase, construct or otherwise acquire non-current assets that are recognized as deferred revenue and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

The benefit of a government loan received below the market interest rate is treated as a government grant, which is measured as the difference between the proceeds received and the fair value of the loan based on the prevailing market interest rate.

p. Employee benefits

1) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

2) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as an expense when employees have rendered services entitling them to the contributions.

Defined benefit costs (including service cost, net interest and remeasurement) under defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost (including current service cost) and net interest on the net defined benefit liability are recognized as employee benefit expenses in the period they occur. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retain earnings and will not be reclassified to profit or loss.

Net defined benefit liability represents the actual deficit in the Company's defined benefit plan. Any surplus resulting from this calculation is limited to the present value of any refunds from the plans or reductions in future contributions to the plans.

3) Other long-term employee benefits

Other long-term employee benefits are accounted for in the same way as the accounting required for defined benefit plan except that remeasurement is recognized in profit or loss.

4) Termination benefits

A liability for a termination benefit is recognized at the earlier of when the Company can no longer withdraw the offer of the termination benefit and when the Company recognizes any related restructuring costs.

q. Share-based payment arrangements

The fair value at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Company's best estimates of the number of shares or options that are expected to ultimately vest, with a corresponding increase in capital surplus – employee share options or other equity – employees' unearned compensation. It is recognized as an expense in full at the grant date if vesting immediately.

When restricted shares for employees are issued, other equity - unearned employee benefits are recognized on the grant date, with a corresponding increase in capital surplus - restricted shares for employees.

At the end of each reporting period, the Company revises its estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the capital surplus - employee share options or capital surplus-restricted share option.

r. Treasury shares

The parent company's shares held by subsidiaries is reclassified to treasury shares from investment accounted for using equity method and recognized with the original investment cost. Cash dividends earned by subsidiaries are write-off with investment income and adjust capital surplus-treasury share transaction.

s. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

Income tax payable (recoverable) is based on taxable profit (loss) for the year determined according to the applicable tax laws of each tax jurisdiction.

According to the Income Tax Law in the ROC, an additional tax on unappropriated earnings is provided for in the year the shareholders approve to retain earnings.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, unused loss carry forward and unused tax credits for purchases of machinery, equipment and technology, research and development expenditures and personnel training expenditures to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. A previously unrecognized deferred tax asset is also reviewed at the end of each reporting period and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the year which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from 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.

3) Current and deferred taxes

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions on the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered relevant. Actual results may differ from these estimates.

The Company considers the possible impact of the recent development of the COVID-19 in Taiwan and its economic environment implications when making its critical accounting estimates in cash flow projections, growth rate, discount rate, profitability, etc. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimate is revised if the revision affects only that period or in the period of the revision and future years if the revision affects both current and future years.

a. Write-down of inventory

The net realizable value of inventory is the estimated selling price in the ordinary course of business less the estimated costs of completion and disposal. The estimation of net realizable value was based on current market conditions and historical experience with product sales of a similar nature. Changes in market conditions may have a material impact on the estimation of the net realizable value.

b. Recognition and measurement of defined benefit plans

The net defined liabilities (assets) and the resulting defined benefit costs under the defined benefit pension plans are calculated using the projected unit credit method. Actuarial assumptions comprise the discount rates, rates of employee turnover, future salary increase, etc. Changes in economic circumstances and market conditions will affect these assumptions and may have a material impact on the amount of related expense and the liabilities.

6. CASH AND CASH EQUIVALENTS

	December 31	
	2021	**2020**
Cash on hand	$ -	$ -
Checking accounts and demand deposits	5,886,345	9,084,046
Cash equivalents		
Time deposits	10,313,472	1,213,419
	$ 16,199,817	$ 10,297,465

7. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	December 31	
	2021	**2020**
Non-current		
Investments in equity instruments		
Domestic investments		
Listed shares	$ 1,995,329	$ 1,389,540
Unlisted shares	498,055	389,504
	$ 2,493,384	$ 1,779,044

These investments in equity instruments are not held for trading. Instead, they are held for medium to long-term strategic purposes. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Company's strategy of holding these investments for long-term purposes.

The Company recognized dividends income of NT$118,914 thousand and NT$95,559 thousand for the years ended December 31, 2021 and 2020, respectively. As of December 31, 2021 and 2020, the Company's related investments still held amounted to NT$2,493,384 thousand and NT$1,779,044 thousand, respectively.

8. NOTES RECEIVABLE, TRADE RECEIVABLES AND OTHER RECEIVABLES

	December 31	
	2021	**2020**
Trade receivables		
Total amount of trade receivable measured at amortized cost	$ 4,656,163	$ 2,892,039
Less: Allowance for impairment loss	(16,955)	(17,018)
	$ 4,639,208	$ 2,875,021
Other receivables		
Tax receivable	$ 178,544	$ 108,750
Receivables from disposal of property, plant and equipment	173,565	-
Others	7,502	2,189
	$ 359,611	$ 110,939

a. Trade receivables

The average credit period for sales of goods was 60 days.

In determining the recoverability of a trade receivable, the Company evaluates each customer's credibility and financial position and considers any change in the credit quality of the trade receivable since the date credit was initially granted to the end of the reporting period.

The Company measures the loss allowance for trade receivables at an amount equal to lifetime ECLs.

The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience with the respective debtors and an analysis of the debtors' current financial positions, adjusted for factors that are specific to the debtors, general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecasted direction of the conditions at the reporting date. The Company estimates expected credit losses based on the number of days for which receivables are past due. As the Company's historical credit loss experience shows significantly different loss patterns for different customer segments, the provision for losses based on past due status of receivables is not further distinguished according to the different segments of the Company's customer base.

The aging of trade receivables is as follows:

	December 31	
	2021	**2020**
Neither past due nor impaired	$ 4,505,220	$ 2,834,955
Past due but not impaired		
Within 60 days	133,236	40,033
61-120 days	752	33
Over 120 days	-	-
	$ 4,639,208	$ 2,875,021

The above aging schedule was based on the past due days from the end of the credit term.

As of December 31, 2021 and 2020, the Company did not hold collateral for most of its receivables.

The movements of the allowance for doubtful trade receivables are as follows:

	For the Year Ended December 31	
	2021	**2020**
Balance at January 1	$ 17,018	$ 16,795
Add: Amounts recovered	-	223
Less: Amounts reversed	(63)	-
Balance at December 31	$ 16,955	$ 17,018

b. Other receivables

No allowance for impairment loss of other receivables was recognized since the other receivables of the Company were not past due and the Company assessed that there was no uncertainty of recoverability.

9. INVENTORIES

	December 31	
	2021	2020
Finished goods and merchandise	$ 1,314,928	$ 917,507
Work in progress	11,056,652	11,316,910
Raw materials	763,264	677,600
	$ 13,134,844	$ 12,912,017

The cost of inventories recognized as cost of goods sold included reversal of inventory loss due to sold part of the written-down inventory. The amounts were as follows:

	For the Year Ended December 31	
	2021	2020
Reversal of inventory loss	$ 1,548,422	$ 99,103

10. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

	December 31	
	2021	2020
Investment in subsidiaries	$ 2,927,848	$ 2,522,146

Investments in subsidiaries

	December 31	
	2021	2020
Macronix (BVI) Co., Ltd. (MXBVI)	$ 2,548,353	$ 2,235,463
Macronix America, Inc. (MXA)	228,970	174,769
Hui Ying Investment Ltd. (Hui Ying)	94,664	83,782
Run Hong Investment Ltd. (Run Hong)	43,833	14,113
Mxtran Inc. (Mxtran)	12,028	14,019
	$ 2,927,848	$ 2,522,146

	Proportion of Ownership and Voting Rights	
	December 31	
Name of Subsidiaries	2021	2020
MXBVI	100.00%	100.00%
MXA	100.00%	100.00%
Hui Ying	100.00%	100.00%
Run Hong	100.00%	100.00%
Mxtran	90.43%	90.43%

The investments in subsidiaries accounted for using the equity method and the share of profit or loss and other comprehensive income of those investments for the years ended December 31, 2021 and 2020 were based on the subsidiaries' financial statements which have been audited for the same years.

11. PROPERTY, PLANT AND EQUIPMENT

	December 31	
	2021	2020
Assets used by the Company	$ 31,792,537	$ 31,016,511

	Years Ended December 31, 2021				
	Balance, Beginning of Year	Additions	Disposals	Reclassification	Balance, End of Year
Cost					
Freehold land	$ 598,076	$ -	$ -	$ -	$ 598,076
Buildings	25,223,237	-	4,319,859	312,968	21,216,346
Machinery equipment	100,853,676	-	10,721,370	1,207,367	91,339,673
Research and development equipment	4,167,190	-	17,298	2,600,067	6,749,959
Transportation equipment	20,741	-	3,365	6,905	24,281
Leasehold improvements	3,230	-	-	-	3,230
Miscellaneous equipment	1,078,664	-	110,802	78,059	1,045,921
Advance payments and construction in progress	5,089,153	4,901,959	-	(4,205,744)	5,785,368
	137,033,967	$ 4,901,959	$ 15,172,694	$ (378)	126,762,854
Accumulated depreciation and impairment					
Buildings	20,921,810	$ 426,065	$ 4,312,258	$ -	17,035,617
Machinery equipment	82,255,046	3,162,587	10,708,361	-	74,709,272
Research and development equipment	1,903,183	430,023	17,298	-	2,315,908
Transportation equipment	13,091	3,625	3,365	-	13,351
Leasehold improvements	3,078	152	-	-	3,230
Miscellaneous equipment	921,248	80,074	108,005	(378)	892,939
	106,017,456	$ 4,102,526	$ 15,149,287	$ (378)	94,970,317
Carrying amount at December 31, 2021	$ 31,016,511				$ 31,792,537

	Years Ended December 31, 2020				
	Balance, Beginning of Year	Additions	Disposals	Reclassification	Balance, End of Year
Cost					
Freehold land	$ 598,076	$ -	$ -	$ -	$ 598,076
Buildings	24,948,657	-	750	275,330	25,223,237
Machinery equipment	91,635,490	-	204,065	9,422,251	100,853,676
Research and development equipment	3,564,430	-	9,444	612,204	4,167,190
Transportation equipment	26,781	-	7,240	1,200	20,741
Leasehold improvements	3,230	-	-	-	3,230
Miscellaneous equipment	1,120,248	-	147,782	106,198	1,078,664
Advance payments and construction in progress	9,821,555	5,689,291	-	(10,421,693)	5,089,153
	131,718,467	$ 5,689,291	$ 369,281	$ (4,510)	137,033,967
Accumulated depreciation and impairment					
Buildings	20,514,366	$ 408,194	$ 750	$ -	20,921,810
Machinery equipment	79,413,703	2,845,772	204,065	199,636	82,255,046
Research and development equipment	1,860,125	256,188	9,444	(203,686)	1,903,183
Transportation equipment	17,079	2,672	6,660	-	13,091
Leasehold improvements	2,540	538	-	-	3,078
Miscellaneous equipment	1,006,342	63,148	147,782	(460)	921,248
	102,814,155	$ 3,576,512	$ 368,701	$ (4,510)	106,017,456
Carrying amount at December 31, 2020	$ 28,904,312				$ 31,016,511

For the years ended December 31, 2021 and 2020, the Company assessed that no indication of an impairment loss was present; therefore, no impairment assessment was performed.

The Company's 6-inch fab ceased production in May 2021 and was disposed of in September 2021. The related gain on disposal of NT$2,505,176 thousand was recognized as gain on disposal of property, plant and equipment under non-operating income and expenses.

The above items of property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives as follows:

Buildings	
Main buildings	31 years
Electronic equipment	11 years
Facility equipment	15 years
Machinery equipment	11 years
Research and development equipment	11 years
Transportation equipment	5 years
Leasehold improvements	6 years
Miscellaneous equipment	3-6 years

Property, plant and equipment pledged as collateral for bank borrowings are set out in Note 32.

12. LEASE ARRANGEMENTS

a. Right-of-use assets

	December 31	
	2021	**2020**
Carrying amounts		
Freehold land	$ 735,749	$ 901,793
Buildings	14,641	23,711
Machinery equipment	-	9,445
Transportation equipment	1,037	2,632
Miscellaneous equipment	500	500
	$ 751,927	$ 938,081

	For the Year Ended December 31	
	2021	**2020**
Additions to right-of-use assets	$ 9,162	$ 55,579
Depreciation charge for right-of-use assets		
Freehold land	$ 65,481	$ 69,642
Buildings	8,477	8,847
Machinery equipment	10,050	4,861
Transportation equipment	1,595	1,463
Miscellaneous equipment	2,000	2,000
	$ 87,603	$ 86,813
Income from the subleasing of right-of-use assets (included in other income)	$ (4,006)	$ (4,036)

Except for the recognized depreciation, the Company did not have impairment of right-of-use assets for the years ended December 31, 2021 and 2020.

b. Lease liabilities

	December 31	
	2021	2020
Carrying amounts		
Current	$ 63,287	$ 79,341
Non-current	$ 706,487	$ 873,701

Range of discount rate for lease liabilities was as follows:

	December 31	
	2021	2020
Freehold land	1.67%-1.73%	1.67%-1.73%
Buildings	1.03%-1.28%	1.03%-1.22%
Machinery equipment	1.18%-1.28%	1.05%
Transportation equipment	1.03%-1.22%	1.03%-1.22%
Miscellaneous equipment	1.19%	1.03%-1.22%

c. Material lease-in activities and terms

The Company also leased certain land and buildings for the use as plant and office in a period of one to twenty years. The Company does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms. In addition, the Company is prohibited from subleasing or transferring all or any portion of the underlying assets without the lessor's consent.

d. Other lease information

	For the Year Ended December 31	
	2021	2020
Expenses relating to short-term leases	$ 385	$ -
Expenses relating to low-value asset leases	$ 60	$ 60
Expenses relating to variable lease payments not included in the measurement of lease liabilities	$ 10,200	$ 7,249
Total cash outflow for leases	$ (107,776)	$ (103,106)

The Company leases certain office buildings which qualify as short-term leases and certain office equipment which qualifies as low-value asset leases. The Company has elected to apply the recognition exemption and thus, did not recognize right-of-use assets and lease liabilities for these leases.

13. INTANGIBLE ASSETS

	Year Ended December 31, 2021				
Item	Balance, Beginning of Year	Additions	Disposals	Reclassification	Balance, End of Period
Cost					
Software	$ 88,796	$ 84,339	$ 19,383	$ 4,888	$ 158,640
Accumulated amortization					
Software	34,167	$ 43,860	$ 19,383	$ 4,888	63,532
Carrying amount at December 31, 2021	$ 54,629				$ 95,108

Item	Year Ended December 31, 2020 Balance, Beginning of Year	Additions	Disposals	Balance, End of Period
Cost				
Software	$ 89,973	$ 42,146	$ 43,323	$ 88,796
Others	13,000	-	13,000	-
	102,973	$ 42,146	$ 56,323	88,796
Accumulated amortization				
Software	47,497	$ 29,993	$ 43,323	34,167
Others	11,917	1,083	13,000	-
	59,414	$ 31,076	$ 56,323	34,167
Carrying amount at December 31, 2020	$ 43,559			$ 54,629

Intangible assets are amortized on a straight-line basis over their estimated useful lives as follows:

Software	3 years
Others	3 years

14. OTHER FINANCIAL ASSETS

	December 31 2021	2020
Non-current		
Restricted time deposits (Note 32)	$ 208,268	$ 157,665
Refundable deposits	4,027	4,102
	$ 212,295	$ 161,767

15. OTHER ASSETS

	December 31 2021	2020
Current		
Prepayments	$ 180,189	$ 99,553
Non-current		
Prepayments	$ 333,147	$ -

The non-current prepayments were made according to the production capacity cooperation agreement signed between the Company and its suppliers; the prepayments were paid in accordance with the contract.

16. BORROWINGS

Long-term borrowings

	December 31	
	2021	2020
Secured borrowings from financial institutions	$ 6,737,500	$ 10,291,437
Unsecured borrowings from financial institutions	5,670,625	5,880,000
	12,408,125	16,171,437
Less: Current portion	3,094,739	5,412,007
Less: Arrangement fee	10,000	22,555
Less: Government loan discount	53,051	-
Long-term borrowings	$ 9,250,335	$ 10,736,875
Interest rate	0.50%-1.79%	0.93%-1.79%

		December 31	
Borrowing Type	Repayment Terms	2021	2020
Secured syndicated loan denominated in NT$	From June 2019 to February 2024	$ 6,737,500	$ 7,700,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	978,000	-
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	649,000	-
Unsecured bank borrowings denominated in NT$	From December 2020 to December 2023	600,000	600,000
Unsecured bank borrowings denominated in NT$	From August 2020 to February 2023	600,000	600,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	556,000	-
Unsecured bank borrowings denominated in NT$	From December 2021 to December 2024	500,000	-
Unsecured bank borrowings denominated in NT$	From August 2020 to August 2023	437,500	500,000
Unsecured bank borrowings denominated in NT$	From June 2020 to June 2023	375,000	500,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2031	329,000	-
Unsecured bank borrowings denominated in NT$	From August 2020 to August 2023	328,125	500,000
Unsecured bank borrowings denominated in NT$	From April 2021 to April 2028	318,000	-
Unsecured bank borrowings denominated in NT$	Pay off in December 2021	-	1,200,000
Unsecured bank borrowings denominated in NT$	Pay off in December 2021	-	450,000
Unsecured bank borrowings denominated in NT$	Pay off in December 2021	-	300,000
Secured bank borrowings denominated in NT$	Pay off in December 2021	-	218,750

(Continued)

Borrowing Type	Repayment Terms	December 31 2021	December 31 2020
Secured bank borrowings denominated in NT$	Pay off in September 2021	$ -	$ 196,875
Unsecured bank borrowings denominated in NT$	Pay off in September 2021	-	120,000
Unsecured bank borrowings denominated in NT$	Pay off in July 2021	-	150,000
Unsecured bank borrowings denominated in NT$	Pay off in June 2021	-	960,000
Secured syndicated loan denominated in NT$	Pay off in January 2021	-	2,175,812
Less: Current portion		3,094,739	5,412,007
Less: Arrangement fee		10,000	22,555
Less: Government loan discount		53,051	-
Total long-term borrowings		$ 9,250,335	$ 10,736,875

(Concluded)

To repay the vested liabilities, purchase equipment and machinery and increase operating funds, the Company signed a 5-year syndicated loan agreement with 7 financial institutions in November 2017 with a total amount of NT$7.7 billion. In January 2021, the Company repaid all of the loan in advance.

To purchase equipment or machinery, the Company has entered into a 5-year syndicated loan agreement with 9 financial institutions including the Taiwan Cooperative Bank in January 2019 with the total amount of NT$8 billion. The Company provided notes used as refundable guarantees for syndicated loan mentioned above that will be cancelled upon termination of the guarantee.

The Ministry of Economic Affairs implemented the “Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan” on January 1, 2019, which provided enterprises to make compliant investments with financial institutions at preferential interest rates. The Company has obtained the approval of the Ministry of Economic Affairs to qualify for the project loan and signed a loan contract with a financial institution to obtain a financing line of NT$6.7 billion, with a credit period of 7 to 10 years. The funds obtained are used for factory expansion, purchased machinery and equipment, buildings and operating turnover, etc. The details of government grants are set out in Note 28.

In addition, the Company’s floating borrowing rate on the above borrowing is reset every one to three months.

The loan agreement requires the maintenance of a current ratio, debt ratio, and interest coverage ratio based on the Company’s semi-annual and annual financial statements. For the year ended December 31, 2021 and 2020, the Company had met the financial ratio covenants.

The details of assets pledged as collateral for long-term loans are set in Note 32.

17. NOTES PAYABLE AND TRADE PAYABLES

	December 31 2021	December 31 2020
Trade payables	$ 3,403,530	$ 2,940,247

The Company has financial risk management policies in place to ensure that all payables are paid within the pre-agreed upon credit terms.

18. OTHER PAYABLES

	December 31 2021	December 31 2020
Payables for bonuses	$ 271,759	$ 252,351
Payables for donations	218,872	177,957
Payables for maintenance and repairs	211,542	192,006
Payables for patents	122,327	129,333
Others	795,380	614,449
	$ 1,619,880	$ 1,366,096

19. OTHER LIABILITIES

	December 31 2021	December 31 2020
Current		
Refund liabilities	$ 294,298	$ 124,522
Receipts under custody	35,706	31,238
Temporary credits	7,158	7,068
Guarantee deposits	-	160,721
	$ 337,162	$ 323,549
Non-current		
Government grants deferred revenue (Note 28)	$ 55,226	$ -
Guarantee deposits	10,755	19,410
	$ 65,981	$ 19,410

20. PROVISIONS

	December 31 2021	December 31 2020
Current		
Employee benefits (a)	$ 3,282	$ 3,283

a. The provision for employee benefits represents vested long service leave entitlements accrued.

21. RETIREMENT BENEFIT PLANS

a. Defined contribution plans

The Company adopted a pension plan under the Labor Pension Act (LPA), which is a state-managed defined contribution plan. Under on the LPA, the Company makes monthly contributions to employees' individual pension accounts at 6% of monthly salaries and wages.

b. Defined benefit plans

The defined benefit plan adopted by the Company in accordance with the Labor Standards Act is operated by the government. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the 6 months before retirement. The Company contributes amounts equal to 2% of total monthly salaries and wages to a pension fund administered by the pension fund monitoring committee. Pension contributions are deposited in the Bank of Taiwan in the committee's name. Before the end of each year, the Company assesses the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company is required to fund the difference in one appropriation that should be made before the end of March of the next year. The pension fund is managed by the Bureau of Labor Funds, Ministry of Labor (the "Bureau"); the Company has no right to influence the investment policy and strategy.

The amounts in the balance sheets in respect of the Company's defined benefit plans were as follows:

	December 31	
	2021	**2020**
Present value of defined benefit obligation	$ 1,874,741	$ 1,898,790
Fair value of plan assets	(1,021,636)	(942,837)
Net defined benefit liability	$ 853,105	$ 955,953

Movements in net defined benefit liability were as follows:

	Present Value of Defined Benefit Obligation	**Fair Value of the Plan Assets**	**Net Defined Benefit Liabilities (Assets)**
Balance at January 1, 2020	$ 1,903,616	$ 791,902	$ 1,111,714
Service cost			
Current service cost	5,015	-	5,015
Net interest expense	15,013	-	15,013
Return on plan assets	-	6,241	(6,241)
Recognized in profit or loss	20,028	6,241	13,787
Remeasurement			
Return on plan assets	-	26,677	(26,677)
Actuarial loss - experience adjustments	26,798	-	26,798
Actuarial loss - change in financial assumptions	39,079	-	39,079
Actuarial loss - change in demographic assumptions	(5,967)	-	(5,967)
Recognized in other comprehensive income	59,910	26,677	33,233
Contributions from the employer	-	202,781	(202,781)
Benefits paid	(84,764)	(84,764)	-
Balance at December 31, 2020	1,898,790	942,837	955,953
Service cost			
Current service cost	3,601	-	3,601
Net interest expense	9,359	-	9,359
Return on plan assets	-	4,662	(4,662)
Recognized in profit or loss	12,960	4,662	8,298

(Continued)

	Present Value of Defined Benefit Obligation	Fair Value of the Plan Assets	Net Defined Benefit Liabilities (Assets)
Remeasurement			
Return on plan assets	$ -	$ 12,094	$ (12,094)
Actuarial loss - experience adjustments	53,453	-	53,453
Actuarial loss - change in demographic assumptions	39,519	-	39,519
Recognized in other comprehensive income	92,972	12,094	80,878
Contributions from the employer	-	192,024	(192,024)
Benefits paid	(129,981)	(129,981)	-
Balance at December 31, 2021	$ 1,874,741	$ 1,021,636	$ 853,105

(Concluded)

An analysis by function of the amounts recognized in profit or loss in respect of the defined benefit plans is as follows:

	For the Year Ended December 31	
	2021	2020
Operating costs	$ 4,307	$ 7,381
Selling and marketing expenses	528	797
General and administration expenses	1,552	2,478
Research and development expenses	1,911	3,131
	$ 8,298	$ 13,787

Through the defined benefit plans under the Labor Standards Act, the Company is exposed to the following risks:

1) Investment risk: The plan assets are invested in domestic and foreign equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the Bureau or under the mandated management. However, in accordance with relevant regulations, the return generated by plan assets should not be below the interest rate for a 2-year time deposit with local banks.

2) Interest risk: A decrease in the government/corporate bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the plan's debt investments.

3) Salary risk: The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The significant assumptions used for the purposes of the actuarial valuations were as follows:

	December 31	
	2021	2020
Discount rate	0.50%	0.50%
Expected rate of salary increase	3.00%	3.00%
Expected return on plan assets increase	0.50%	0.50%

If possible reasonable change in each of the significant actuarial assumptions will occur and all other assumptions will remain constant, the present value of the defined benefit obligation would increase (decrease) as follows:

	For the Year Ended December 31	
	2021	2020
Discount rate		
0.50% increase	$ (62,796)	$ (67,172)
0.50% decrease	$ 66,474	$ 71,260
Expected rate of salary increase		
0.50% increase	$ 102,481	$ 97,993
0.50% decrease	$ (96,601)	$ (92,509)

The sensitivity analysis presented above may not be representative of the actual change in the present value of the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

	December 31	
	2021	2020
The expected contributions to the plan for the next year	$ 87,610	$ 56,154
The average duration of the defined benefit obligation	6.9 years	7.3 years

The Company maintains a separate executive pension plan and the net periodic pension costs were NT$5,218 thousand and NT$6,835 thousand for the years ended December 31, 2021 and 2020, respectively.

Movements in net defined benefit liability were as follows:

	Present Value of Defined Benefit Obligation
Balance at January 1, 2020	$ 498,861
Service cost	
Current service cost	2,860
Net interest expense	3,975
Recognized in profit or loss	6,835
Remeasurement	
Actuarial loss (gain) - experience adjustments	(34,790)
Actuarial loss - changes in assumptions	4,294
Recognized in other comprehensive income	(30,496)
Benefits paid	-
Balance at December 31, 2020	475,200
Service cost	
Current service cost	2,851
Net interest expense	2,367
Recognized in profit or loss	5,218
Remeasurement	
Actuarial loss - experience adjustments	52,255
Actuarial loss - changes in assumptions	20,233
Recognized in other comprehensive income	72,488
Benefits paid	-
Balance at December 31, 2021	$ 552,906

An analysis by function of the amounts recognized in profit or loss in respect of the defined benefit plans is as follows:

	For the Year Ended December 31	
	2021	**2020**
General and administration expenses	$ 5,218	$ 6,835

The actuarial valuations of the present value of the defined benefit obligation of executive pension plan were carried out by qualified actuaries. The significant assumptions used for the purposes of the actuarial valuations were as follows:

	December 31	
	2021	**2020**
Discount rate	0.50%	0.50%
Expected rate of salary increase	-	-
Expected return on plan assets increase	0.50%	0.50%

22. EQUITY

a. Share capital

Ordinary shares

	December 31	
	2021	**2020**
Number of shares authorized (in thousands)	6,550,000	6,550,000
Shares authorized	$ 65,500,000	$ 65,500,000
Number of shares issued and fully paid (in thousands)	1,856,018	1,856,302
Share issued	$ 18,560,178	$ 18,563,017

Fully paid ordinary shares, which have a par value of $10, carry one vote per share and carry a right to dividends.

A total of 864,704 thousand shares and 650,000 thousand shares of the Company's authorized shares were reserved for the issuance of convertible bonds and employee share options.

b. Capital surplus

	December 31	
	2021	**2020**
May be used to offset a deficit, distributed as cash dividends, or transferred to share capital (1)		
Issuance of ordinary shares	$ 253,624	$ 145,378
Donations	37	37
Treasury share transactions	35,444	33,096
	$ 289,105	$ 178,511

(Continued)

	December 31	
	2021	**2020**
May be used to offset a deficit only		
Changes in percentage of ownership interests in subsidiaries (2)	$ 4,609	$ 4,609
May not be used for any purpose		
Employee restricted shares	$ 105,496	$ 201,652

(Concluded)

1) Such capital surplus may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Company's capital surplus and once a year).

2) Such capital surplus arises from changes in capital surplus of subsidiaries accounted for by using the equity method.

c. Retained earnings and dividend policy

The Company's Articles of Incorporation, state that, where the Company made profit in a fiscal year, the profit shall be first utilized for paying taxes, offsetting losses of previous years, setting aside a legal reserve 10% of the remaining profit (until the amount of the legal reserve equals the amount of the Company's paid-in capital), setting aside or reversing a special reserve in accordance with the laws and regulations, and then any remaining profit together with any undistributed retained earnings shall be used by the Company's board of directors as the basis for proposing a distribution plan, which should be resolved in the shareholders' meeting for the distribution of dividends and bonuses to shareholders. For the policies on the distribution of employees' compensation and remuneration of directors stated by the Company's Articles of Incorporation, refer to "Employees' compensation and remuneration of directors" in Note 24 (h).

The Company is classified under the capital intensive industry. In accordance with the long-term financial program of the Company, the above shareholders' dividends can be retained as undistributed earnings, and then be distributed in the future, as determined by the shareholders at the Annual General Meeting.

Distributions shall be prioritized to take the form of cash dividends. Nevertheless, it still depends on the Company's financial, sales or operating condition. The Company's Articles of Incorporation provide that no more than 50% of the current year's total amount of distributable earnings can be distributed in the form of share dividends.

The appropriation of earnings to a legal reserve shall be made until the legal reserve equals the Company's paid-in capital. The legal reserve may be used to offset any deficit. If the Company has no deficit and the legal reserve has exceeded 25% of the Company's paid-in capital, the excess may be transferred to capital or distributed in cash.

The appropriation of earnings for 2020 and 2019, which had been proposed by the Company's general meeting of shareholders on August 17, 2021 and May 27, 2020, respectively. The appropriation and dividends per share were as follows:

	For the Year Ended December 31	
	2020	2019
Legal reserve	$ 529,409	$ 301,196
Special reserve	$ (329,834)	$ (385,857)
Cash dividends	$ 2,227,424	$ 2,207,891
Cash dividends per share	$ 1.2	$ 1.2

The appropriation of earnings for 2021, which were proposed by the Company's board of directors on February 25, 2022, were as follows:

	For the Year Ended December 31, 2021
Legal reserve	$ 1,155,091
Special reserve	$ (214,869)
Cash dividends	$ 3,340,758
Cash dividends per share	$ 1.8

The above appropriation for cash dividends had been resolved by the Company's board of directors; the other proposed appropriations will be resolved by the shareholders in their meeting to be held on May 27, 2022.

d. Special reserve

	For the Year Ended December 31	
	2021	2020
Beginning at January 1	$ 621,195	$ 1,007,052
Appropriations in respect of		
Treasury shares reversal	(9,979)	(36,882)
Reversal of the debits to other equity items	(319,855)	(348,975)
Balance at December 31	$ 291,361	$ 621,195

According to the shareholding ratio, the special reserve is calculated based on the difference between the market value of the parent company's stock holdings and the book value, and the special reserve will be partially reversed on market price.

e. Other equity items

1) Exchange differences on translating foreign operations

	For the Year Ended December 31	
	2021	2020
Balance at January 1	$ (386,090)	$ (235,880)
Exchange differences on translating foreign operations	(112,962)	(150,210)
Balance at December 31	$ (499,052)	$ (386,090)

2) Unrealized valuation gain on/(loss) on financial assets at FVTOCI

	For the Year Ended December 31	
	2021	**2020**
Balance at January 1	$ 171,026	$ (299,040)
Recognized for the year		
Unrealized gain - equity instrument	714,340	338,470
Share from associates accounted for using the equity method	230,165	102,496
Other comprehensive income recognized for the year	1,115,531	141,926
Cumulative unrealized gain/(loss) of equity instruments transferred to retained earnings due to disposal in subsidiaries	258,672	29,100
Balance at December 31	$ 1,374,203	$ 171,026

3) Employee unearned benefit

In the meetings of shareholders on June 16, 2016 and June 18, 2019, the shareholders approved a restricted share plan for employees. Refer to Note 27 for the information on restricted shares issued.

	For the Year Ended December 31	
	2021	**2020**
Balance at January 1	$ (150,555)	$ (443,066)
Share-based payment expenses recognized	115,145	293,662
Adjustments for change of turnover rate	(9,994)	(1,151)
Balance at December 31	$ (45,404)	$ (150,555)

f. Treasury shares

The Company’s shares held by its subsidiaries at December 31, 2021 and 2020 were as follows:

Name of Subsidiary	Number of Shares Held (In Thousands)	Carrying Amount	Market Price
December 31, 2021			
Hui Ying	1,957	$ 159,061	$ 82,569
December 31, 2020			
Hui Ying	1,957	$ 159,061	$ 82,765

The Company’s shares held by subsidiaries are regarded as treasury shares; shareholders’ rights are retained, except for the rights to participate in any share issuances for cash and to vote.

23. REVENUE

a. Segmentation of revenue from contracts with customers

	For the Year Ended December 31	
	2021	2020
Product type		
Flash	$ 32,538,740	$ 20,153,644
ROM	13,556,983	16,022,159
Foundry	3,501,876	2,794,731
Others	600	25,434
	$ 49,598,199	$ 38,995,968

b. Contract balances

	For the Year Ended December 31	
	2021	2020
Contract liabilities (classified as current liabilities)	$ 34,963	$ 87,155

The changes in the contract liability balances primarily result from the timing difference between the satisfaction of the performance obligations and the customer's payment.

The Company recognized revenue from the beginning balance of contract liabilities as follows:

	For the Year Ended December 31	
	2021	2020
From the beginning balance of contract liabilities		
Sale of goods	$ 86,424	$ 96,861

24. NET PROFIT (LOSS) FROM CONTINUING OPERATIONS

a. Interest income

	For the Year Ended December 31	
	2021	2020
Bank deposits	$ 17,689	$ 20,466

b. Other income

	For the Year Ended December 31	
	2021	2020
Dividend income	$ 118,914	$ 95,559
Others	36,713	21,281
	$ 155,627	$ 116,840

c. Gain on disposal of property, plant and equipment

	For the Year Ended December 31	
	2021	2020
Gain on disposal of idle assets	$ 2,505,176	$ -

d. Other gains and losses

	For the Year Ended December 31	
	2021	2020
Net foreign exchange (losses) gains	$ (162,247)	$ 71,859
Other losses	(314)	(434)
	$ (162,561)	$ 71,425

e. Finance costs

	For the Year Ended December 31	
	2021	2020
Interest on loans	$ 220,856	$ 248,416
Interest on lease liabilities	14,627	16,211
Less: Amounts included in the cost of qualifying assets	(2,851)	(21,892)
	$ 232,632	$ 242,735

Information about capitalized interest was as follows:

	For the Year Ended December 31	
	2021	2020
Capitalized interest	$ 2,851	$ 21,892
Capitalization rate	1.20%	1.79%

f. Depreciation and amortization

	For the Year Ended December 31	
	2021	2020
An analysis of depreciation by function		
Operating costs	$ 3,598,189	$ 3,255,402
Operating expenses	591,940	407,923
	$ 4,190,129	$ 3,663,325
An analysis of amortization by function		
Operating costs	$ 18,342	$ 14,039
Operating expenses	25,518	17,037
	$ 43,860	$ 31,076

g. Employee benefits expense

	For the Year Ended December 31	
	2021	2020
Post-employment benefits (Note 21)		
Defined contribution plans	$ 208,895	$ 194,661
Defined benefit plans	13,516	20,622
	222,411	215,283
Share-based payments		
Equity-settled	115,145	293,662
Other employee benefits	8,409,327	6,301,205
Total employee benefits expense	$ 8,746,883	$ 6,810,150
An analysis of employee benefits expense by function		
Operating costs	$ 4,046,241	$ 3,275,037
Operating expenses	4,700,642	3,535,113
	$ 8,746,883	$ 6,810,150

h. Employees' compensation and remuneration of directors

In compliance with the Articles of Incorporation, the Company accrued employees' compensation and remuneration of directors at the rates of 15% and no higher than 2%, respectively, of net profit before income tax, employees' compensation, and remuneration of directors. For the years ended December 31, 2021 and 2020, the estimated employees' compensation and the remuneration of directors resolved by the board of directors on February 25, 2022 and February 26, 2021, respectively, were as follows:

Amount

	For the Year Ended December 31	
	2021	2020
Employees' compensation	$ 2,396,656	$ 1,050,180
Remuneration of directors	$ 319,554	$ 140,024

If there is a change in the amounts after the annual parent company only financial statements are authorized for issue, the differences are recorded as a change in the accounting estimate.

There is no difference between the actual amount of employees' compensation and remuneration of directors paid and the amount recognized in the financial statements for the years ended December 31, 2020 and 2019.

Information on the employees' compensation and remuneration of directors resolved by the Company's board of directors in 2021 and 2020 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

25. INCOME TAXES RELATING TO CONTINUING OPERATIONS

a. Major components of income tax expense recognized in profit or loss:

	For the Year Ended December 31	
	2021	2020
Current tax		
In respect of the current year	$ 630,925	$ 38,349
Adjustments for prior year	9,312	-
Deferred tax		
In respect of the current year	658,310	446,566
Income tax expense recognized in profit or loss	$ 1,298,547	$ 484,915

A reconciliation of accounting loss and income tax expenses is as follows:

	For the Year Ended December 31	
	2021	2020
Income before tax from continuing operations	$ 13,261,499	$ 5,810,998
Income tax expense calculated at the statutory rate	$ 2,652,300	$ 1,162,200
Non-deductible expenses in determining taxable income	7,969	7,083
Non-taxable income	(131,393)	(18,213)
Realized investment losses	(242,886)	-
Deductible temporary differences	(1,234,348)	(1,087,055)
Deductible tax-exemptions income credits	(83,349)	-
Unrecognized investment credits	(337,368)	(25,666)
Adjustments for prior year	9,312	-
Recognized loss carryforwards	658,310	446,566
Income tax expense recognized in profit or loss	$ 1,298,547	$ 484,915

b. Current tax assets and liabilities

	December 31	
	2021	2020
Current tax assets		
Tax refund receivable	$ 2,745	$ 3,816
Current tax liabilities		
Income tax payable	$ 640,237	$ 38,349

c. Deferred tax assets and liabilities

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2021

	Opening Balance	Recognized in Profit or Loss	Closing Balance
Deferred tax assets			
Temporary differences			
Unrealized inventory losses	$ -	$ 483,271	$ 483,271
Net defined benefit liabilities	-	83,127	83,127
Unrealized refund liabilities	-	35,569	35,569
Recognized loss carryforwards	658,310	(658,310)	-
Others	-	42,246	42,246
	$ 658,310	$ (14,097)	$ 644,213
Deferred tax liabilities			
Temporary differences			
Depreciation	$ -	$ (603,554)	$ (603,554)
Unrealized exchange gains	-	(40,659)	(40,659)
	$ -	$ (644,213)	$ (644,213)

For the year ended December 31, 2020

	Opening Balance	Recognized in Profit or Loss	Closing Balance
Deferred tax assets			
Temporary differences			
Recognized loss carryforwards	$ 1,104,876	$ (446,566)	$ 658,310

d. Deductible temporary differences and unused investment credits for which no deferred assets have been recognized in the parent company only balance sheets

	December 31	
	2021	2020
Investment credits		
Research and development expenditures	$ 141,281	$ 200,880
Purchase of smart machines expenditures	30,000	23,538
	$ 171,281	$ 224,418
Deductible temporary differences	$ 5,537,304	$ 9,508,014

The unrecognized investment credits will expire in 2021.

e. Information on unused investment credits and tax-exemptions

As of December 31, 2021, the investment tax credits comprised of:

Law and Statutes	Tax Credit Source	Remaining Creditable Amount	Expiry Year
Statute for Industrial Innovation	Research and development expenditures	$ 141,281	2022
Statute for Industrial Innovation	Purchase of smart machines expenditures	30,000	2022
		$ 171,281	

As of December 31, 2021, profit attributable to the following expansion projects is exempted from income tax for a 5-year period:

Expansion of Construction Project	Tax-exemption Period
Construction and expansion of 2008	2017 to 2021

f. Income tax assessments

The Company's tax returns through 2019 have been assessed by the tax authorities.

26. EARNINGS PER SHARE

Unit: NT$ Per Share

	For the Year Ended December 31	
	2021	2020
Basic earnings per share	$ 6.48	$ 2.90
Diluted earnings per share	$ 6.25	$ 2.84

The income and weighted average number of ordinary shares outstanding in the computation of earnings per share from continuing operations were as follows:

Net Income for the Year

	For the Year Ended December 31	
	2021	2020
Income for the year attributable to owners of the Company	$ 11,962,952	$ 5,326,083

Weighted average number of ordinary shares outstanding (in thousand shares):

	For the Year Ended December 31	
	2021	**2020**
Weighted average number of ordinary shares in computation of basic earnings per share	1,845,347	1,839,322
Effect of potentially dilutive ordinary shares:		
Restricted shares to employees	7,704	10,105
Employees' compensation or bonus issue to employees	60,181	27,631
Weighted average number of ordinary shares in computation of diluted earnings per share	1,913,232	1,877,058

Since the Company offered to settle compensation or bonuses paid to employees in cash or shares, the Company assumed the entire amount of the compensation or bonus will be settled in shares and the resulting potential shares were included in the weighted average number of shares outstanding used in the computation of diluted earnings per share, as the effect is dilutive. Such dilutive effect of the potential shares is included in the computation of diluted earnings per share until the number of shares to be distributed to employees is resolved in the following year.

27. SHARE-BASED PAYMENT ARRANGEMENTS

Restricted share plan for employees

Information on share plan for employees were as follows:

Approved Date	Grant Shares (Thousand)	Board of Directors Approved Grant Shares (Thousand)	Grant Date	Issued Date	Issued Shares (Thousand)	Fair Value
2016/06/16	123,535	58,971	2016/10/25	2017/01/03	57,476	$ 4.73
2019/06/18	35,294	16,815	2019/10/21	2020/06/16	16,400	32.55

To meet the vesting conditions, an employee has to meet performance and other conditions over the vesting period listed as follows:

a. If an employee remains employed by the Company for one year after the grant date; and has a current year's performance rating of "successful" (or higher) /A0 or A1, 40% of the restricted shares will be vested;

b. If an employee remains employed by the Company for two years after the grant date; and has a current year's performance rating of "successful" (or higher) /A0 or A1, 30% of the restricted shares will be vested;

c. If an employee remains employed by the Company for three years after grant date; and has a current year's performance rating of "successful" (or higher) /A0 or A1, 30% of the restricted shares will be vested.

In addition to the vesting conditions, the limitations are as follows:

a. Employees, except for inheritance, should not sell, transfer, pledge, donate or in any other way dispose of the shares.

b. The shares should be held in stock trust.

c. Except for the above two paragraphs, the other rights of the restricted share plan for employees, which include, but are not limited to, dividends, bonuses, the distribution rights of the legal reserve and capital surplus, share options of cash capital voting rights of shareholders, etc., are the same as the Group's issued ordinary shares.

d. The dividends of restricted share plan for employees are not restricted by existing conditions.

e. When a new share is returned in cash due to the Company's capital reduction, the refund of the vested capital loss shall be under custodian trust. In accordance with the issuance method, such capital and shares shall be granted if the vesting conditions for new restricted employee shares are met. The vested shares are granted to employees without interests; if the vested conditions are not met, such cash will be recovered by the Company (applicable to the shareholders' resolution of restricted share plan in the 2019 shareholders' meeting).

When employees do not reach the vesting conditions of restricted share plan for employees during the year, the Company will recover and cancel the shares.

Information on restricted share plan for employees was as follows:

	Number of Shares (In Thousands) For the Year Ended December 31	
	2021	**2020**
Balance at January 1	9,836	23
Issued	-	16,400
Vested	(4,800)	(6,465)
Forfeited (Note)	(210)	(122)
Balance at December 31	4,826	9,836

Note: The forfeited shares for the years ended December 31, 2021 include 41 thousand shares which will be cancelled and 169 thousand shares which were already cancelled, and the forfeited shares for the years ended December 31, 2020 include 115 thousand shares which will be cancelled and 7 thousand shares which were already cancelled.

For the years ended December 31, 2021 and 2020, the compensation costs recognized were NT$115,145 thousand and NT$293,662 thousand, respectively

28. GOVERNMENT GRANTS

As of December 31, 2021, the Company obtained a government preferential interest rate loan of $2,830,000 thousand from the "Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan". The loan will be repaid on an average monthly basis after the date of expiry. At the time of the borrowing, the fair value of the borrowing was estimated based on the market interest rate. The difference between the amount obtained and the fair value of the loan is $56,583 thousand, which is regarded as a government low interest loan and recognized as deferred income. For the year ended December 31, 2021, the Company recognized other income of $1,357 thousand and the interest expense of the loan of $3,532 thousand, respectively.

29. CAPITAL MANAGEMENT

The Company manages its capital to ensure that the Company will be able to operate under the premises of going concerns and growth while maximizing the return to shareholders through the optimization of the debt and equity balance.

The Company's strategy for managing the capital structure is to lay out the plan of product development and expand the market share considering the growth and the magnitude of industry and further developing an integral plan founded on the required capacity, capital outlay, and magnitude of assets in long-term development. Ultimately, considering the risk factors such as the fluctuation of the industry cycle and the life cycle of products, the Company determines the optimal capital structure by estimating the profitability of products, operating profit ratio, and cash flow based on the competitiveness of products.

The management of the Company periodically examines the capital structure and contemplates on the potential costs and risks involved while exerting different financial tools. In general, the Company implements prudent strategy of risk management.

30. FINANCIAL INSTRUMENTS

a. Fair value of financial instruments not measured at fair value

The management considers that the carrying amounts of financial assets and financial liabilities recognized in the financial statements approximate their fair values or their fair values cannot be reliably measured.

b. Fair value of financial instruments measured at fair value on a recurring basis

1) Fair value hierarchy

December 31, 2021

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Equity securities				
Securities listed in ROC	$ 1,995,329	$ -	$ -	$ 1,995,329
Securities unlisted in ROC	-	-	498,055	498,055
	$ 1,995,329	$ -	$ 498,055	$ 2,493,384

December 31, 2020

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Equity securities				
Securities listed in ROC	$ 1,389,540	$ -	$ -	$ 1,389,540
Securities unlisted in ROC	-	-	389,504	389,504
	$ 1,389,540	$ -	$ 389,504	$ 1,779,044

There were no transfers between Level 1 and Level 2 in the current and prior years.

2) Reconciliation of Level 3 fair value measurements of financial assets

Financial Assets	**Financial Assets at FVTOCI For the Year Ended December 31 2021**	**2020**
Balance at January 1	$ 389,504	$ 331,459
Total gain recognized in other comprehensive (unrealized gain on financial assets at FVTOCI)	108,551	58,045
Balance at December 31	$ 498,055	$ 389,504

3) Valuation used in Level 3 fair value measurement

The fair values of equity securities listed in the ROC and other countries was arrived at using either the asset-based approach or based on the multiplier evaluated in the active market by the market approach and adjustments of liquidity.

c. Categories of financial instruments

	December 31 2021	**2020**
Financial assets		
Measured at amortized cost (1)	$ 24,020,500	$ 15,669,993
Measured at FVTOCI	2,493,384	1,779,044
Financial liabilities		
Measured at amortized cost (2)	22,484,396	25,193,792

1) The balances included financial assets measured at amortized cost, which comprise cash and cash equivalents, trade receivables (including receivables from related parties), other receivables and other financial assets.

2) The balances included financial liabilities measured at amortized cost, which comprise, notes payable and trade payables (including payables to related parties), other payables (including other payables to related parties), payable for purchases of equipment, guarantee deposits and long-term loans (including current portion).

d. Financial risk management objectives and policies

The Company manages its exposure to risks relating to the operations through market risk, credit risk, and liquidity risk with the objective to reduce the potentially adverse effects the market uncertainties may have on its financial performance.

The plans for material treasury activities are reviewed by management in accordance with procedures required by relevant regulations or internal controls. During the implementation of such plans, the Company must comply with certain treasury procedures that provide guiding principles for overall financial risk management.

1) Market risk

The Company's activities exposed it primarily to the financial risks of changes in foreign currency exchange rates (see (a) below), interest rates (see (b) below), and other price risk (see (c) below).

a) Foreign currency risk

The Company had foreign currency sales and purchases, which exposed the Company to foreign currency risk. Exchange rate exposures were managed within approved policy parameters utilizing foreign exchange forward contracts.

Sensitivity analysis

The Company was mainly exposed to the USD and JPY.

The sensitivity analysis of foreign currency risk focuses mainly on exchange rates for transactions in currencies other than the entity's functional currency (i.e. foreign currencies) which are recognized at the rates of exchange prevailing at the end of each reporting period.

The following table details the Company's sensitivity to a 3% and 10% increase in the New Taiwan dollars (i.e. the functional currency) against the USD and JPY, respectively. The sensitivity rates used are 3% and 10% when reporting foreign currency risk internally to key management personnel.

	USD Impact		**JPY Impact**	
	For the Year Ended December 31		**For the Year Ended December 31**	
	2021	**2020**	**2021**	**2020**
Pre-tax profit decrease	$ 163,232	$ 110,542	$ 14	$ 158,596

b) Interest rate risk

The Company is exposed to interest rate risk from outstanding bank loans. Interest rates of the Company's long-term bank loans are floating, and changes in interest rates would affect the future cash flows but not the fair value.

The sensitivity analysis of interest is performed based on the financial liabilities exposed to cash flow interest rate risk at the end of each reporting period.

If interest rates had been 50 basis points higher/lower, the Company's pre-tax profit for the years ended December 31, 2021 and 2020 would decreased/increased by NT$61,725 thousand and NT$80,744 thousand, respectively.

c) Other price risk

The Company was exposed to equity price risk through its investments in listed equity securities. Equity investments are held for strategic rather than trading purposes. The Company does not actively trade these investments.

Sensitivity analysis

A sensitivity analysis of equity prices is performed based on the fair values of equity investments at the end of each reporting period.

If equity prices had been 10% higher/lower, equity for the years ended December 31, 2021 and 2020 would have increased/decreased by NT$249,338 thousand and NT$177,904 thousand, as a result of the changes in fair value of available-for-sale investments.

2) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Company. The Company's exposure to credit risk mainly arises from trade receivables - operating, bank deposits, and other financial instruments. Credit risk is managed separately for business related and financial related exposures.

Business related credit risk

In order to maintain the credit quality of trade receivables, the Company has established procedures to monitor and limit exposure to credit risk on trade receivables.

Credit evaluation is performed in the consideration of the relevant factors such as financial condition, external and internal credit scoring, historical experience, and economic conditions, which may affect the customer's paying ability. The Company holds some of the credit enhancements such as prepayments and collateral to mitigate its credit risks.

Trade receivables consisted of a large number of customers, spread across diverse industries and geographical areas.

As of December 31, 2021 and 2020, the Company's ten largest customers accounted for 59% and 65% of its total trade receivables (including receivables from related parties), respectively. The Company believed that the concentration of credit risk is relatively insignificant for the remaining trade receivables.

Financial credit risk

The Company's exposure to financial credit risk which pertained to bank deposits and other financial instruments were evaluated and monitored by Corporate Treasury function. The Company only deals with creditworthy counterparties and banks so that no significant credit risk was identified.

3) Liquidity risk

The objective of liquidity risk management is to ensure the Company has sufficient liquidity to fund its business requirements of cash and cash equivalents and the unused of financing facilities associated with existing operations.

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual and undiscounted payments, including principal and estimated interest.

December 31, 2021

	On Demand or Less than 1 Year	1-3 Years	3-5 Years	5+ Years	Total
Non-derivative financial liabilities					
Non-interest bearing	$ 13,580,768	$ -	$ -	$ -	$ 13,580,768
Lease liabilities	75,639	137,111	130,715	512,042	855,507
Interest bearing	3,272,506	7,076,478	1,371,007	1,036,924	12,756,915
	$ 16,928,913	$ 7,213,589	$ 1,501,722	$ 1,548,966	$ 27,193,190

Additional information about the maturity analysis for lease liabilities:

	Less than 1 Year	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
Lease liabilities	$ 75,639	$ 267,826	$ 320,221	$ 185,202	$ 6,619	$ -

December 31, 2020

	On Demand or Less than 1 Year	1-3 Years	3-5 Years	5+ Years	Total
Non-derivative financial liabilities					
Non-interest bearing	$ 10,721,340	$ -	$ -	$ -	$ 10,721,340
Lease liabilities	94,523	175,632	160,363	630,297	1,060,815
Interest bearing	5,626,283	8,046,662	2,891,576	-	16,564,521
	$ 16,442,146	$ 8,222,294	$ 3,051,939	$ 630,297	$ 28,346,676

Additional information about the maturity analysis for lease liabilities:

	Less than 1 Year	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
Lease liabilities	$ 94,523	$ 335,995	$ 376,402	$ 245,069	$ 8,826	$ -

The amounts included above for variable interest rate instruments for both non-derivative financial assets and liabilities was subject to change if changes in variable interest rates were to differ from those estimates of interest rates determined at the end of the reporting period.

31. TRANSACTIONS WITH RELATED PARTIES

In addition to those disclosed in other notes, detail of transactions between the Company and related parties are disclosed below.

a. Related parties and their relationships associated with the Company:

Related Parties	Relationship with the Company
Macronix America, Inc. (MXA)	Subsidiary
Mxtran Inc. (Mxtran)	Subsidiary
Macronix (Hong Kong) Co., Limited (MXHK)	Indirect subsidiary
Macronix Europe N.V. (MXE)	Indirect subsidiary
Macronix Pte Ltd (MPL)	Indirect subsidiary
Macronix (Asia) Limited (MX Asia)	Indirect subsidiary
MegaChips Corporation (MegaChips)	Key management personnel
Ardentec Corporation (Ardentec)	The Company is its major management authority
Etron Technology, Inc. (Etron)	Others
Macronix Education Foundation (MXIC Foundation)	Others
NCKUEE Alumni Foundation (NCKUEE Foundation)	Others

b. Operating revenues

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2021	2020
Sales	Key management personnel		
	MegaChips	$ 13,704,352	$ 16,101,433
	Subsidiaries		
	MXHK	8,919,103	5,778,319
	Others	2,161,911	1,257,181
		$ 24,785,366	$ 23,136,933

Sale prices to foreign related parties were negotiated based on those charged to ultimate customers and were not comparable to those with external customers as foreign related parties were the primary regional distributors. Sales to domestic related parties were priced at a markup on the unit cost of the product, price that was not comparable to those with other customers.

Sales prices for the related parties were not comparable to those for external customers as the Company sells the specific purpose product. The sales terms to the related parties were between 30 to 60 days after monthly closing, similar to those with external customers.

c. Purchases

Related Parties Categories/Name	For the Year Ended December 31 2021	2020
Key management personnel		
MegaChips	$ 5,895,828	$ 6,209,245

Materials purchased from related parties were for manufacturing process. The payment term was 30 days after monthly closing and after acceptance of materials.

d. Receivables from related parties

Line Items	Related Parties Categories/Name	December 31 2021	2020
Receivables from related parties, net	Subsidiaries		
	MXHK	$ 1,500,143	$ 587,454
	Others	326,248	98,670
	Key management personnel		
	MegaChips	961,722	1,647,427
		$ 2,788,113	$ 2,333,551
Other receivables	Subsidiaries		
	MXHK	$ 5	$ 89
	Mxtran	113	113
	Key management personnel		
	MegaChips	-	30
		$ 118	$ 232

The outstanding trade receivables from related parties are unsecured. For the year ended December 31, 2021 and 2020, no impairment loss was recognized for trade receivables from related parties.

e. Payables to related parties

Line Items	Related Parties Categories/Name	December 31 2021	December 31 2020
Payables to related parties	Key management personnel		
	MegaChips	$ 4,388,398	$ 4,062,278
	The Company is its major management authority	120,798	99,149
		$ 4,509,196	$ 4,161,427
Other payables to related parties	Subsidiaries		
	MXA	$ 82,498	$ 58,659
	MXE	45,069	45,740
	MX Asia	22,908	25,574
	Others	6,937	6,852
	Others	360	-
		$ 157,772	$ 136,825

The outstanding trade payables from related parties are unsecured and will be settled in cash.

f. Other transactions with related parties

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2021	For the Year Ended December 31 2020
Manufacturing expense	The Company is its major management authority		
	Ardentec	$ 387,057	$ 306,514
	Subsidiaries	6,600	-
		$ 393,657	$ 306,514
Operating expense	Subsidiaries		
	MXA	$ 215,187	$ 206,028
	MXE	146,596	134,553
	MXAsia	113,092	100,854
	Others	23,393	22,727
	Others	21,928	23,119
		$ 520,196	$ 487,281
IT service revenue	Subsidiaries		
	Mxtran	$ 324	$ 318
Rental revenue	Subsidiaries		
	Mxtran	$ 435	$ 435

The manufacturing expense and operating expense of related parties were comparable to those with other vendors. The payment term was between 30 to 90 days after monthly closing.

The Company leases offices to its subsidiaries (rentals are classified under other gains and losses). The amount of lease payment was based on the office space leased by each related party and was collected on a monthly basis.

Under certain contracts, the Company provided the IT service to the above related parties. The specifically negotiated terms were not comparable to those with external customers.

g. Compensation of key management personnel

	For the Year Ended December 31	
	2021	2020
Short-term benefits	$ 863,154	$ 462,655
Post-employment benefits	5,218	6,835
Share-based payments	18,545	48,751
Other long-term employee benefits	(11)	(14)
	$ 886,906	$ 518,227

The remuneration of key executives was determined by the remuneration committee based on the performance of individuals and market trends.

32. ASSETS PLEDGED AS COLLATERAL OR FOR SECURITY

The following assets were provided as collateral for bank borrowings, the tariff of imported raw materials guarantees, natural gas agreements, and land lease agreements:

	December 31	
	2021	2020
Property, plant and equipment, net	$ 9,758,877	$ 12,915,218
Pledge deposits (classified as other financial assets - non-current)	208,268	157,665
	$ 9,967,145	$ 13,072,883

33. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

In addition to those disclosed in other notes, significant commitments and contingencies of the Company as of December 31, 2021 and 2020 were as follows:

a. As of December 31, 2021 and 2020, unused letters of credit amounted to approximately NT$395,425 thousand and NT$0 thousand, respectively.

b. Unrecognized commitments are as follows:

	December 31	
	2021	2020
Acquisition of property, plant and equipment	$ 11,312,421	$ 2,137,663

c. The Company's board of directors passed a resolution to donate to National Cheng Kung University to establish the "School of Computing" to cultivate cross domain innovative talents with dual expertise "specific discipline" and "computing" to contribute to the society, and to fulfill Company's social responsibilities with a donation amount of $100,000 thousand per year for the following ten years. As of December 31, 2021, the Company has allocated $200,000 thousand.

d. On October 26, 2021, the board of directors of the Company approved to continue participating in the joint development plan of IBM "Phase Change Memory" and obtain the authorization of specific analog artificial intelligence technology. The period is from January 2022 to January 2025. The two parties jointly bear the related technology development fees, and the unrecognized contract amount is US$21,000 thousand.

e. The Company signed a long-term purchase contract with suppliers. The contract is valid up to December 31, 2024. The Company must prepay a certain amount of money as a guarantee according to the contract, and these suppliers must deliver the purchased items to the Company according to the supply quantity and price agreed in the contract. As of December 31, 2021, the Company recorded prepayments of US$11,994 thousand and the unpaid contract amount was US$47,978 thousand.

34. SIGNIFICANT ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The Company' significant financial assets and liabilities denominated in foreign currencies aggregated by the foreign currencies other than functional currencies and the related exchange rates between foreign currencies and respective functional currencies were as follows:

December 31, 2021

	Foreign Currencies (In thousands)	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 18,356,915	0.2405	$ 4,414,838
USD	266,402	27.68	7,374,018
			$ 11,788,856
Non-monetary items			
Investments accounted for using the equity method			
USD	100,337	27.68	$ 2,777,323
Financial liabilities			
Monetary items			
JPY	18,356,338	0.2405	$ 4,414,699
USD	69,832	27.68	1,932,945
			$ 6,347,644

December 31, 2020

	Foreign Currencies (In thousands)	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 20,790,537	0.2763	$ 5,744,425
USD	179,035	28.48	5,098,926
			$ 10,843,351
Non-monetary items			
Investments accounted for using the equity method			
USD	84,629	28.48	$ 2,410,232
Financial liabilities			
Monetary items			
JPY	15,050,542	0.2763	$ 4,158,465
USD	49,655	28.48	1,414,181
			$ 5,572,646

For the years ended December 31, 2021 and 2020, realized and unrealized net foreign exchange (losses) gains were NT$(162,247) thousand and NT$71,859 thousand, respectively. It is impractical to disclose net foreign exchange losses by each significant foreign currency due to the variety of the foreign currency transactions.

35. SEPARATELY DISCLOSED ITEMS

a. Information on significant transactions:

1) Financing provided to others: None

2) Endorsements/guarantees provided: None

3) Marketable securities held (excluding investment in subsidiaries, associates and joint ventures): Table 1 (attached)

4) Marketable securities acquired and disposed of at costs or prices of at least NT$300 million or 20% of the paid-in capital: None

5) Acquisition of individual real estate at costs of at least NT$300 million or 20% of the paid-in capital: None

6) Disposal of individual real estate at prices of at least NT$300 million or 20% of the paid-in capital: Table 2 (attached)

7) Total purchases from or sales to related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 3 (attached)

8) Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 4 (attached)

9) Trading in derivative instruments: None

b. Information on investees: Table 5 (attached)

c. Information on investments in mainland China:

1) Information on any investee company in mainland China, showing the name, principal business activities, paid-in capital, method of investment, inward and outward remittance of funds, shareholding ratio, investment gain or loss, carrying amount of the investment at the end of the period, repatriation of investment gains, and limit on the amount of investment in the mainland China area: Table 6 (attached)

2) Any of the significant transactions with investee companies in mainland China, either directly or indirectly through a third area, and their prices, payment terms, and unrealized gains or losses: None

d. Information of major shareholders: List all shareholders with ownership of 5% or greater showing the name of the shareholder, the number of shares owned, and percentage of ownership of each shareholder: None

MACRONIX INTERNATIONAL CO., LTD.

MARKETABLE SECURITIES HELD
DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Holding Company Name	Type and Name of Marketable Securities	Relationship with the Holding Company	Financial Statement Account	December 31, 2021				Shares as Collateral
				Shares/Units (In Thousands)	Carrying Amount	Percentage of Ownership (%)	Fair Value	
The Company	Shares							
	Ardentec Corporation	The Company serves as member of its board of directors	Financial assets at FVTOCI - non current	35,951,871	$ 1,995,329	7.33	$ 1,995,329	None
	United Industrial Gases Co., Ltd.	None	”	6,671,877	498,055	3.06	498,055	None
	Zowie Technology Co., Ltd.	None	”	20,426	-	0.07	-	None
MXBVI	Shares							
	Chipbond Technology Corporation	None	Financial assets at FVTOCI - non current	1,088,319	72,591	0.15	72,591	None
	Tower Semiconductor Ltd.	None	”	464,000	509,631	0.43	509,631	None
	Amphastar Pharmaceuticals, Inc.	None	”	49,116	31,663	0.10	31,663	None
	Foreign Convertible Preference Shares							
	Kneron Holding Corporation	None	Financial assets at FVTPL - non current	566,711	70,800	0.99	70,800	None
	Wolley Inc.	Associate (Note)	”	2,400,000	83,040	18.19	83,040	None
Hui Ying	Shares							
	Macronix International Co., Ltd.	The Company	Financial assets at FVTOCI - non current	1,956,619	82,569	0.11	82,569	None
	Raio Technology Co., Ltd.	None	”	1,247,288	32,318	10.03	32,318	None
	Genovior Biotech Corporation	None	”	6,270,000	48,906	6.14	48,906	None
Run Hong	Shares							
	Genovior Biotech Corporation	None	Financial assets at FVTOCI - non current	4,500,000	35,100	4.41	35,100	None

Note: The Company has the ability to participate in the decision-making of the company's financial and operating policies and has significant influence on the company.

TABLE 2

MACRONIX INTERNATIONAL CO., LTD.

DISPOSAL OF INDIVIDUAL REAL ESTATE AT PRICES OF AT LEAST NT$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Seller	Property	Event Date	Original Acquisition Date	Carrying Amount	Transaction Amount	Collection	Gain (Loss) on Disposal	Counterparty	Relationship	Purpose of Disposal	Price Reference	Other Terms
The Company	Buildings and affiliated factory facilities	August 5,2021	From June 1991 to February 2020	$ 6,192	$ 820,000	Collect the price according to the contract	$ 813,808	HON HAI PRECISION INDUSTRY CO., LTD.	None	In order to enhance advanced technology and international competitiveness, the Company will focus on the development of 12-inch fab and focus on the research, development and manufacturing of 3D NAND and advanced NOR Flash.	Based on the appraisal results of professional appraisal agencies as a reference for decision	None

MACRONIX INTERNATIONAL CO., LTD.

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Buyer	Related Party	Relationship	Transaction Details				Abnormal Transaction		Notes/Accounts Receivable (Payable)		Note
			Purchase/ Sale	Amount	% to Total	Payment Terms	Unit Price	Payment Term	Ending Balance	% to Total	
The Company	MegaChips	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Sales	$ 13,704,352	28	30 days after monthly closing	Note 31	Note 31	$ 961,722	13	-
	MXHK	Indirect subsidiary	Sales	8,919,103	18	45 days after monthly closing	Note 31	Note 31	1,500,143	20	-
	MXA	Subsidiary	Sales	2,159,019	4	Net 60 days	Note 31	Note 31	326,248	4	-
	MegaChips	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Purchase	5,895,828	49	30 days after monthly closing and after acceptance of materials	Note 31	Note 31	4,388,398	55	-
MXHK	The Company	Indirect subsidiary	Purchase	US$ 319,733	100	45 days after monthly closing	No material difference	No material difference	US$ 54,196	100	-
MXA	The Company	Subsidiary	Purchase	US$ 77,323	100	Net 60 days	No material difference	No material difference	US$ 11,786	100	-

MACRONIX INTERNATIONAL CO., LTD.

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Company Name	Related Party	Relationship	Ending Balance	Turnover Rate	Overdue		Amounts Received in Subsequent Period	Allowance for Impairment Loss
					Amount	Action Taken		
The Company	MegaChips	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	$ 961,722	10.50 times	$ -	-	$ 865,477 thousand	$ -
	MXHK	Indirect subsidiary	1,500,143	8.54 times	-	-	1,500,143 thousand	-
	MXA	Subsidiary	326,248	10.16 times	-	-	326,248 thousand	-

MACRONIX INTERNATIONAL CO., LTD.

INFORMATION ON INVESTEES
FOR THE YEAR ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2021			Net Income (Loss) of the Investee	Share of Profit (Loss)	Note
				December 31, 2021	December 31, 2020	Shares	%	Carrying Amount			
The Company	MXA	San Jose, California, USA.	Sales and marketing	$ 2,640	$ 2,640	$ 100,000	100.00	$ 228,970	$ 79,885	$ 79,885	Subsidiary
	MXBVI	Tortola, British Virgin Islands	Investment holding company	7,348,057	7,348,057	212,048,000	100.00	2,548,353	191,446	191,398	Subsidiary
	Hui Ying	Taipei, Taiwan	Investment	500,000	500,000	-	100.00	94,664	9,759	7,411	Subsidiary
	Run Hong	Taipei, Taiwan	Investment	1,014,432	984,432	-	100.00	43,833	(279)	(279)	Subsidiary
	Mxtran	Hsinchu, Taiwan	IC design	755,287	755,287	69,627,323	90.43	12,028	(2,172)	(1,966)	Subsidiary
MXBVI	NTTI	San Jose, California, USA.	IC design	911,049	899,931	27,850,000	100.00	272,627	(9,103)	Note	Subsidiary
	MXE	Belgium	After-sales service	2,106	2,106	999	100.00	126,978	8,008	Note	Subsidiary
	MPL	Singapore	After-sales service	3,291	3,291	174,000	100.00	21,895	1,108	Note	Subsidiary
	MXHK	Hong Kong	Sales and marketing	378,427	378,427	89,700,000	100.00	1,092,282	194,035	Note	Subsidiary
	MX Asia	Cayman Island	After-sales service	23,035	23,035	700,000	100.00	68,631	5,230	Note	Subsidiary
Run Hong	Mxtran	Hsinchu, Taiwan	IC design	40,318	40,318	3,393,200	4.41	586	(2,172)	Note	Subsidiary
Mxtran	Mxtran Samoa	Samoa	Investment holding company	35,979	35,979	1,170,000	100.00	956	-	Note	Subsidiary
Mxtran Samoa	Mxtran HK	Hong Kong	Investment holding company	23,880	23,880	6,152,000	100.00	407	-	Note	Subsidiary

Note : Under relevant regulations, no disclosure of investment gain (loss) is needed.

TABLE 6

MACRONIX INTERNATIONAL CO., LTD.

INFORMATION ON INVESTMENT IN MAINLAND CHINA
FOR THE YEARS ENDED DECEMBER 31, 2021
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Main Businesses and Products	Paid-in Capital	Method of Investment	Accumulated Outward Remittance for Investment from Taiwan as of January 1, 2021	Remittance of Funds		Accumulated Outward Remittance for Investment from Taiwan as of December 31, 2021	Net Income (Loss) of the Investee	% Ownership for Direct or Indirect Investment	Investment Gain (Loss) (Note 1)	Carrying Amount as of December 31, 2021	Accumulated Repatriation of Investment Income as of December 31, 2021
					Outward	Inward						
MXm	Development of integrated circuit system and software	$ 296,160	MXHK (Note 2)	$ 296,160	$ -	$ -	$ 296,160	$ 16,568	100	$ 16,568	$ 414,017	$ -

Accumulated Outward Remittance for Investment in Mainland China as of December 31, 2021	Investment Amount Authorized by the Investment Commission, MOEA	Upper Limit on the Amounts of Investment Stipulated by Investment Commission, MOEA
$ 296,160	$ 296,160	$ 28,034,874

Note 1: The amount was recognized based on the audited financial statements of the investee company.

Note 2: The Company invested in a company located in mainland China indirectly through the existing company in a third country.

Macronix International Co., Ltd.

Chairman: Miin Wu