Stock Code: ２３３７

MACRONIX INTERNATIONAL CO., LTD.

2018

Annual Report

Printed on April 20, 2019

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

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I. Company Spokesperson and Deputy

Spokesperson: Miin Chyou Wu — Title: Chairman and CEO
Tel: 03-5786688 — E-mail: ir@mxic.com.tw
Deputy Spokesperson: Pei-Fu 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 1: No. 3, Creation Road III, Science Park, Hsin-chu, Taiwan, R.O.C.
Tel: 03-5788888
FAB 5: No. 19, Li-Hsin Road, Science Park, Hsin-chu, Taiwan, R.O.C.
Tel: 03-6668999
Product Testing: 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

Stock Affairs Office of Macronix International Co., Ltd.
Address: 2F, No. 162-1, Songjiang Road, Taipei, Taiwan, R.O.C.
Website: http://www.macronix.com
Tel: 02-25638128

IV. Auditors

Accounting Firm: Deloitte & Touche
Accountant: Ming-Hui Chen, Ching-Pin Shih
Address: 6F, No. 2, Prosperity Road I, 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

Be Grounded

Macronix's Values

Innovation, Quality, Efficiency, Service, Team Work

Table of Contents

Chapter I. Letter to Shareholders

Macronix achieved an outstanding performance in 2018. Not only the annual revenue reaches record high, operating margin and earnings per share also increased. Although the global memory market has been impacted by uncertainties, including the US-China trade negotiations resulting in oversupply price down pressure, Macronix's high-quality and reliable products and services have earned the trust of customers. Not only the price remained stable, high-quality applications, including automotive, industrial, medical, and aerospace, has been increased to 26% of NOR Flash revenue in 2018. Those illustrated Macronix's excellent technology, research, and development capacity, and demonstrated Macronix's strict self-discipline for seeking high quality, unique characteristics and competitiveness. Furthermore, settlement of around 30 patent disputed with Toshiba also add to certain of Macronix's income in 2018 (http://mops.twse.com.tw/mops/web/t05st01), which evidences Macronix's R&D and intellectual property as well as international negotiation and litigation strengths, and are helpful in Macronix's long-term developments.

The operating performance of 2018 is as follows: net consolidated revenue for the year was NT$36.953 billion, an increase of 8% over the previous year. Gross profit of the combined business was NT$13.926 billion, an increase of 10% over the previous year, while annual gross profit margin was 38%, an increase of 1 percentage point. Net profit after tax was NT$8.993 billion, an increase of 63% over the previous year, and earnings per share posted NT$4.94. Cash generated from operating activities was NT$10.092 billion; meanwhile, cash expenditures for investment activities was NT$4.852 billion, with NT$13.612 billion in cash at the end of the period. The debt ratio was 46.9%, book value per share rose to NT$17.06, and return on equity was as high as 32%. All these figures indicate that Macronix's financial status is well sounded.

R&D and innovation are the main goals of Macronix as well as the foundation of its sustainable operations. Since its establishment, Macronix has always focused on researching forward-looking memory technology and the development of proprietary products. Investment expenses for research and development were equivalent to about 11% of annual revenue in 2018. In addition, through long-term strategic cooperation with international technology giants, we have jointly developed advanced memory technologies to bolster the Company's technical strength. By the end of last year (2018), Macronix had been awarded 7,640 patents worldwide. Outstanding research and development achievements and strong intellectual property support continue to strengthen the value of the Company, which is also the key for creating higher investment return for shareholders.

Regarding the development of processes and products, in terms of read-only memory (ROM), products above 64Gb accounted for 72% of ROM revenues in the fourth quarter of 2018. In terms of NOR Flash, products below 75 nm accounted for 63% of NOR Flash revenue in the fourth quarter of the year, of which high-density products above 256Mb increased to 25% of NOR Flash revenue. Our market share has taken the world's leading position. Process technology is advancing towards 55 nm, and the Company continues to expand in the application market for high-quality products for automotive and industrial use. In terms of NAND Flash, the Company plans to upgrade all 36 nm in the 12-inch fab process technology to 19 nm in order to increase high-level production capacity and meet the expectations of customers of SLC NAND Flash and 1GB-8GB eMMC NAND Flash products. Macronix hopes to become a major supplier in this sector to further enhance profitability and meet customer needs.

With the development of artificial intelligence and the integration of cloud computing, Big Data, and the Internet of Things (IoT), the application of memory chips has become more extensive. Macronix's superior product design and technical strength will provide customers with solutions that cover the general specifications or capacity requirements. For example, 2018 saw the launch of the extremely fast octa flash with high-ultra performance and extended battery life, in line with current trends of application that require extremely high performance and reliability. Read-While-Write (RWW) flash also meets customers' need for the latest functions and safety regulation updates of vehicle safety systems in a timely manner. It has also been adopted by the latest automotive instrument cluster of international car manufacturers. In addition to meeting the rigorous automotive electronic verification standard AEC-Q100, Macronix also passed the IATF 16949 certification for the automotive industry quality management system in 2018. Moreover, through advanced analysis technology, Macronix's product yield has increased significantly, and the return rate has also dropped from the industry standard "ppm" (parts per million) to "ppb" (parts per billion). It has become one of the few companies in the world that can measure defective products using the "ppb" indicator. Macronix's continuous pursuit of high-quality performance has been recognized and trusted by high-level application customers, and it has been selected as a high-quality supplier or long-term partner.

In view of the fact that the semiconductor industry is a capital and technology-intensive one, Macronix must continuously improve its production capacity and process technology to reduce production costs and maintain product competitiveness. In the fourth quarter of 2018, the Board of Directors passed capital expenditures of NT$14.203 billion. Besides enhancing the production capacity of the high-level process of the 12-inch fab and creating higher revenue and profit through mass production of high-level process products, the Company also invests in the 3D NAND R&D program to develop 96-layer process technology and products, as well as timely developing the key technology for mainstream memories in the future, in the hopes of making Macronix more competitive.

In sector of corporate governance, Macronix has also established a Nomination Committee and a performance evaluation system for the Board of Directors to promote the sound development of the Board's functions and protect the shareholders' equity. Integrity management stands as the corporate culture of Macronix which strictly complies with laws and regulations, as well as the management of risks such as business secrets and information security, in order to create a sustainable business environment. Furthermore, in sector of corporate social responsibility, Macronix continues to improve the performance of environmental protection, occupational safety, and health with high standards. Besides promoting energy conservation, water conservation, carbon reduction, and waste reduction, the Company also actively complies with the code of conduct of the Responsible Business Alliance (RBA). Taking the latest AI Big Data analysis technology introduced in 2018 for example, it has effectively reduced the carbon emissions of the 12-inch fab and passed the RBA VAP (Validated Assessment Program) audit with excellent results, demonstrating Macronix's commitment to sustainable corporate development.

Macronix is about to enter its 30th year. Having witnessed the ups and downs of the semiconductor industry, the Company has always focused on the development and manufacturing of advanced non-volatile memory. It is precisely due to this continuous pursuit of innovation that we have reached today's level of achievement. Moving forward, the management team will continue to strengthen technical development and cost advantages by taking on new competition and challenges with a forward-looking vision and sound strategies. We hope to work together with employees, shareholders, customers, and suppliers to create a win-win situation and reach new heights!

Chairman：Miin Chyou Wu

President：Chih-Yuan 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 is a leading integrated device manufacturer in the global non-volatile memory (NVM) 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 deliver high-quality, innovative and performance driven products to its customers in consumer, communications, computing, automotive, networking and other segment markets. Macronix currently owns one 12-inch wafer fab (Fab 5), one 8-inch wafer fab (Fab 2), and one 6-inch wafer fab (FAB 1). FAB 5 and FAB 2 are for Macronix own products, and FAB 1 is focusing on strategic foundry businesses for niche analog and logic products.

(II) The Company's Mergers and Acquisitions, Reinvestment in Affiliated Enterprises, and Restructuring

1. Implementation of Major Mergers and Acquisitions: None.
2. Reinvestment in Affiliated Companies: Please refer to page 74 of this Annual Report for the "Total and Combined Shareholding in A Single Enterprise by the Company, its Directors, Supervisors, Managers and the Directly or Indirectly Controlled Entities".
3. Reorganization: None.

(III) Mass Transfer of Equity by or Change of Directors, Supervisors, or More than 10% Shareholders: None.

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

(V) Other Matters Sufficient to Affect Shareholders' Equity and Impacts on the Company: None.

(VI) Milestones

Month/Year	Milestones
Dec. 1989	• Establishment of the Company.
Dec. 1990	• Joint development of Mask ROM with NKK Corp., Japan.
Jan. 1991 Dec.	• Successfully developed the 256Kb and 512Kb EPROM. • Revenue exceeded NT$ 100 million.
May. 1992 Jun. Oct.	• Macronix's Flat Cell patent was granted by USPTO. • Mass production of FAB 1with monthly production exceeded 5,000 wafers. • Launched the world first 4Mb Flash Memory.
Jun. 1993 Oct.	• Process technology migrated to 0.6 um. • 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 of High-Tech company under Category C in Taiwan Stock Exchange (“TSE”) • Grand opening for 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 sales revenue exceeded NT$10 billion.
Feb. 1997 Mar. May. Sep. Oct.	• Issued the first ECB for around US$ 210 million. • Mass production of FAB 2. • Company shares listed at TSE changed from Category C to Cagtegory A. • Establishment of Stock Affair Office. • Signed cooperation memorandum with Matsushita Electronics, Japan.
Aug. 1998 Dec.	• Joint development of 16Mb XA microcontroller with Philips Semiconductor. • Completion of new organization structure for Y2000 challenges.
Mar. 1999	• Grand opening for 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 for mobile memory IC manufacturing. • Strategic alliance with Tower Semiconductor, Israel.
Aug. 2001 Dec.	• Establishment of the Macronix Education Foundation. • NT$300 million donation to 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	• Judgement 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. Min Wu was elected as the Chairman of Macronix. • Mass production of150nm 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), and among those the paper with IBM and Qimonda regarding Phase Change Memory was selected as highlighted paper by IEDM and ISSCC. • Mass production of 100nm XtraROM®.

Month/Year	Milestones
Jan. 2007	• Spined off four subsidiaries.
Jul.	• Dr. Chih-Yuan 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 65nmXtraROM®.
May. 2009	• Mass production of 110nm 3V Serial Flash products.
Dec.	• Macronix was awarded of National Industrial Safety& Health Awards.
Apr. 2010	• FAB 5 Acquisition.
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.	• FAB 5 unveiling ceremony.
Feb. 2011	• Mass production of 110nm 1.8V Parallel Flash products.
Mar.	• Mr. Miin Chyou Wu, Chairman & CEO of Macronix, was awarded of Honorary Doctorate by National Tsing Hua University.
July.	• Mr. Chih-Yuan Lu, President of Macronix, was awarded of 2012 IEEE Frederik Philips Award.
Sep.	• Macronix honored with 2011 National Invention and Creation Award.
Nov.	• Macronix ranked number one in patent strength in Taiwan's semiconductor industry, and 18th worldwide.
Dec.	• Mass production of 75nm 1.8V Serial Flash products.
	• Mass production of 75nm 3V NAND Flash products.
Jan. 2012	• Mr. Chih-Yuan Lu, President of Macronix was awarded of Special Distinguished Award of Physical Society of Republic of China.
	• Mass production of 45nm XtraROM®.
Feb.	• Mass production of 75nm 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. Chih-Yuan Lu, President of Macronix was awarded of Honorary Doctorate by National Chiao Tung University.
Jul.	• Mr. Chih-Yuan Lu, President of Macronix was awarded of ITRI Laureate.
Dec.	• Mr. Chih-Yuan Lu, President of Macronix was awarded of Presidential Science Prize.
	• Macronix Education Foundation was awarded by the Ministry of Education of Outstanding Educational Foundation.
Feb. 2014	• Mass production of 55nm 3V Parallel Flash products.
May.	• Mass production of 55nm 3V Serial Flash products.
	• Mass production of 36nm 1.8V/3V NAND Flash products.
Jun.	• Mass production of 32nm XtraROM® products.
Jun. 2015	• Macronix ranked in the top 5% of the first corporate governance evaluation by the TSE.
Sep.	• 55nm 1.8V Serial Flash products delivered samples.

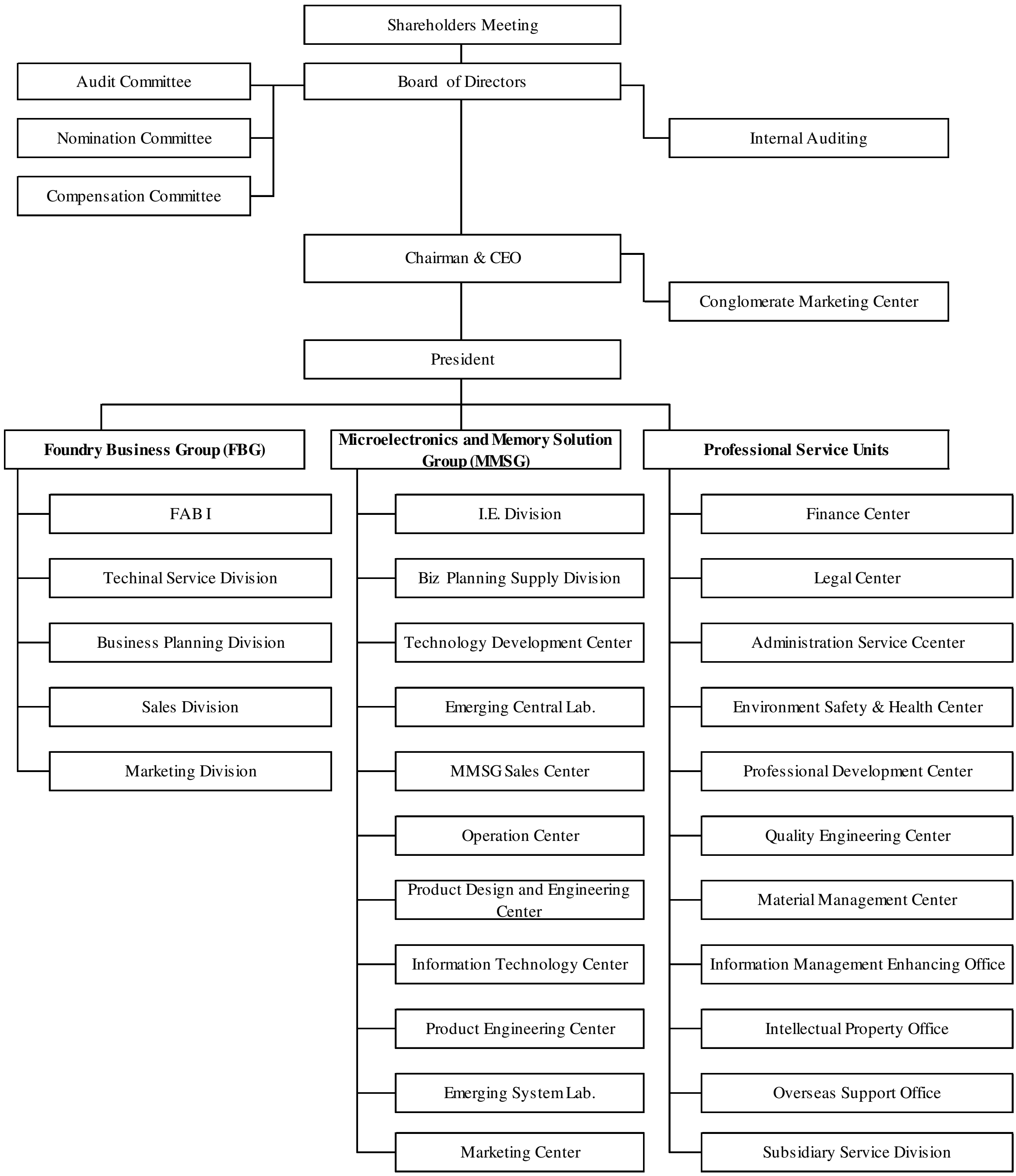
Month/Year	Milestones
Nov.	• Mr. Chih-Yuan Lu, President of Macronix was awarded of The World Academy of Sciences (TWAS) Prize in Engineering Sciences.
Feb. 2016 Dec.	• Mass production of 55nm 1.8V Serial Flash products. • Mr. Miin Chyou Wu, Chairman & CEO of Macronix was awarded of Honorary Doctorate by National Cheng Kung University.
May. 2017 Dec.	• Capital reduction plan resolved by the annual shareholders meeting. • Mr. Chih-Yuan Lu, President of Macronix, was awarded of 19th "Outstanding Performance Award in the Field of Management of Technology" of Chinese Society for Management of Technology. • Mr. Miin Chyou Wu, Chairman & CEO of Macronix, was awarded of Social Education Contribution Awards of the Ministry of Education.
Apr. 2018 Jul. Nov.	• Mr. Chih-Yuan Lu, President of Macronix was elected as Fellow of the US National Academy of Inventors. • Mr. Chih-Yuan Lu, President of Macronix was elected as Academician of Academia Sinica. • Mr. Chih-Yuan Lu, President of Macronix was awarded of Materials Technology Contribution Award of Materials Research Society Taiwan. • Mr. Miin Chyou Wu, Chairman & CEO of Macronix was awarded of "Country Winner" and "Business Paradigm Entrepreneur" of EY Entrepreneur Of The Year.
Feb. 2019	• Mass production of 19nm 3V NAND Flash products.

(VII) CSR Milestones and Other Awards: Please refer to page 53 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

April 20 2019

Title	Nationality or Place of registration	Name	Gender	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected		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	%	Shares	%			Title	Name	Relation
Chairman	R.O.C	Miin Chyou Wu	Male	2016.06.16	3	1989.11.25	21,139,050	0.58%	12,371,859	0.67%	None	None	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 Macronix Europe NV. Director of Macronix (Hong Kong) Co., Ltd. Chairman of Macronix Microelectronics (Suzhou) Co., Ltd. Director of Macronix (Asia) Limited Managing Director of Eastern Electronics Co., Ltd.	None	None	None
Director	R.O.C	Chien Hsu Investment Corporation (Note 1)	-	2016.06.16	3	2016.06.16	600,000	0.02%	811,421	0.04%	None	None	None	None	None	Director of ZOWIE Technology Corporation Director / supervisor of Homey Consulting Corp. Supervisor of Andes Technology Corporation	None	None	None
	R.O.C	Representative: Ding-Hua Hu	Male	Omitted	Omitted	1989.11.25	Omitted	Omitted	556,521	0.03%	1,441,799	0.08%	None	None	Ph.D. degree in Electrical & Computer Engineering, University of Missouri	Chairman of Champion Investment Corporation Chairman of Chien Hsu Investment Corporation Representative (Director) of ZOWIE Technology Corporation Representative (Director) of Ardentec Corporation Representative (Chairman) of Homey Consulting Corp. Representative (Director) of Ti-Shiue Biotech, Inc. Chairman of Personal Genomics, Inc. Representative (supervisor) of Andes Technology Corporation	None	None	None

Title	Nationality or Place of registration	Name	Gender	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected		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	%	Shares	%			Title	Name	Relation
Director	R.O.C	Chih-Yuan Lu	Male	2016.06.16	3	2003.04.18	2,290,346	0.06%	2,300,395	0.13%	None	None	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 NV. Director of Macronix (Hong Kong) Co., Ltd. Chairman & CEO of Ardentec Semiconductor Co., Ltd. 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
Director	R.O.C	Shun Yin Investment Ltd.	-	2016.06.16	3	2004.06.18	76,014,572	2.10%	22,587,265	1.23%	None	None	None	None	None	None	None	None	None
	Japan	Representative: Shigeki Matsuoka	Male	2016.06.16	3	2011.08.08	None	None	None	None	None	None	None	None	M.S. degree in electronics engineering from Kyoto University	Adviser of MegaChips Corporation	None	None	None
Director	R.O.C	Cheng-Yi Fang	Male	2016.06.16	3	2001.04.19	703,552	0.02%	353,026	0.02%	129,047	0.01%	None	None	B.B.A. degree in Business Administration Department from National Taiwan University	Director of Mercuries & Associates, Holding Ltd.	None	None	None

Title	Nationality or Place of registration	Name	Gender	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected		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	%	Shares	%			Title	Name	Relation
Director	R.O.C	Chung-Laung Liu	Male	2016.06.16	3	2003.06.27	130,909	0.00%	80,986	0.00%	None	None	None	None	Ph.D.degree in Electrical Engineering from Massachusetts Institute of Technology	Chairman of TrendForce Corp. Director of United Microelectronics Corp. Director of UBI Pharma Inc. Independent Director of Powerchip Technology Corporation Independent Director of Accton Technology Corp. Independent Director of Microelectronics technology Corp. Independent Director of Far EasTone Telecommunications Co., Ltd. Supervisor of Andes Technology Corporation	None	None	None
Director	R.O.C	Achi Capital Limited (Note2)	-	2016.06.16	3	2010.06.09	1,421,862	0.04%	902,456	0.05%	None	None	None	None	None	Director of Mxtran Inc.	None	None	None
	R.O.C	Representative: Guei-Min Lee	Female	Omitted	Omitted	2007.06.29	Omitted	Omitted	None	None	None	None	None	None	Ph.D. degree in Law, University of the Pacific	Representative (Director) of Mxtran Inc.	None	None	None
Director	R.O.C	Che-Ho Wei	Male	2016.06.16	3	2016.06.16	None	None	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.	None	None	None
Director	R.O.C	Dang-Hsing Yiu	Male	2016.06.16	3	1995.06.05	12,495,893	0.35%	6,557,048	0.36%	1,272,084	0.07%	None	None	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. Outside Director of MegaChips Corporation Representative (Director) of MegaChips Taiwan Corporation	None	None	None
Director	R.O.C	Ful-Long Ni	Male	2016.06.16	3	2007.06.29	1,833,206	0.05%	1,647,732	0.09%	340,333	0.02%	None	None	M.S. degree in Electronic Engineering from University of Michigan	Vice President of Macronix International Co., Ltd. Chairman of Macronix Europe NV. Director of Macronix Pte. Ltd. Director of Macronix (Hong Kong) Co., Ltd.	None	None	None

Title	Nationality or Place of registration	Name	Gender	Date Elected	Term (yrs)	Date First Elected	Shareholding When Elected		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	%	Shares	%			Title	Name	Relation
Director	R.O.C	Hui Ying Investment Ltd. (Note3)	-	2016.06.16	3	2001.04.19	3,899,382	0.11%	1,956,619	0.11%	None	None	None	None	None	None	None	None	None
	R.O.C	Representative: Pei-Fu Yeh	Male	Omitted	Omitted	2007.07.18	Omitted	Omitted	2,623,627	0.14%	13,985	0.00%	None	None	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 NV. Director of Macronix (Hong Kong) Co., Ltd. Representative (supervisor) of Mxtran Inc.	None	None	None
Independent Director	R.O.C	Chiang Kao	Male	2016.06.16	3	2007.06.29	None	None	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	None	None	None
Independent Director	R.O.C	Yan-Kuin Su	Male	2016.06.16	3	2007.06.29	None	None	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	None	None	None
Independent Director	R.O.C	John C.F. Chen	Male	2016.06.16	3	2007.06.29	None	None	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. Representative (Director) of ReaLy Development & Construction Corp. Director of Diwan Investment Inc.	None	None	None

Note 1: Mr. Ding-Hua Hu was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director’s rights thereof..
Note 2: Ms. Guei-Min Lee was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director’s rights thereof..
Note 3: Mr. Pei-Fu Yeh was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director’s rights thereof..

Major Shareholders of Institutional Shareholders

April 20, 2019

Name of institutional shareholder	Major shareholders of institutional shareholders
Chien Hsu Investment Corporation	Ching-Yun Li (46.08%) Ding-Hua Hu (26.67%) Champion Investment Corporation (16.56%) Chih-To Lee (4.04%) Pao-Yueh Chang (1.94%) Chih-Te Yeh (1.83%) Guang-Hui Chu (1.76%) 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

April 20, 2019

Name of institutional shareholder	Major shareholders of institutional shareholders
Champion Investment Corporation	Ding-Hua Hu (26.18%) Ching-Yun Li (21.48%) 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%) Chih-Ho Tsai (2.67%)
MegaChips Corporation (Japan)	Japan Trustee Services Bank, Ltd. (Trust Location No.) (10.55%) Shindo Kogyo Corporation (5.71%) Megachips Corporation and Associates (5.71%) The Master Trust Bank of Japan, Ltd. (Trust Location) (5.16%) Shigeki Matsuoka (3.73%) Japan Trustee Services Bank, Ltd. (Trust Location No.9) (3.31%) THE BANK OF NEW YORK (2.66%) Akihiro Shindo (2.63%) Ritsuko Shindo (2.63%) Noriko Matsui (2.52%)
Top Harvest Investment Ltd. (Samoa).	Guei-Min Lee (100%)
Macronix International Co., Ltd.	Polaris Taiwan Dividend Plus ETF (1.67%) JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (1.53%) VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS (1.50%) Shun Yin Investment Ltd. (1.23%) Credit Suisse Securities (Europe) Limited (0.71%) Dimensional Emerging Markets Value Fund (0.70%) New Labor Pension Fund (0.69%) Miin Chyou Wu (0.67%) EMERGING MARKETS CORE EQUITY PORTFOLIO OF DFA INVESTMENT DIMENSIONS GROUP INC. (0.61%) AB SICAV I -Emerging Markets Multi-Asset Portfolio (0.56%)

2. Professional Expertise and Independence of directors and supervisors

April 20, 2019

Criteria / Name	Meets One of the Following Professional Qualification Requirements, Together with at Least Five Years' Work Experience			Independence Criteria (Note4)										Number of Other Public Companies in which Serves Concurrently as an Independent director
	An instructor or higher position in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the Company in a public or private junior college, college or university	A judge, public prosecutor, attorney, Certified Public Accountant, or other professional or technical specialist who has passed a national examination and been awarded a certificate in a profession necessary for the business of the Company	Has work experience in the areas of commerce, law, finance, or accounting, or otherwise necessary for the business of the Company	1	2	3	4	5	6	7	8	9	10	
Miin Chyou Wu			✓				✓	✓	✓	✓	✓	✓	✓	0
Chien Hsu Investment Corporation Representative：Ding-Hua Hu (Note 1)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		0
Chih-Yuan Lu	✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	1
Shun Yin Investment Ltd. Representative：Shigeki Matsuoka			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		0
Cheng-Yi Fang			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Chung-Laung Liu	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4
Achi Capital Limited Representative：Guei-Min Lee (Note 2)	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓		0
Che-Ho Wei	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Dang-Hsing Yiu			✓			✓	✓	✓	✓	✓	✓	✓	✓	0
Ful-Long Ni			✓			✓	✓	✓	✓	✓	✓	✓	✓	0
Hui Ying Investment Ltd. Representative ：Pei-Fu Yeh (Note 3)			✓			✓	✓	✓	✓	✓	✓	✓		0
Chiang Kao	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Yan-Kuin Su	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3
John C.F. Chen		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0

Note 1: Mr. Ding-Hua Hu was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 2: Ms. Guei-Min Lee was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 3: Mr. Yeh-Pei Fu was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 4: Please tick the corresponding boxes that apply to the directors or supervisors during the two years prior to being elected or during the term of office.

(1) Not an employee of the Company or any of its affiliates.

(2) Not a director or supervisor of the Company or any of its affiliates. Not applicable in cases where the person is an independent director of the Company, its parent company, or any subsidiary as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.

(3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of 1% or more of the total number of outstanding shares of the Company or ranking in the top 10 in holdings.

(4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding three subparagraphs.

(5) Not a director, supervisor, or employee of a corporate shareholder who directly holds 5% or more of the total number of outstanding shares of the Company or who holds shares ranking in the top five holdings.

(6) Not a director, supervisor, officer, or shareholder holding 5% or more of the shares, of a specified company or institution which has a financial or business relationship with the Company.

(7) Not a professional individual who is an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that provides commercial, legal, financial, accounting services or consultation to the Company or to any affiliate of the Company, or a spouse thereof. These restrictions do not apply to any member of the Compensation Committee who exercises powers pursuant to Article 7 of the "Regulations Governing the Establishment and Exercise of Powers of Compensation Committees of Companies whose Stock is Listed on the TWSE or Traded on the TPEx".

(8) Not having a marital relationship, or a relative within the second degree of kinship to any other director of the Company.

(9) Not been a person of any conditions defined in Article 30 of the Company Law.

(10) Not a governmental, juridical person or its representative as defined in Article 27 of the Company Law.

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

April 20, 2019

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 Chyou Wu	Male	2007.07.30	12,371,859	0.67%	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. Chairman of Mxtran Inc. Director of Macronix Europe NV. Director of Macronix (Hong Kong) Co., Ltd. Chairman 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	Chih-Yuan Lu	Male	2007.07.30	2,300,395	0.13%	None	None	None	None	Ph.D. degree in Physics from Columbia University	Chairman of Macronix America Inc. Director of Macronix Europe NV. Director of Macronix (Hong Kong) Co., Ltd. Chairman & CEO of Ardentec Semiconductor Co. Ltd. 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	Dang-Hsing Yiu	Male	2007.01.01	6,557,048	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. Outside Director of MegaChips Corporation Representative (Director) of MegaChips Taiwan Corporation	None	None	None
Vice President	R.O.C	Ful-Long Ni	Male	2006.06.27	1,647,732	0.09%	340,333	0.02%	None	None	M.S. degree in Electronic Engineering from University of Michigan	Chairman of Macronix Europe NV. Director of Macronix Pte. Ltd. Director of Macronix (Hong Kong) Co., Ltd.	None	None	None
Vice President	R.O.C	Pei-Fu Yeh	Male	2007.10.30	2,623,627	0.14%	13,985	0.00%	None	None	MBA degree in Business Administration, of National Chengchi University	Director of New Trend Technology Inc. Director of Macronix Europe NV. 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	1,342,751	0.07%	35,108	0.00%	None	None	B.S. degree in Materials Science and Engineering of National Tsing Hua University	Representative (Director) of Ardentec Semiconductor Co. Ltd.	None	None	None
Vice President	R.O.C	Chun-Hsiung Hung	Male	2015.10.28	269,150	0.01%	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	209,493	0.01%	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	383,710	0.02%	158,059	0.01%	None	None	M.S. degree in Economics of University of Arizona	Director of Macronix Pte. Ltd. Director of Macronix Europe NV. Director of Macronix (Hong Kong) Co., Ltd.	None	None	None
Associate V.P	R.O.C	Kuang-Chao Chen	Male	2015.10.28	549,142	0.03%	1,511	0.00%	None	None	M.S. degree in Chemistry of National Sun Yat-sen University	None	None	None	None
Project Executive Director	R.O.C	Chuan-Hsien Wen	Male	2017.10.01	436	0.00%	276	0.00%	None	None	B.S. degree in Chemical Engineering of National Cheng Kung University	None	None	None	None
Project Executive Director	R.O.C	Hui-Chi Li	Male	2017.10.11	304,278	0.02%	3,066	0.00%	None	None	M.S. degree in Ceramic Engineering of Alfred University	None	None	None	None
Executive Director	R.O.C	Wen-Pin Lu	Male	2015.10.28	34,731	0.02%	None	None	None	None	M.S. degree in Electronic Engineering of National Taiwan University	None	None	None	None

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

1. Remuneration of Directors (including Independent Directors)

December 31, 2018

Unit: NT$ thousands

Title	Name	Remuneration								Ratio of Total Remuneration (A+B+C+D) to Net Income (%)		Relevant Remuneration Received by Directors Who are Also Employees								Ratio of Total Compensation (A+B+C+D+E+F+G) to Net Income (%)		Compensation Paid to the President and Vice Presidents from an Invested Company Other than the Company's Subsidiary
		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 Chyou Wu	0	0	0	0	55,653	55,653	120	120	0.62%	0.62%	15,528	15,528	1,019	1,019	97,805	0	97,805	0	1.89%	1.89%	0
Director	Chien Hsu Investment Corporation	0	0	0	0	27,827	27,827	120	120	0.31%	0.31%	0	0	0	0	0	0	0	0	0.31%	0.31%	0
Director	Achi Capital Limited	0	0	0	0	27,827	27,827	120	120	0.31%	0.31%	0	0	0	0	0	0	0	0	0.31%	0.31%	0
Director	Chih-Yuan Lu	0	0	0	0	27,827	27,827	120	120	0.31%	0.31%	12,449	12,449	1,019	1,019	51,139	0	51,139	0	1.03%	1.03%	42,398
Director	Shun Yin Investment Ltd. Representative: Shigeki Matsuoka	0	0	0	0	27,827	27,827	120	120	0.31%	0.31%	0	0	0	0	0	0	0	0	0.31%	0.31%	0
Director	Cheng-Yi Fang	0	0	0	0	9,275	9,275	120	120	0.10%	0.10%	0	0	0	0	0	0	0	0	0.10%	0.10%	0
Director	Chung-Laung Liu	0	0	0	0	9,275	9,275	120	120	0.10%	0.10%	0	0	0	0	0	0	0	0	0.10%	0.10%	0
Director	Dang-Hsing Yiu	0	0	0	0	9,275	9,275	120	120	0.10%	0.10%	6,586	6,586	1,019	1,019	24,380	0	24,380	0	0.46%	0.46%	0
Director	Ful-Long Ni	0	0	0	0	9,275	9,275	120	120	0.10%	0.10%	8,048	8,048	1,019	1,019	36,297	0	36,297	0	0.61%	0.61%	0
Director	Hui Ying Investment Ltd.	0	0	0	0	9,275	9,275	120	120	0.10%	0.10%	0	0	0	0	0	0	0	0	0.10%	0.10%	0
Director	Che-Ho Wei	0	0	0	0	9,275	9,275	120	120	0.10%	0.10%	0	0	0	0	0	0	0	0	0.10%	0.10%	0
Independent Director	Yan-Kuin Su	2,148	2,148	0	0	0	0	120	120	0.03%	0.03%	0	0	0	0	0	0	0	0	0.03%	0.03%	0
Independent Director	Chiang Kao	2,148	2,148	0	0	0	0	120	120	0.03%	0.03%	0	0	0	0	0	0	0	0	0.03%	0.03%	0
Independent Director	John C.F. Chen	2,148	2,148	0	0	0	0	120	120	0.03%	0.03%	0	0	0	0	0	0	0	0	0.03%	0.03%	0
In addition to the above remuneration, director remuneration shall be disclosed when received from companies included in the consolidated financial statements in the most recent year to compensate directors for their services, such as being independent consultants: None.																						

Note 1: Estimated amount.

Note 2: Proposed amount.

Note 3: Explanation of the correlation and rationality of changes in the after tax profit and loss and remuneration.

(1) The Company's 2017 net profit after tax was NT$5,517,847,000. The net profit for 2018 was NT$ 8,993,006,000. According to the Articles of Incorporation, bonuses are distributed to Directors and employees as incentive. The Company's net profit after tax for 2018 increased from 2017, 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.

2. Remuneration of the President and Vice Presidents

December 31, 2018
Unit: NT$ thousands

Title	Name	Salary (A)		Severance Pay (B) (Note 1)		Bonuses and Allowances (C)		Employee Compensation (D) (Note 2)				Ratio of total compensation (A+B+C+D) to net income (%)		Compensation Paid to the President and Vice Presidents from an Invested Company Other than the Company's Subsidiary
		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			
CEO	Miin Chyou Wu	55,190	55,190	9,171	9,171	18,253	18,253	338,194	0	338,194	0	4.68%	4.68%	42,398
President	Chih-Yuan Lu													
Senior Vice President & Chief Marketing Officer	Dang-Hsing Yiu													
Vice President	Ful-Long Ni													
Vice President	Pei-Fu Yeh													
Vice President	Yen-Hie Chao													
Vice President	Chun-Hsiung Hung													
Vice President	Jui-Kun Chen													
Vice President	Jon-Ten Chung (Note 3)													

Note 1: Estimated amount.
Note 2: Proposed amount
Note 3: Promoted to Vice President on February 1st, 2018.

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$ 2,000,000		
NT$2,000,001 (inclusive) – NT$5,000,000 (exclusive)		
NT$5,000,001 (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)	Pei-Fu Yeh/Yen-Hie Chao	Pei-Fu Yeh/Yen-Hie Chao
NT$30,000,000 (inclusive) – NT$ 50,000,000 (exclusive)	Dang-Hsing Yiu/Ful-Long Ni/ Chun-Hsiung Hung / Jui-Kun Chen/Jon-Ten Chung	Dang-Hsing Yiu/Ful-Long Ni/ Chun-Hsiung Hung / Jui-Kun Chen/Jon-Ten Chung
NT$50,000,000 (inclusive) – NT$ 100,000,000 (exclusive)	Chih-Yuan Lu	
Over NT$100,000,000	Miin Chyou Wu	Miin Chyou Wu/Chih-Yuan Lu
Total	9	9

Note: The total amount of A+B+C+D and compensation paid from an invested company other than a subsidiary.

3. Employees Compensation Distributed to Management Team

December 31, 2018
Unit: NT$ thousands

	Title	Name	Stock (Fair Market Value)	Cash	Total	Ratio of Total Amount to Net Income (%)
Managers	CEO	Miin Chyou Wu	0	380,515	380,515	4.23%
	President	Chih-Yuan Lu				
	Senior Vice President & Chief Marketing Officer	Dang-Hsing Yiu				
	Vice President	Ful-Long Ni				
	Vice President	Pei-Fu Yeh				
	Vice President	Yen-Hie Chao				
	Vice President	Chun-Hsiung Hung				
	Vice President	Jui-Kun Chen				
	Vice President	Jon-Ten Chung (Note)				
	Senior Associate Manager	Guang-Chao Chen				
	Project Associate Manager	Chuan-Hsien Wen				
	Project Associate Manager	Hui-Ji Li				
	Associate Manager	Wen-Bin Lu				

Note: Promoted to Vice president on February 1, 2018.

(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.

	2017		2018	
	The Company	Companies in the consolidated financial statements	The Company	Companies in the consolidated financial statements
Directors	2.54%	2.54%	2.57%	2.57%
Presidents and Vice Presidents	5.98%	5.98%	4.68%	4.68%

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(Note) 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) 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 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.

(Note：The independent directors received fixed remuneration monthly from NT$150,000 to NT$300,000, approved by 10-14th Board Directors on August 22, 2018.)

III. Implementation of Corporate Governance

(I) Board of Directors

A total of 6 (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)	Remarks
Chairman	Miin Chyou Wu	6	0	100%	
Director	Chien Hsu Investment Corporation Representative: Ding-Hua Hu (Note 1)	5	1	83%	
Director	Chih-Yuan Lu	6	0	100%	
Director	Shun Yin Investment Ltd. Representative: Shigeki Matsuoka	6	0	100%	
Director	Cheng-Yi Fang	5	1	83%	
Director	Chung-Laung Liu	6	0	100%	
Director	Achi Capital Limited Representative: Guei-Min Lee (Note 2)	6	0	100%	
Director	Che-Ho Wei	6	0	100%	
Director	Dang-Hsing Yiu	6	0	100%	
Director	Ful-Long Ni	6	0	100%	
Director	Hui Ying Investment Ltd. Representative: Pei-Fu Yeh (Note 3)	6	0	100%	
Independent Director	Chiang Kao	5	1	83%	
Independent Director	Yan-Kuin Su	6	0	100%	
Independent Director	John C.F. Chen	6	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.

1. The 11th meeting of the 10th Term of the Board of Directors (March 16, 2018)

Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions	Resolution
(1) 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	The motion was unanimously adopted and approved by all attendant Directors, and will be submitted to the annual shareholders meeting for follow up.

2. The 12th meeting of the 10th Term of the Board of Directors (April 24, 2018)

Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions	Resolution
(1) Pursuant to the applicable regulations, it is hereby proposed to amend the Company's Internal Control System for Shareholders Services Process.	Approved	Not applicable	The motion was unanimously adopted and approved by all attendant Directors.

3. The 13th meeting of the 10th Term of the Board of Directors (July 24, 2018)

Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions	Resolution
(1) Submitted for approval of 2017 employee bonus to be distributed to the managers as defined under Company Law and/or Securities and Exchanged Act ("Company Managers").	Approved	Not applicable	The motion was duly resolved by the Company's Compensation Committee and unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions	Resolution
(2) Submitted for approval of 2018 salary adjustment of the Company Managers.	Approved	Not applicable	The motion was duly resolved by the Company's Compensation Committee and unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).
(3) Submitted for approval of 2018 annual incentive bonus of the Company Managers.	Approved	Not applicable	The motion was duly resolved by the Company's Compensation Committee and unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

4. The 14th meeting of the 10th Term of the Board of Directors (October 22, 2018)

Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions	Resolution
(1) Submitted for approval of the unused annual leave's substitutes to be distributed to the managers defined under Company Law ("Manager").	Approved	Not applicable	The motion was duly resolved by the Company's Compensation Committee and unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

5. The 15th meeting of the 10th Term of the Board of Directors (December 24, 2018)

Motion	Independent Directors' Opinions	The Company's Response to Independent Directors' Opinions	Resolution
(1) Proposal for the approval of engaging the Company's Independent Auditors for the 2019 financial and/or tax matters, as resolved by the Audit Committee. (2) Proposal for the approval of the fees and expenses of the Company 2019 financial and/or tax auditing service, as duly resolved by the Audit Committee.	Approved	Not applicable	The motion was unanimously adopted and approved by all attendant Directors.
(3) Submitted for approval of the outstanding contribution awards to the related person.	Approved	Not applicable	The motion was duly resolved by the Company's Compensation Committee and unanimously adopted and approved by all attendant Directors other than Director Achi Capital Limited, its Representative Ms. Lee, and/or their delegator.

(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:

(1) Directors' names: Chiang Kao, Yan-Kuin Su, and John C.F. Chen

Content of the motion: Submitted for approval of Independent Directors' compensation and Directors' transportation allowance.

Causes of avoiding conflicts of interest: Related persons

Voting participation: The proposal was fully discussed by attendant Directors other than those who have conflict interests, i.e. Independent Director Kao, Independent Director Su, and Independent Director Chen, and/or concluded that additional market surveys shall be proceeded and submitted for the Board of Directors' further discussion and decision.

(2) Directors' names: Miin Chyou Wu, Chih-Yuan Lu, Dang-Hsing Yiu, Ful-Long Ni, and Hui Ying Investment, Ltd.

Content of the motion: Submitted for approval of 2017 employee bonus to be distributed to the managers as defined under Company Law and/or Securities and Exchanged Act ("Company Managers").

Causes of avoiding conflicts of interest: Related persons

Voting participation: The resolution was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

(3) Directors' names: Miin Chyou Wu, Chih-Yuan Lu, Dang-Hsing Yiu, Ful-Long Ni, and Hui Ying Investment, Ltd.

Content of the motion: Submitted for approval of 2018 salary adjustment of the Company Managers.

Causes of avoiding conflicts of interest: Related persons

Voting participation: The resolution was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

(4) Directors names: Miin Chyou Wu, Chih-Yuan Lu, Dang-Hsing Yiu, Ful-Long Ni, and Hui Ying Investment, Ltd.

Content of the Motion: Submitted for approval of 2018 annual incentive bonus of the Company Managers.

Causes of avoiding conflicts of interest: Related persons

Voting participation: The resolution was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

(5) Directors' names: Chiang Kao, Yan-Kuin Su, and John C.F. Chen

Content of the motion: Submitted for approval of Independent Directors' compensation.

Causes of avoiding conflicts of interest: Related persons

Voting participation: The resolution was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Independent Director Kao, Independent Director Su, and Independent Director Chen, and/or their respective delegator (if any) with immediate effect.

(6) Directors' names: Miin Chyou Wu, Chih-Yuan Lu, Dang-Hsing Yiu, Ful-Long Ni, and Hui Ying Investment, Ltd.

Content of the motion: Submitted for approval of the unused annual leave's substitutes to be distributed to the managers defined under Company Law ("Manager").

Causes of avoiding conflicts of interest: Related persons

Voting participation: The resolution was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

(7) Director's name: Achi Capital Limited.

Content of the motion: Submitted for approval of the outstanding contribution awards to the related person.

Causes of avoiding conflicts of interest: Related persons

Voting participation: The resolution was unanimously adopted and approved by all attendant Directors other than Director Achi Capital Limited, its Representative Ms. Lee, and/or their delegator (if any).

III. 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 knowledges 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 61 of this annual report for the Company's Director training in the most recent year.

Note 1: Mr. Ding-Hua Hu was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director’s rights thereof.

Note 2: Ms. Guei-Min Lee was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director’s rights thereof.

Note 3: Mr. Pei-Fu Yeh was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director’s rights thereof.

(II) Audit Committee

The Company’s Audit Committee is comprised of three 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 theirs 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 and semi-annual financial reports.
5. Business report and earnings distribution

A total of 6 (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	Chiang Kao	5	1	83%	
Independent Director	Yan-Kuin Su	5	1	83%	
Independent Director	John C.F. Chen	6	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 date, term, and agenda of the Board of 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

1. The 11th meeting of the 10th Term of the Board of Directors (March 16, 2018)

Motion	Resolution results of the Audit Committee	The Company's response to the comments of the Audit Committee	Resolutions of the Board of Directors
(1) 2017 Business Report and Financial Statement (2) 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.	Unanimously approved by all members of the Audit Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Audit Committee was unanimously adopted and approved by all attendant Directors.

2. The 12th meeting of the 10th Term of the Board of Directors (April 24, 2018)

Motion	Resolution results of the Audit Committee	The Company's response to the comments of the Audit Committee	Resolutions of the Board of Directors
Pursuant to the applicable regulations, it is hereby proposed to amend the Company’s Internal Control System for Shareholders Services Process.	Unanimously approved by all members of the Audit Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Audit Committee was unanimously adopted and approved by all attendant Directors.

3. The 13th meeting of the 10th Term of the Board of Directors (July 24, 2018)

Motion	Resolution results of the Audit Committee	The Company's response to the comments of the Audit Committee	Resolutions of the Board of Directors
Financial Report and 2018 Q2 Consolidated Financial Statements.	Unanimously approved by all members of the Audit Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The financial report and 2018 Q2 Consolidated Financial Statements have been reported to the Board of Directors.

4. The 15th meeting of the 10th Term of the Board of Directors (December 24, 2018)

Motion	Resolution results of the Audit Committee	The Company's response to the comments of the Audit Committee	Resolutions of the Board of Directors
(1) According to the resolution of the Audit Committee of the Company, it is proposed that CPAs Gordon Chen and Benjamin Shih (with Deloitte & Touche) are appointed as the Company's Independent Auditors for the 2019 financial and/or tax matters	Unanimously approved by all members of the Audit Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The motionwas unanimously adopted and approved by all attendant Directors.
(2) According to the resolution of the Audit Committee of the Company, it is proposed that the fees and expenses of the Company 2019 financial and/or tax auditing service			

(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 the interest: None.

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

(I) In addition to attending the Board of Directors meetings, the internal auditing supervisor shall also regularly report and communicating with the committee members the internal auditing results and its implementation. In case of extraordinary circumstances, the supervisor will immediately report to the Audit Committee. There were no major events in 2018. Members of the Company’s Audit Committee maintain good communication with the head of internal auditing.

(II) The Company's CPAs shall regularly report and communicating with the committee members the financial statements as well as those required under applicable laws and regulations. In case of extraordinary circumstances, the CPAs will immediately report to the Audit Committee. There were no major events in 2018. Both the Company's Audit Committee and CPAs have maintained good communications.

(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	
1. 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

Evaluation Item	Implementation Status			Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
2. Shareholding structure & shareholders’ rights				
(1) Does the company establish an internal operating procedure to deal with shareholders’ suggestions, doubts, disputes, and litigations, and implement based on the procedure?	✓		(1) 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
(2) Does the company possess the list of its major shareholders as well as the ultimate owners of those shares?	✓		(2) 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.	None
(3) Does the company establish and execute the risk management and firewall system within its conglomerate structure?	✓		(3) 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.	None
(4) Does the company establish internal rules against insiders trading with undisclosed information?	✓		(4) 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.	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
3. Composition and Responsibilities of the Board of Directors				
(1) Does the Board develop and implement a diversified policy for the composition of its members?	✓		(1) 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. The Board of Directors is currently composed of 14 professionals with backgrounds covering areas including industry, technology, legal, finance, accounting, marketing, and venture capital. Please refer to Page 66 of this annual report for implementation of the Board Diversity Policy.	None
(2) Does the company voluntarily establish other functional committees in addition to the Compensation Committee and the Audit Committee?	✓		(2) The Company voluntarily set up the Nomination Committee on January 22, 2019, comprised of the Chairman and two Independent Directors. The functional authority is handled in accordance with the Company's "Nominating Committee Charter." The members and operations are disclosed on the Market Observation Post System.	None

Evaluation Item	Implementation Status			Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
(3) Does the company establish a standard to measure the performance of the Board, and implement it annually?	✓		(3) 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 performance evaluation of the Board of Directors was conducted in the form of “Directors’ Self-Evaluation” in 2018. The evaluation items included the “Understanding of the Company's Objectives and Tasks,” “Directors’ Responsibilities,” “Participation in the Company's Operations," "Management and Communication of Internal Relations," "Directors' Expertise and Continuous Education," as well as "Internal Control.” The overall performance score was 4.7 (out of 5), showing the excellent performance of the Board of Directors.	None
(4) Does the company regularly evaluate the independence of CPAs?	✓		(4) The company engaged a professional accounting firm to conduct financial and tax compliance audits. The appointment is decided by the Audit Committee and submitted to the Board of Directors for resolution. In addition to the independence requirements for accountants, the Company evaluates the independence of CPAs by the following criteria every year: 1. Not appointing the same accountant to perform audits for more than seven consecutive years, 2. Obtaining a	None

Evaluation Item	Implementation Status			Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
			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.	
4. Does the company set up a corporate governance unit or appoint personnel responsible for corporate governance matters (including but not limited to providing information for directors and supervisors to perform their functions, handling work related to meetings of the board of directors and the shareholders' meetings, filing company registration and changes to company registration, and producing minutes of 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. 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;	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			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.	
5. 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 reasonable expectations, needs, and concerns of the stakeholders through various channels of communication. For example, the Company has established various meetings to encourage employees to exchange views with the management and set up a " No Topic is Off Limits " suggestion box and whistle-blowing hotline. The Audit Committee has designated a team to address all feedback. A stakeholder section has also been set up on the company website for inquiries and comments. For the identification of stakeholders and their identities, concerns, communication channels, and responses, please refer to the Company's "Corporate Social Responsibility Report."	None
6. Does the company appoint a professional shareholder service agency to deal with shareholder affairs?		✓	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	Please refer to Implementation Status

Evaluation Item	Implementation Status			Deviations from “the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
			“Standards for the Internal Control System of the Stock Department," and the same applies to shareholders' meetings.	
7. Information Disclosure (1) Does the company have a corporate website to disclose both financial standings and the status of corporate governance? (2) Does the company have other information disclosure channels (e.g. building an English website, appointing designated people to handle information collection and disclosure, creating a spokesman system, webcasting investor conferences)?	✓ ✓		(1) The Company has established a corporate website to disclose information on financial operations and corporate governance. (2) 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.	None None
8. Is there any other important information to facilitate a better understanding of the company’s corporate governance practices (e.g., including but not limited to employee rights, employee wellness, investor relations, supplier relations, rights of stakeholders, directors’ and	✓		1. Status of employee rights and employee wellness: Please refer to the Company's "Corporate Social Responsibility Report." 2. Status of risk management policies and risk evaluation: Please refer to (VIII) on Page 61 of this annual report for important information that can enhance the	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
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)?			understanding of the Company's corporate governance operations. 3. Directors' training: The Company arranges training courses for Directors annually. Each Director also participates in relevant courses organized by external institutions when necessary. For 2018, the number of training hours for each director reached 6 hours or more. Please refer to Page 61 of the Annual Report for the 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).	
9. Please explain the improvements which have been made in accordance with the results of the Corporate Governance Evaluation System released by the Corporate Governance Center, Taiwan Stock Exchange, and provide the priority enhancement measures. The Company's corporate governance evaluation was ranked 6% to 20% of the corporate governance evaluation for listed companies in 2015 (the second evaluation). However, the Company did not include the corporate governance evaluation in 2016 and 2017 due to changes in transaction methods caused by loss. To establish a more comprehensive corporate governance system, the Company refers to the "New Corporate Governance Blue Print (2018-2020)" and "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies" from the competent authority to establish the "Corporate Governance Principles", the "Ethical Corporate Management Principles" and the "Rules for Board of Directors Performance " in 2018, as well as setting up the Nomination Committee in January 2019.				

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

1. Information on the Members:

Title	Criteria / Name	Meets One of the Following Professional Qualification Requirements, Together with at Least Five Years' Work Experience			Independence Criteria (Note)								Number of Other Public Companies in Which the Individual is Concurrently Serving as an Compensation Committee Member	Remarks
		An instructor or higher position in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the Company in a public or private junior college, college or university	A judge, public prosecutor, attorney, Certified Public Accountant, or other professional or technical specialist who has passed a national examination and been awarded a certificate in a profession necessary for the business of the Company	Has work experience in the areas of commerce, law, finance, or accounting, or otherwise necessary for the business of the Company	1	2	3	4	5	6	7	8		
Independent Director	Chiang Kao	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	0	
Independent Director	Yan-Kuin Su	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2	
Independent Director	John C.F. Chen		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	

Note: Please tick the corresponding boxes that apply to a member during the two years prior to being elected or during the term(s) of office.

(1) Not an employee of the Company or any of its affiliates.

(2) Not a director or supervisor of the Company or any of its affiliates. Not applicable in cases where the person is an independent director of the Company, its parent company, or any subsidiary as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.

(3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of 1% or more of the total number of outstanding shares of the Company or ranking in the top 10 in holdings.

(4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding three subparagraphs.

(5) Not a director, supervisor, or employee of a corporate shareholder who directly holds 5% or more of the total number of outstanding shares of the Company or who holds shares ranking in the top five holdings.

(6) Not a director, supervisor, officer, or shareholder holding 5% or more of the shares, of a specified company or institution which has a financial or business relationship with the Company.

(7) Not a professional individual who is an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that provides commercial, legal, financial, accounting services or consultation to the Company or to any affiliate of the Company, or a spouse thereof. These restrictions do not apply to any member of the Compensation Committee who exercises powers pursuant to Article 7 of the "Regulations Governing the Establishment and Exercise of Powers of Compensation Committees of Companies whose Stock is Listed on the TWSE or Traded on the TPEx".

(8) Not been a person of any conditions defined in Article 30 of the Company Law.

2. Functional Authority

(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. Information Regarding the State of Operations:

(1) The Company has a Compensation Committee composed of 3 members.

(2) The current term of office started on June 16 2016 and ends on June 15, 2019.

(3) The Compensation Committee convened 5 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	1	80%	
Committee Member	Yan-Kuin Su	5	0	100%	
Committee Member	John C.F. Chen	5	0	100%	

Other items that shall be recorded:

I. The main items that discussion the conference of Compensation Committee in the recent years were as follows

1. The 13th meeting of the 10th Term of the Board of Directors (July 24, 2018)

Motion	Resolution results of the Compensation Committee	The Company's response to the comments of the Compensation Committee	Resolution of the Board of Directors
(1) Submitted for approval of Independent Directors' compensation and Directors' transportation allowance.	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The motion was fully discussed by attendant Directors other than those who have conflict interests, i.e. Independent Director Kao, Independent Director Su, and Independent Director Chen, and/or concluded that additional market surveys shall be proceeded and submitted for the Board of Directors' further discussion and decision.

Motion	Resolution results of the Compensation Committee	The Company's response to the comments of the Compensation Committee	Resolution of the Board of Directors
(2) Submitted for approval of 2017 employee bonus to be distributed to the managers as defined under Company Law and/or Securities and Exchanged Act ("Company Managers").	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Compensation Committee was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).
(3) Submitted for approval of 2018 salary adjustment of the Company Managers.	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Compensation Committee was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator(if any).
(4) Submitted for approval of 2018 annual incentive bonus of the Company Managers.	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Compensation Committee was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

2. The 14th meeting of the 10th Term of the Board of Directors (October 22, 2018)

Motion	Resolution results of the Compensation Committee	The Company's response to the comments of the Compensation Committee	Resolution of the Board of Directors
(1) Submitted for approval of Independent Directors' compensation.	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Independent Director Kao, Independent Director Su, and Independent Director Chen, and/or their respective delegator (if any) with immediate effect.
(2) Submitted for approval of the unused annual leave's substitutes to be distributed to the managers defined under Company Law ("Manager").	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Compensation Committee was unanimously adopted and approved by attendant Directors other than those who have conflict interests, i.e. Chairman Wu, Director Lu, Director Yiu, Director Ni, and the representative of Director Hui Ying Investment, Ltd., Mr. Yeh, and/or their respective delegator (if any).

3. The 15th meeting of the 10th Term of the Board of Directors (December 24, 2018)

Motion	Resolution results of the Compensation Committee	The Company's response to the comments of the Compensation Committee	Resolution of the Board of Directors
(1) Submitted for approval of the outstanding contribution awards to the related person.	Unanimously approved by all members of the Compensation Committee attending the meeting and will be submitted to the Board of Directors meeting for approval.	Not applicable	The resolution of the Compensation Committee was unanimously adopted and approved by all attendant Directors other than Director Achi Capital Limited, its Representative Ms. Lee, and/or their delegator) (if any)

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: 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) Fulfillment of Social Responsibilities

Evaluation Item	Implementation Status			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
1. Corporate Governance Implementation (1) Has the Company established corporate social responsibility (CSR) policies or systems to review the effectiveness of CSR actions?	✓		(1) The Company established the SA 8000 social responsibility management system in 2008 and is the first local semiconductor company that passed the certification. The Company has committed to the corporate social responsibility policy signed by the President, and is well aware of its importance. The management system and policy are regularly reviewed, and the supply chain management system allows the Company to work together with the suppliers to implement the concept of corporate social responsibility. In addition to customer recognition, the Company received Corporate Social Responsibility Award from Global Views Monthly in 2009, 2010 and 2012, as well as the same award from the Commonwealth magazine in 2010, 2011 and 2012. Global Views Monthly in particular gave the Company the highest rating of "Five-Star Award." In the past three years (2013 to 2015), Macronix also won the Gold CSR Rating and was rated as the top 5% of the evaluated suppliers by EcoVadis, a global CSR research institute. The evaluation results of Eco Vadis have been adopted by over 20,000 companies in the world for choosing their suppliers. The fact that Macronix continues to win the Gold CSR Rating each year is the solid proof of the excellent performance in CSR operations.	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
(2) Does the Company regularly hold CSR training?	✓		(2) To promote social responsibility, newcomer orientation, quarterly training, and staff training are regularly organized.	None
(3) Has the company established a fully (or partially) dedicated unit to promote CSR? Does the Board of Directors authorize the senior management to handle such matters and report its implementation to the Board of Directors?	✓		(3) The Company promotes CSR operations through the Environment, Safety and Health Center, the Administration Service Center, and the Professional Development Center. The corporate social responsibility management system is continuous improvement by both internal and external audits. The audit results are reviewed by the management to ensure continuous effectiveness of the management system.	None
(4) Has the Company established a reasonable remuneration policy and combined its employee performance appraisal system and corporate social responsibility policy? Has the Company established a clear reward and discipline system?	✓		(4) The Company has established a reasonable remuneration policy, combined CSR and the employee performance appraisal system, and established a clear and effective reward and discipline system. If the employees violate the corporate social responsibility policy, appropriate disciplinary actions will be taken.	None
2. Developing a Sustainable Environment (1) Is the Company committed to improving the efficiency of various resources and utilizing renewable materials to reduce the environmental impact?	✓		(1) 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
(2) Has the Company established a suitable environmental management system based on the characteristics of the	✓		(2) The company established and passed the ISO 14001 Environmental Management System certification in 1997. In 2007, the IECQ QC 080000	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
industry?			Hazardous Substance Process Management System was established and passed to promote environmental management on both the operational and product aspects.	
(3) Is the Company aware of the impact global climate change has on its business activities? Has the Company implemented greenhouse gas (GHG) inventory checks and formulated strategies for reducing energy consumption, carbon emissions, and greenhouse gas?	✓		(3) In response to climate change, the Company has conducted greenhouse gas inventory and external verification in accordance with the ISO 14064-1 standard annually since 2007. The Company also set up a product carbon footprint file in accordance with the PAS 2050 guidelines in 2010.	None
3. Promoting Social Welfare (1) Has the Company formulated management policies and procedures in accordance with relevant laws and regulations as well as the International Bill of Human Rights?	✓		(1) 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
(2) Has the company established any employee grievance mechanisms and channels, and addressed these concerns in an appropriate manner?	✓		(2) In addition to reporting any incident that may violate the laws or the Company's conduct and ethics standards to the Company's Audit Committee, the Company has also set up an employee suggestion box and hotline to provide employees with channels for whistle-blowing.	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
(3) Has the Company provided employees with a safe and healthy working environment, and routinely implemented safety and health education for employees?	✓		(3) 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.	None
(4) Has the Company established a system to regularly communicate with its employees and notify them in a reasonable manner of operational changes that may result in significant impacts?	✓		(4) The Company's regular communication mechanisms include: new employee orientation, departmental meetings, labor-management meetings, cadet seminars, internal quarterly meetings at each factory, and e-newsletter from our family employee relations portal. Any operational changes that might cause significant impacts are communicated through cadet seminars, management briefing, and the electronic bulletin boards.	None
(5) Has the Company established an effective career developmental plan for its employees?	✓		(5) The Company holds regular career seminars every year to assist employees in career planning. The Company has also made various online courses available at the Macronix E-Learning School so that the employees can learn anytime, anywhere. At Macronix, the performance management system and the personal development program are closely integrated. The Company conducts	None

Evaluation Item	Implementation Status			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
			a performance review once every six months to examine individual and organizational performance. Employees can also have face face-to-face discussions with the supervisors 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.	
(6) Has the Company established relevant policies and systems of appeal for consumer rights and interests in the Company's processes and procedures for research and development, procurement, production, operations, and services?	✓		(6) The Company produces semiconductor products, and has comprehensive and professional mechanisms for providing service and client grievance procedures for clients (domestic and overseas manufacturers of electronic products).	None
(7) Does the Company comply with relevant provisions and international standards for the marketing and labeling of products and services?	✓		(7) The Company's products have green product labeling and are lead-free and halogen-free. The products meet the requirements of the European Union's RoHS directive and SVHC (Substances of Very High Concern).	None
(8) Has the Company evaluated the records of its suppliers to see whether they had any impact on the environment and society prior to engaging in commercial dealings?	✓		(8) The Company has included environmental and social responsibility into the criteria for supplier selection. The Company works side by side with the supply chain partners to engage in corporate social responsibility work through regular communication, annual supplier meetings, and suppliers' audit.	None
(9) Do contracts between the Company and its major suppliers include terms where the Company may terminate or rescind the contract at any time if the	✓		(9) The Company has stated in all Terms & Conditions of Purchase that all suppliers have to adhere to the regulations mentioned above.	None

<table>
<tr><th rowspan="2">Evaluation Item</th><th colspan="3">Implementation Status</th><th rowspan="2">Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Abstract Explanation</th></tr>
<tr><td>said supplier violates the Company's corporate social responsibility policy and causes significant impact on the environment and society?</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4. Strengthening Information Disclosure
(1) Does the Company disclose relevant and reliable information relating to CSR on its official website or the Market Observation Post System (MOPS)?</td><td>✓</td><td></td><td>(1) The Company discloses information (including information regarding corporate social responsibility) through the Company's website and the Market Observation Post System (MOPS). The Company has also prepared corporate social responsibility reports to provide the public, shareholders, and customers with information regarding corporate social responsibility.
The Company has established an open communication channel in the stakeholder section of the Company's website to provide the customers, investors, employees, media, and suppliers a way to submit enquiries and feedback. Dedicated personnel have been assigned to forward the issues to relevant units.</td><td>None</td></tr>
<tr><td colspan="5">5. If the Company has established its own corporate social responsibility practices according to the Corporate Social Responsibility Best Practice Principles for TWSE/TPEx-Listed Companies, please provide detailed information on the discrepancies between its implementation and the prescribed best practices: No substantive discrepancy.</td></tr>
<tr><td colspan="5">6. Other important information helpful in understanding CSR operations:
Relevant information is detailed in the Corporate Social Responsibility Report of the Company, the Company website, and the Macronix Education Foundation website (http://www.macronix.com).</td></tr>
<tr><td colspan="5">7. A statement shall be made if the Company's CSR Report has been verified by a relevant accreditation agency:
The Company has completed the product carbon footprint and its external verification. The Corporate Social Responsibility Report has obtained the international accreditation for GRI Standards G4.0 Standards and complies with the AA1000 standards.</td></tr>
</table>

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 Chyou Wu, Chairman & CEO of Macronix was awarded of social Education Contribution Award from the Ministry of Education.
2018	• Mr. Miin Chyou Wu, Chairman & CEO of Macronix was awarded of ‘’Country Winner’’ and ’’ Business Paradigm Entrepreneur "of EY’s Entrepreneur of the Year.

(VI) Implementation of Corporate Governance and its Measures

Evaluation Item	Implementation Status			Deviations from “Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies” and Reasons
	Yes	No	Abstract Illustration	
1. Establishment of corporate governance policies and programs				
(1) Does the company disclose its corporate governance policies and procedures in its guidelines and external documents, as well as the commitment from its Board to implement the policies?	✓		(1) The Company has established the " Ethical Corporate Management Principles " and "Code of Business Conduct and Ethics" which are published on the Company's website and the internal e-bulletin system. The staff of the Company, as well as its subsidiaries, are urged to perform their duties in an honest and ethical manner.	None
(2) Does the company establish policies to prevent unethical conduct with clear statements regarding relevant procedures, guidelines of conduct, punishment for violation, rules of appeal, and the commitment to implement the policies?	✓		(2) 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.	None
(3) Does the company establish appropriate precautions against high-potential unethical conducts or listed activities stated in Paragraph 7 of Article 2 of the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies?	✓		(3) 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	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			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 Conducts Compliance Certificate " which stipulates that suppliers 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 damage.	
2. Implementation of corporate governance (1) Does the company evaluate business partners' ethical records and include ethics-related clauses in business contracts?	✓		(1) 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
(2) Does the company establish exclusively (or concurrently) dedicated first-line managers authorized by the board to be in charge of proposing the corporate social responsibility policies and reporting to the board?	✓		(2) The Company has established various organizations and channels to implement corporate governance and supervision. The internal units shall carry out their individual duties. Besides promoting the concept to	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
			employees, relevant prevention plans have been established in the internal operating procedures to ensure the staff can execute their duties in an honest and ethical manner. A dedicated team appointed by the Audit Committee are responsible for addressing issues collected from the dedicated mailbox and hotline. The Auditing Office is responsible for the supervising and auditing the annual auditing plan approved by the Board, as well as reporting to the Board regularly. The "Ethical Committee" was established in October 2018 to promote ethical operations. The Board approved the "Ethical Corporate Management Principles" in December of the same year to promote the implementation of corporate governance. The Board is informed of the results of the promotion and implementation.	
(3) Does the company establish policies to prevent conflicts of interest and provide appropriate communication channels, and implement it?	✓		(3) 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
(4) Has the company established effective systems for both accounting and internal control to facilitate	✓		(4) The Company's accounting and internal control systems are approved by the Audit Committee	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
ethical corporate management, and are they audited by either internal auditors or CPAs on a regular basis?			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.	
(5) Does the company provide educational training on corporate social responsibility on a regular basis?	✓		(5) The Company has established the "Ethical Corporate Management Principles " and " Code of 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. The Company conducts regular training on behaviors and ethical principles, information security knowledge, and personal data protection to strengthen the employees' awareness of compliance. In 2018, the number of participants was 11,344 and the total training time was 4,355 hours. Suppliers are also invited to be engaged in the promotion to ensure that they understand the Company's corporate governance. In 2018, the number of participants was 82 and the total training time was 328 hours.	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
3 Operation of the integrity channel (1) 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?	✓		(1) Regarding reports of possible breach of laws and regulations or the Company's regulations, the Company has also set up the "No Topic is Off Limits" suggestion box and a hotline aside from other channels such as reporting to the Chairman, his designated staff, and the Audit Committee. The staff can report any fraud they discover to prevent damage to the Company's image caused by dishonest behavior. The Company is committed to implementing corporate governance policies and takes into consideration the employees' implementation status in the annual performance evaluation.	None
(2) Does the company establish standard operating procedures for confidential reporting on investigating accusation cases?	✓		(2) The "Code of Business Conduct and Ethics " The "No Topic is Off Limits" suggestion box and whistle-blowing hotline have clearly outlined the protection for whistleblowers. The Company is committed to the protection of whistleblowers and prohibits any retaliation. Any violation will be published accordingly.	None
(3) Does the company provide proper whistleblower protection?	✓		(3) The "Code of Business Conduct and Ethics " The "No Topic is Off Limits" suggestion box and whistle-blowing hotline have clearly outlined the protection for whistleblowers. The Company is committed to the protection of whistleblowers and prohibits any retaliation. Any violation will be published accordingly.	None

Evaluation Item	Implementation Status			Deviations from "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
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?	✓		(I) 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.	None
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: The Company has established the " Ethical Corporate Management Principles " and " Code of Business Conduct and Ethics " based on principles of integrity to prevent misconduct and encourage honesty and integrity. The regulations have been faithfully reinforced.				
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.				

(VII) 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.

(VIII) 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 of Course	Organizer	Course Title	Length of the Curriculum
Chairman	Miin Chyou Wu	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Director Representative of the Corporation	Ding-Hua Hu	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		May 3, 2018	Taiwan Corporate Governance Association	Common Tax Disputes for Corporate Mergers and Acquisitions	3

Title	Name	Date of Course	Organizer	Course Title	Length of the Curriculum
		May 4, 2018	Taiwan Corporate Governance Association	The amendments in Income Tax Act and Statute for Industrial Innovation	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
		November 1, 2018	Taiwan Corporate Governance Association	Response to the Anti-tax Avoidance Policy and Countermeasures	3
Director	Chih-Yuan Lu	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		May 3, 2018	Taiwan Corporate Governance Association	Common Tax Disputes for Corporate Mergers and Acquisitions	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
		November 1, 2018	Taiwan Corporate Governance Association	Response to the Anti-tax Avoidance Policy and Countermeasures	3
		November 9, 2018	Taiwan Corporate Governance Association	Legal code of conduct for corporate mergers and acquisitions	3
Director	Cheng-Yi Fang	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		August 1, 2018	Taiwan Insurance Institute	Information Security and Corporate Governance	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Director Representative of the Corporation	Shigeki Matsuoka	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3

Title	Name	Date of Course	Organizer	Course Title	Length of the Curriculum
Director	Chung-Laung Liu	March 7, 2018	Taiwan Corporate Governance Association	Evaluation of the effectiveness of the Board	3
		March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		August 1, 2018	Taiwan Corporate Governance Association	Liability insurance for directors, supervisors, and important staff members	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Director Representative of the Corporation	Guei-Min Lee	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		April 20, 2018	Taiwan Corporate Governance Association	Development trends and important specifications for anti-money laundering and financing of terrorism	3
		May 11, 2018	Taiwan Corporate Governance Association	Discussion on Significant “Economic Crime” Case Analysis and Relevant Legal Liability	3
		June 1, 2018	Taiwan Securities Association	Equity Transfer and Tax Planning Practices for Directors, Supervisors, and Supervisors	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
		November 27, 2018	Taiwan Corporate Governance Association	Impact of changes to corporate governance, internal control, and directors' and supervisors' responsibilities from the latest Company Act amendment	3
Director	Che-Ho Wei	July 17, 2018	TWSE	Legal Compliance of Publicly-listed Company Insider Equity Trading of session	3

Title	Name	Date of Course	Organizer	Course Title	Length of the Curriculum
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Director	Dang-Hsing Yiu	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Director	Ful-Long Ni	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Director Representative of the Corporation	Pei-Fu Yeh	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		September 20, 2018 - September 21, 2018	Accounting Research and Development Foundation	Continuing Training Class for Principal Accounting Officers of Issuers, Securities Firms, and Securities Exchanges	12
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Independent Director	Chiang Kao	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Independent Director	Yan-Kuin Su	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3

Title	Name	Date of Course	Organizer	Course Title	Length of the Curriculum
		July 13, 2018	Taiwan Corporate Governance Association	How should directors fulfill their duty of loyalty	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
Independent Director	John C.F. Chen	March 16, 2018	Taiwan Corporate Governance Association	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		August 29, 2018	Securities and Futures Institute	The latest amendment to the Company Act and the Corporate Response Practices	3

4. Manager Training Records

Miin Chyou Wu, Chih-Yuan Lu, Dang-Hsing Yiu, Ful-Long Ni, and Pei-Fu 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 of Course	Organizer	Course Title	Length of the Curriculum
Vice President	Yen-Hie Chao	March 16, 2018	PwC Taiwan	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		May 3, 2018	Taiwan Corporate Governance Association	Common Tax Disputes for Corporate Mergers and Acquisitions	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3
		November 1, 2018	Taiwan Corporate Governance Association	Response to the Anti-tax Avoidance Policy and Countermeasures	3
Deputy Director of the Auditing Office	Hong-Chi Wang	March 16, 2018	PwC Taiwan	The impact of international anti-tax avoidance and money laundering on enterprises and the countermeasures	3
		October 22, 2018	Taiwan Corporate Governance Association	The development of corporate governance assessment and response	3

5. Implementation of Board Diversity Policy

Name	Gender	Nationality	Age			Professional Background				
			Under 60 Years Old	61 - 70 years old	Over 71 years old	Industrial Technology	Law	Financial Accounting	Marketing	Venture Capital
Miin Chyou Wu	Male	R.O.C		✓		✓			✓	
Chien Hsu Investment Corporation Representative: Ding-Hua Hu	Male	R.O.C			✓	✓				✓
Chih-Yuan Lu	Male	R.O.C		✓		✓				
Shun Yin Investment Ltd. Representative: Shigeki Matsuoka	Male	Japan		✓		✓				
Cheng-Yi Fang	Male	R.O.C			✓	✓			✓	
Chung-Laung Liu	Male	R.O.C			✓	✓				
Guei-Min Lee	Female	R.O.C	✓			✓	✓			
Che-Ho Wei	Male	R.O.C			✓	✓				
Dang-Hsing Yiu	Male	R.O.C		✓		✓				
Ful-Long Ni	Male	R.O.C	✓			✓				
Hui Ying Investment Ltd. Representative: Pei-Fu Yeh	Male	R.O.C		✓		✓		✓		
Chiang Kao	Male	R.O.C		✓		✓				
Yan-Kuin Su	Male	R.O.C		✓		✓				
John C.F. Chen	Male	R.O.C			✓	✓		✓		

(IX) Implementation of Internal Control System

1. Internal Control System Statement

Macronix International Co., Ltd.
Statement on Internal Control System

Date: 22 January 2019

The Company states the following with regard to its internal control system during the period from 1 January 2018 to 31 December 2018, 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 31,2018 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 approved by the Board of Directors Meeting of the Company held on 22 January 2019, 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.

(X) Penalties on the Company and its Personnel or Disciplinary Actions Imposed by the Company on Personnel in Violation of Internal Control System Regulations, Major Deficiencies and Improvements during the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report:

The FAB 5 was fined with NT$100,000 on January 3, 2018 for failure to record each process-related raw material in the operation permit.

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

1.2018 Major Resolutions of Shareholders' Meeting

Major resolutions	Review of implementation
1.Ratification of 2017 Business Report and Financial Statements	Resolution announced in accordance with Article 230 of the Company Act
2. Ratification of the Company's 2017 Distribution Plan	After being reported to the relevant authority for approval, cash dividends and stock dividends were issued on September 28, 2018
3.Approval of Capital Increase by Earning Surplus	
4. 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	Was not carried out in 2018. The proposal was approved by the Board of Directors again on March 12, 2019 and submitted to the 2019 Annual Shareholders' Meeting.
5. Approval of releasing competition restrictions of the directors	Announce the resolution according to the regulations.

. Major Resolutions Adopted by the Board of Directors in the Most Recent Year and Up to the Printing Date of this Annual Report

Board of Directors	Date	Major Resolutions
The 10th meeting of the 10th term of the board of directors	January 29,2018	Approval of the record date of the capital reduction for the redeemed shares of employee Restricted Stock Awards (RSA)
The 11th meeting of the 10th term of the board of directors	March 16,2018	1. Proposal of the Company's 2018 Distribution Plan 2. Proposal of Capital Increase by Earning Surplus 3. Proposal 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.To resolve the matters for convening the 2018 Annual Shareholders Meeting

Board of Directors	Date	Major Resolutions
The 12th meeting of the 10th term of the board of directors	April 24,2018	Approval of the record date of the capital reduction for the redeemed shares of employee Restricted Stock Awards (RSA)
The 13th meeting of the 10th term of the board of directors	July 24,2018	Approval of the record date of the cash and stock dividends from 2017 earning surplus
The 14th meeting of the 10th term of the board of directors	October 22,2018	1.Approval of the record date of the capital reduction for the redeemed shares of employee Restricted Stock Awards (RSA) 2. Approval of the capital expenditure budget plan
The 15th meeting of the 10th term of the board of directors	December 24,2018	1. Approval of newly the 2019 capital expenditure budget plan 2.Approval of the donation to Macronix Education Foundation 3.Approval of continuing the cooperation with IBM regarding Phase Change Memory (PCRAM) project
The 16th meeting of the 10th term of the board of directors	January 22,2019	1.Approval of the record date of the capital reduction for the redeemed shares of employee Restricted Stock Awards (RSA) 2.To establish the Nomination Committee and appoint its members
The 17th meeting of the 10th term of the board of directors	March 12,2019	1.Approval of the Company's 2018 Distribution Plan 2.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 3.To resolve the matters for convening the 2019 Annual Shareholders Meeting ("AGM") 4.Approval of the issuance of new shares for employee Restricted Stock Awards 5.The appointment of Corporate Governance Officer 6. The Board of Directors resolved to build and donate the "Macronix innovation Building" to National Cheng Kung University

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

(XIII) 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 and R&D: None.

IV. CPA Fees

Unit: NT$ thousands

Accounting Firm	Name of CPA	Audit Fee	Non-Audit Fee					Period Covered by CPA's Audit	Remarks
			System of Design	Company Registration	Human Resource	Others	Subtotal		
Deloitte & Touche	Ming hui Chen Ching Pin Shih	6,645	-	220	29	1,100	1,349	1/1/2018 ~12/31/2018	Other non-audit fees are mainly for the transfer pricing service fees and other services.

(I) When the Non-Audit Fees Paid to the CPAs, their Firm, and the Affiliated Companies Account for 25% or more of the Audit Fees, the Sum of the Audit and Non-Audit Fees and the Content of Non-Audit Service Must be Disclosed: Not applicable.

(II) 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.

(III) Where the Audit Fee Paid for the Year is Reduced by more than 15% Compared to that of the Previous Year, the Sum, Proportion, and Cause of the Reduction Shall be Disclosed: Not applicable.

V. CPA Information: Deloitte & Touche did not change the auditor partners for Macronix in the last two years.

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

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

Title	Name	2018		up to April 20 2019	
		Increase (decrease) in shares held	Increase (decrease) in shares pledged	Increase (decrease) in shares held	Increase (decrease) in shares pledged
Chairman / CEO	Miin Chyou Wu	886,204	0	0	0
Director	Chien Hsu Investment Corporation	417,873	0	0	0
	Representative：Ding-Hua Hu (Note 1)	10,915	0	0	0
Director / President	Chih-Yuan Lu	447,825	0	0	0
Director	Shun Yin Investment Ltd.	443,013	0	0	0
	Representative：Shigeki Matsuoka	0	0	0	0
Director	Cheng-Yi Fang	6,924	0	0	0
Director	Chung-Laung Liu	1,588	0	0	0
Director	Achi Capital Limited	202,993	0	0	0
	Representative：Guei-Min Lee (Note 2)	0	0	0	0
Director	Che-Ho Wei	0	0	0	0
Director / Senior Vice President & Chief Marketing Officer	Dang-Hsing Yiu	218,025	0	0	0
Director / Vice President	Ful-Long Ni	293,334	0	0	0
Director / Vice President	Hui Ying Investment Ltd.	38,376	0	0	0
	Representative：Pei-Fu Yeh (Note 3)	215,532	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	172,412	0	0	0

Title	Name	2018		up to April 20 2019	
		Increase (decrease) in shares held	Increase (decrease) in shares pledged	Increase (decrease) in shares held	Increase (decrease) in shares pledged
Vice President	Chun-Hsiung Hung	46,491	0	0	0
Vice President	Jui-Kun Chen	(176,237)	0	0	0
Vice President	Jon-Ten Chung	157,422	0	0	0
Associate V.P	Kuang-Chao Chen	197,274	0	0	0
Project Executive Director	Chuan-Hsien Wen	436	0	0	0
Project Executive Director	Hui-Chi Li	16,415	0	0	0
Executive Director	Wen-Pin Lu	11,448	0	0	0

Note :1: Mr. Ding-Hua Hu was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 2: Ms. Guei-Min Lee was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 3: Mr. Pei-Fu Yeh was appointed to represent it to attend the 10th Term of the Board of Directors and exercised any and all Director's rights thereof.

Note 4:The counterparts of equity transfer or equity pledge in the table above are not related party.

VIII. Relationship Among the Top Ten Shareholders

April 202019

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	
Polaris Taiwan Dividend Plus ETF	30,724,238	1.67%	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	28,184,396	1.53%	None	None	None	None	None	None	
VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS	27,638,343	1.50%	None	None	None	None	None	None	
Shun Yin Investment Ltd.	22,587,265	1.23%	None	None	None	None	None	None	
Representative: Shigeki Matsuoka	None	None	None	None	None	None			
Credit Suisse Securities (Europe) Limited	13,147,948	0.71%	None	None	None	None	None	None	
Dimensional Emerging Markets Value Fund	12,869,605	0.70%	None	None	None	None	None	None	
New Labor Pension Fund	12,609,178	0.69%	None	None	None	None	None	None	
Miin Chyou Wu	12,371,859	0.67%	None	None	None	None	None	None	
EMERGING MARKETS CORE EQUITY PORTFOLIO OF DFA INVESTMENT DIMENSIONS GROUP INC.	11,144,837	0.61%	None	None	None	None	None	None	
AB SICAV I -Emerging Markets Multi-Asset Portfolio	10,346,000	0.56%	None	None	None	None	None	None	

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

IX. 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, 2018

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	-	-
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	-	-

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
2009.08	-	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	-	-
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	-	-

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
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	-	-

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

April 20, 2019
Unit: shares

Type of stock	Authorized capital			Remarks
	Shares issued and outstanding (Note 1)	Un-issued shares	Total	
Common stocks	1,804,166,993	4,709,833,007	6,550,000,000	Note 2

Note 1: 1,840,111,342 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

April 20, 2019

Type of Shareholders	Government Agencies	Financial Institutions	Other legal Persons	Domestic Natural Persons	Foreign Institutions and Natural Persons	Total
Number of Shareholders	12	70	355	321,356	575	322,368
Shareholding	14,944,386	20,711,314	84,650,663	1,484,225,812	235,634,818	1,840,166,993
Shareholding percentage (%)	0.81%	1.13%	4.60%	80.66%	12.80%	100.00%

(III) Distribution profile of Share Ownership

April 20, 2019

Class of Shareholding (Unit: Share)	Number of Shareholders	Shareholding	Shareholding percentage (%)
1 ~ 999	155,501	38,235,117	2.08%
1,000 ~ 5,000	112,353	246,924,653	13.42%
5,001 ~ 10,000	26,946	194,366,771	10.56%
10,001 ~ 15,000	9,489	112,054,079	6.09%
15,001 ~ 20,000	5,352	95,727,210	5.20%
20,001 ~ 30,000	5,025	122,557,468	6.66%
30,001 ~ 50,000	3,665	141,733,299	7.70%
50,001 ~ 100,000	2,459	171,196,433	9.30%
100,001 ~ 200,000	936	127,963,057	6.95%
200,001 ~ 400,000	402	110,765,144	6.02%
400,001 ~ 600,000	83	39,319,254	2.14%
600,001 ~ 800,000	44	30,493,940	1.66%
800,001 ~ 1,000,000	21	18,725,782	1.02%
1,000,001 or over	92	390,104,786	21.20%
Total	322,368	1,840,166,993	100.00%

(IV) Major Shareholders

April 20, 2019

Name of Shareholders	Shareholding	Shareholding percentage (%)
Polaris Taiwan Dividend Plus ETF	30,724,238	1.67%
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	28,184,396	1.53%
VANGUARD EMERGING MARKETS STOCK INDEX FUND, A SERIES OF VANGUARD INTERNATIONAL EQUITY INDEX FUNDS	27,638,343	1.50%
Shun Yin Investment Ltd.	22,587,265	1.23%
Credit Suisse Securities (Europe) Limited	13,147,948	0.71%
Dimensional Emerging Markets Value Fund	12,869,605	0.70%
New Labor Pension Fund	12,609,178	0.69%
Miin Chyou Wu	12,371,859	0.67%
EMERGING MARKETS CORE EQUITY PORTFOLIO OF DFA INVESTMENT DIMENSIONS GROUP INC.	11,144,837	0.61%
AB SICAV I -Emerging Markets Multi-Asset Portfolio	10,346,000	0.56%

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

Unit: NT$

<table>
<tr><th colspan="3">Year / Item</th><th>2017</th><th>2018</th><th>2019 up to April 20</th></tr>
<tr><td rowspan="3">Market Price per Share (Note 1)</td><td colspan="2">Highest Market Price</td><td>60.9</td><td>55.5</td><td>24.45</td></tr>
<tr><td colspan="2">Lowest Market Price</td><td>4.56</td><td>15.15</td><td>16.85</td></tr>
<tr><td colspan="2">Average Market Price</td><td>28.43</td><td>34.38</td><td>21.27</td></tr>
<tr><td rowspan="2">Net Worth per Share</td><td colspan="2">Before Distribution</td><td>13.68</td><td>17.06</td><td rowspan="13">Not Applicable</td></tr>
<tr><td colspan="2">After Distribution</td><td>12.43</td><td>(Note 5)</td></tr>
<tr><td rowspan="4">Earnings per Share</td><td rowspan="2">Weighted Average Shares (thousand shares)</td><td>Not-adjusted</td><td>1,765,736</td><td rowspan="2">1,822,137</td></tr>
<tr><td>Adjusted</td><td>1,801,061</td></tr>
<tr><td rowspan="2">Earnings per Share</td><td>Not-adjusted</td><td>3.12</td><td rowspan="2">4.94</td></tr>
<tr><td>Adjusted</td><td>3.06</td></tr>
<tr><td rowspan="4">Dividends per Share</td><td colspan="2">Cash Dividends</td><td>1.00029086</td><td>1.2</td></tr>
<tr><td rowspan="2">Stock Dividends</td><td>Dividends from Retained Earnings</td><td>0.20005817</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>8.30</td><td>7.30</td></tr>
<tr><td colspan="2">Price / Dividend Ratio (Note 3)</td><td>25.88</td><td>30.06</td></tr>
<tr><td colspan="2">Cash Dividend Yield Rate (Note 4)</td><td>3.86%</td><td>3.33%</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 2018 will be resolved at the 2019 Shareholders' Meeting.
Note 6: The ratio of the distribution of earnings to capital increase by retained earnings for 2018 is 2%. Information regarding the market price and cash dividend after adjustment are as follows:

<table>
<tr><th colspan="2">Year / Item</th><th>2018</th></tr>
<tr><td rowspan="3">Adjusted Market Price Per Share</td><td>Highest Market Price</td><td>54.41</td></tr>
<tr><td>Lowest Market Price</td><td>14.85</td></tr>
<tr><td>Average Market Price</td><td>33.71</td></tr>
<tr><td colspan="2">Adjusted Cash Dividends</td><td>Undistributed</td></tr>
</table>

(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$2,208,200,392 (NT$1.2 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 2018, as stipulated by the Articles of Incorporation, were NT$1,669,586,163 and NT$222,611,488 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 March 12, 2019, the Board of Directors approved NT$1,669,586,163 for employee compensation and NT$222,611,488 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. New Shares of Employee Restricted Stock Awards

(I) New Shares of Employee Restricted Stock Awards

April 20, 2019

Types of new shares of employee Restricted Stock Awards	1st issuance of 2014 New shares of employee Restricted Stock Awards Plan	2nd issuance of 2014 New shares of employee Restricted Stock Awards Plan	1st issuance of 2016 New shares of employee Restricted Stock Awards Plan
Effective date	August 19, 2014		October 17, 2016
Distribution date	August 28, 2014	March 16, 2015	October 25, 2016
Issue date	August 25, 2014	July 22, 2015	January 3, 2017
New Shares of employee Restricted Stock Awards issued	37,300,950 shares	61,278,760 shares	57,475,580 shares
Issued price	NT$ 0	NT$ 0	NT$ 0
Ratio of New shares of employee Restricted Stock Awards to total issued	1.06%	1.72%	1.59%
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 Successful (or higher)： 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 Successful (or higher)： 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 Successful (or higher)： 30% of restricted shares will be vested.		
Restricted rights of new shares of employee	(1) Except for being inherited, the new shares of employee Restricted Stock Awards not be sold, transferred, pledged, or gifted to others or		

Types of new shares of employee Restricted Stock Awards	1st issuance of 2014 New shares of employee Restricted Stock Awards Plan	2nd issuance of 2014 New shares of employee Restricted Stock Awards Plan	1st issuance of 2016 New shares of employee Restricted Stock Awards Plan
Restricted Stock Awards	disposed of using any other methods. (2) The new shares of employee Restricted Stock Awards shall be kept in a stock trust.		
Custody status of new shares of employee Restricted Stock Awards	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		
Shares of new shares of employee Restricted Stock Awards taken back or bought back	2,585,568 shares	4,083,263 shares	2,598,706 shares
Shares of released new shares of employee Restricted Stock Awards	29,650,613 shares	48,719,710 shares	18,816,225 shares
Shares of new shares of employee Restricted Stock Awards that were canceled due to participation in the Company's capital reduction	5,063,367 shares	8,475,787 shares	28,302,044 shares
Shares of unreleased new shares of employee Restricted Stock Awards	1,402 shares	0 shares	7,758,605 shares
Ratio of unreleased new shares of employee Restricted Stock Awards to total issued (%)	0.00%	0.00%	0.42%
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

April 20, 2019

	Title	Name	No. of New Restricted Shares	New Restricted Shares as a Percentage of Shares Issued	Released: No. of Shares	Released: Issued Price (NT$)	Released: Amount (NT$ thousands)	Released: Released Restricted Shares as a Percentage of Shares Issued	Unreleased: No. of Shares	Unreleased: Strike Price (NT$)	Unreleased: Amount (NT$ thousands)	Unreleased: Unreleased Restricted Shares as a Percentage of Shares Issued
Managers	CEO	Miin Chyou Wu	8,234,995	0.448%	6,753,287	0	0	0.367%	1,481,708	0	0	0.081%
	President	Chih-Yuan Lu										
	Senior Vice President & Chief Marketing Officer	Dang-Hsing Yiu										
	Vice President	Ful-Long Ni										
	Vice President	Pei-Fu Yeh										
	Vice President	Yen-Hie Chao										
	Vice President	Chun-Hsiung Hung										
	Vice President	Jui-Kun Chen										
	Vice President	Jon-Ten Chung										
	Associate V.P	Kuang-Chao Chen										
	Project Executive Director	Chuan-Hsien Wen										
	Project Executive Director	Hui-Chi Li										
	Executive Director	Wen-Pin Lu										
Employees	Senior Director	Kun-Lung Chang	3,053,855	0.166%	2,674,161	0	0	0.145%	379,694	0	0	0.021%
	Senior Director	Han-Song Chen										
	Senior Director	Shuo-Nan Hung										
	Senior Director	Ta-Hung Yang										
	Senior Director	Tao-Cheng Lu										
	Senior Director	Yen-Hao Shih										
	Division Director	Keng-Hui Chen										
	Project Director	Nai-Ping Kuo										
	Project Director	Nan-Tzu Lien										
	Project Director	Ming-Xiang Chen										

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 170 of this annual report.

2. Business Proportion

Unit: NT$ thousands

Products	2017		2018	
	Net Revenue	%	Net Revenue	%
Flash	23,315,458	68.18%	23,326,091	63.12%
ROM	8,416,942	24.61%	11,166,453	30.22%
Foundry	2,432,297	7.11%	2,445,263	6.62%
Others	32,219	0.10%	15,225	0.04%
Total	34,196,916	100.00%	36,953,032	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 (XtraROM®, Mask ROM)
Wafer Foundry Service	Sub-micron logic process / high voltage CMOS and BCD process
	Embedded ROM/MTP/OTP process

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. This brings the Company to a new level of competitiveness.

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 three 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 first generation project

※ 2D NAND Flash: 19 nanometer plan

※ NOR Flash: 48 nanometer plan

(2) Wafer Foundry Service

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

※ Embedded ROM and OTP are applied to voice ICs.

※ BCD (Bipolar-CMOS-DMOS) technology for analog and power management Ics

(II) State of the Industry

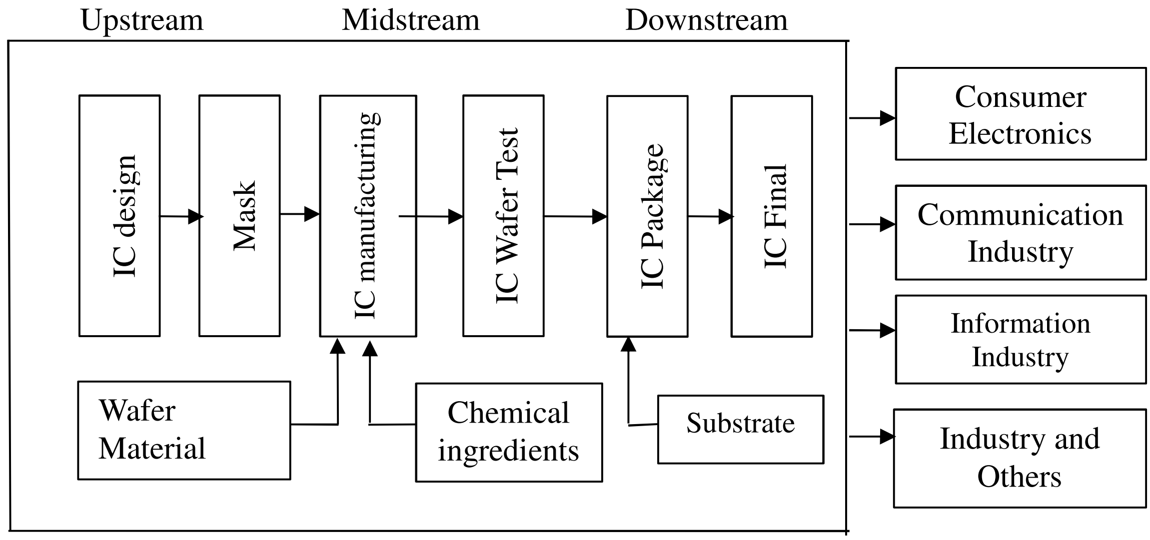
1. Industry Development and Competition

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 characteristics 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 specific 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

Year / Item	2018	Q1, 2019
R&D expenses	4,259,540	803,240
Operating Revenue	36,953,032	6,028,899
% of R&D expenses to Operating Revenue	12%	13%

2. Successfully Developed Technologies or Products

In 2018, Macronix successfully implemented product and technology innovations to extend its superior product competitiveness.

(1) Technology Innovation

※ The innovation and demonstration of the 3D NAND flash control technology.

(2) Product Innovation

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

(3) Intellectual Rights Achievements

The Company values R&D and innovation, and actively applies for patents as a form of intellectual property rights. As of 2018, the Company has obtained 2,931 patents in the U.S., 2,724 patents in Taiwan, 1,717 patents in China, and 268 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. Furthermore, settlement of around 30 patents disputed with Toshiba also add to certain of the Company's income in 2018 (http://mops.twse.com.tw/mops/web/t05st01), which evidences the Company's R&D and intellectual property as well as international negotiation and litigation strengths, and are helpful in the Company's long-term developments.

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

(IV) Short- and Long-Term Business Development Plans

1. Short-term

※ Develop XtraROM® and NAND Flash 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.

2. Long-term

※ Develop high-capacity 2D 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		2017		2018	
		Net revenue	%	Net revenue	%
Domestic		8,365,240	24.46	7,998,367	21.64
Export	Japan	11,204,685	32.77	13,710,918	37.10
	USA	1,410,643	4.12	1,603,060	4.34
	Europe	1,611,389	4.71	2,437,895	6.60
	Asia	11,604,959	33.94	11,202,792	30.32
	Subtotal	25,831,676	75.54	28,954,665	78.36
Total		34,196,916	100.00	36,953,032	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 for more than a decade.

(2) NOR Flash

The long-term market and technology development have won the trust and support of customers around the world. The Company's NOR Flash product line continues to own the world's biggest market share.

NOR Flash Share Ranking

Rank	Company	Market Share
1	**Macronix**	**23.1%**
2	Winbond	22.5%
3	Cypress	21.7%
4	Micron	15.1%
5	GigaDevice	7.6%
	Others	10.0%
Total		100%

Source: iHS, Dec 2018

3. Competitive Niches

The Company has been developing ROM and Flash technology and products for more than 20 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.

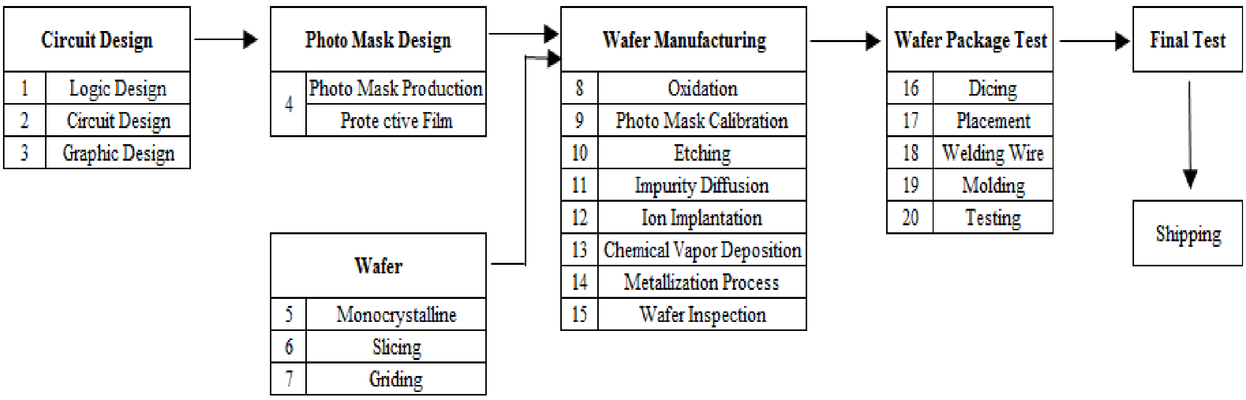
In order to achieve sustainable development, the Company will continue to develop advanced non-volatile memory technology and update the 12-inch fab equipment to create an advanced R&D environment and production base. Our goal is to provide customers with superior products and services in order to gain 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 amusement equipment.
	Mask ROM/XtraROM®	Mainly used in TV game cards, electronic entertainment equipment, electronic toys and so on.
Wafer Foundry Service)	Sub-micron logic process / high voltage CMOS and BCD process	Providing high-voltage CMOS manufacturing technology in order to serve analog IC design customers.
	Embedded ROM/MTP/OTP Process	Providing embedded ROM/MTP/OTP integration technology to serve microcontroller 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

	2017				2018				As of Q1 of 2019			
Item	Name	Amount	Percentage of Net Purchase for the Year (%)	Relationship with the Issuer	Name	Amount	Percentage of Net Purchase for the Year (%)	Relationship with the Issuer	Name	Amount	Percentage of net purchase for the current year as of the previous quarter (%)	Relationship with the Issuer
1	Supplier A	5,595,024	47.81	Related party	Supplier A	11,056,200	60.83	Related party	Supplier A	854,916	38.19	Related party
	Others	6,106,794	52.19		Others	7,119,378	39.17		Others	1,383,669	61.81	
	Net Purchase	11,701,818	100.00		Net Purchase	18,175,578	100.00		Net Purchase	2,238,585	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: List 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, if the contract stipulates that the name of the supplier should not be disclosed, or the counterpart 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

	2017				2018				As of Q1 of 2019			
Item	Customer	Net Revenue	Percentage of Annual Net Revenue for the Year (%)	Relationship with the Issuer	Customer	Net Revenue	Percentage of Annual Net Revenue for the Year (%)	Relationship with the Issuer	Customer	Net Revenue	Percentage of net Revenue for the current year as of the previous quarter (%)	Relationship with the Issuer
1	Customer A	8,657,954	25.32	Related party	Client A	11,104,912	30.05	Related party	Client A	1,223,059	20.29	Related party
	Others	25,538,962	74.68		Others	25,848,120	69.95		Others	4,805,840	79.71	
	Total Net Revenue	34,196,916	100.00		Total Net Revenue	36,953,032	100.00		Total Net Revenue	6,028,899	100.00	

Note 1: The names, sales revenue and ratio of customers that accounted for at least 10% of net consolidated revenue in the two most recent years are listed. However, should the contract stipulate that information regarding the customer's name or transaction counterparty is a natural person (that is not a related party) is not to be disclosed, a code can be used in its place.

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

Year / Produce Amount / Main Products	2017			2018		
	Capacity	Output	Amount	Capacity	Output	Amount
Flash		3,101,829	12,874,329		2,196,429	11,782,840
ROM		84,710	6,697,885		98,890	8,660,474
Subtotal (Kea)		3,186,539	19,572,214		2,295,319	20,443,314
Foundry (PC)		279,884	1,777,073		279,706	1,732,240
Capacity (PC)	1,292,735			1,307,446		

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

Year / Sales & Shipments / Products	2017				2018			
	Domestic		Export		Domestic		Export	
	Shipments	Net revenue	Shipments	Net revenue	Shipments	Net revenue	Shipments	Net revenue
Flash	877,284	6,267,579	2,006,026	17,047,879	654,704	6,088,238	1,295,838	17,237,853
ROM	1,606	23,978	80,248	8,392,964	482	7,621	96,091	11,158,832
Foundry (Note)	235,529	2,070,100	42,233	362,197	215,333	1,900,252	62,999	545,011
Others	-	3,583	-	28,636	-	2,256	-	12,969
Total	878,890	8,365,240	2,086,274	25,831,676	655,186	7,998,367	1,391,929	28,954,665

Note: Unit of Foundry shipments is 8-inch equivalent wafers.

III. Employees Information

(I) Company Employees Information

Year		2017	2018	As of April 20, 2019
Number of employees	Management Personnel	694	703	700
	R&D and Technical Personnel	1,882	1,860	1,819
	Operators	1,491	1,487	1,473
	Total	4,067	4,050	3,992
Average age		36.9 years old	37.5 years old	38.5 years old
Average Length of Service		10 years and 3 months	10 years and 10 months	11 years and 10 months
Education Level (%)	Ph.D.	1.9	1.8	1.8
	Master's Degree	30.2	30.3	30.3
	Bachelor's	49.9	50.7	50.9
	High School	17.7	17.0	16.8
	Below High School	0.3	0.2	0.2

(II) Consolidated Employees information

Year		2017	2018	As of April 20, 2019
Number of employees	Management Personnel	121	117	114
	R&D and Technical Personnel	146	151	146
	Operators	0	0	0
	Total	267	268	260
Average age		38.9 years old	39.3 years old	39.4 years old
Average Length of Service		7 years and 10 months	8 years and 4 months	8 years and 6 months
Educational Level (%)	Ph.D.	0.0	0.0	0.0
	Master's Degree	34.8	34.7	34.6
	Bachelor's	63.3	63.4	63.5
	High School	1.9	1.9	1.9
	Below High School	0.0	0.0	0.0

IV. Environmental Protection Expenditures

(I) The Losses (Including Compensation) Caused by Environmental Pollution and the Total Fines in the Most Recent Fiscal Year and Up to the Printing Date ofthis Annual Report

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 Possible 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$160,109,000 in 2018.

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 Greenhouse Gas Inventory Management System," "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 2018, the Company won awards including the "Outstanding Recognition of Environmental Preservation and Landscape," the " Awarded with Outstanding Green Procurement Enterprise," 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, and peripheral equipment, etc., to fulfill its corporate social responsibilities.

(6) 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 do not use lead and halogen in manufacture process, and meet the requirements of the European Union's Substance of Very High Concern (SVHC).

(3) No "conflict minerals" are used in the products (conflict minerals refer to minerals such as gold, tin, tungsten, and tantalum obtained through exploiting labors 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 2018, 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 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.

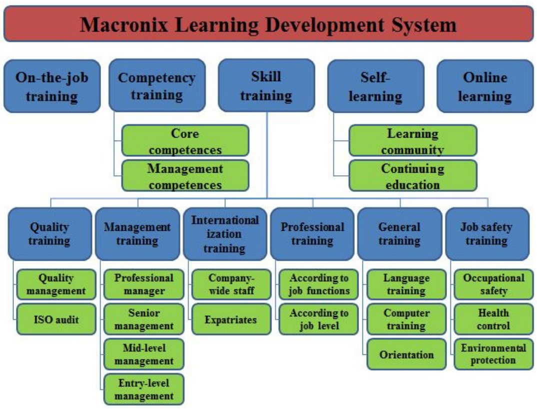
(II) Staff Training and Development

The Company held a total of 3,258 internal and external training courses in 2018. The average number of training hours was 24.25 hours. The total number of trainees was 77,714, and the total number of training hours was 98,226 hours. The total training cost was NT$8,602,146.

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 is 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, OHSAS 18001 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) The first company in Hsinchu Science Park to pass the "ISO 14064 Greenhouse Gas Management System" approved by the TAF (National Certification Foundation).

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 equipment (water, air, waste, toxic waste, and noise) and strictly monitoring the quality of the environment.

(4) Implementing "Green Procurement" to purchase equipment with the "Environmental Protection Label" from the Environmental Protection Administration or the "Energy Conservation Label" from the Ministry of Economic Affairs, such as 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 2018.

(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) 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) Providing a "fire and earthquake escape package" for employees on a business trip abroad in case of emergency.

(10) Assisting the Hsinchu Science Park Administration Bureau to organize the work safety and environmental protection promotion month, as well as assisting SMEs in establishing a safety and health management system.

3. Health Management

(1) Regularly holding employee health promotion activities and providing quality health management services.

(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) A dedicated unit collects the latest epidemic prevention information to strengthen the epidemic prevention management; providing vaccination services and gives "anti-epidemic packages" for employees on business trips abroad to protect their health.

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

(5) 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.

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

(7) Naming 2000 as the "beginning of sports;" encouraging employees to pursue a work-life balance by developing a good habit of regular exercise; offer employees flexibility to work out during work hours to promote physical fitness.

(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 2017.

(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" have 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) Losses Arising from Labor Disputes in the Most Recent Fiscal Year and Up to the Printing Date of this Annual Report, as well as Disclosure of Potential Current and Future Losses and Countermeasures

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
2014	The first work life balance competition "Work-Life Balance Award" and "Healthy and Happy Award"	Ministry of Labor, Executive Yuan
2014	Award from the Breastfeeding Room Competition	Public Health Bureau, Hsinchu City
2015	[Health Promotion Seal] from the Healthy Workplace Voluntary Promotion Health Promotion Seal	Health Administration, Ministry of Health and Welfare
2015	[Health Leadership Award] from the Excellent Healthy Workplace Competition	Health Administration, Ministry of Health and Welfare
2015	[Health Leadership Award] from the Healthy Workplace	Public Health Bureau, Hsinchu City
2015	[Award of Excellence] from the Breastfeeding Room Competition, Workplace Category	Public Health Bureau, Hsinchu City
2016	Awarded with Top Honor for an Accredited Healthy Workplace	Health Promotion Administration, Ministry of Health and Welfare
2016	Third Place in the Breastfeeding Room Competition, Workplace Category	Public Health Bureau, Hsinchu City
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	Gold Level	Responsible Business Alliance
2018	Health Promotion Seal	Health Promotion Administration, Ministry of Health and Welfare
2018	Healthy Workplace Creative Gold Award	Health Promotion Administration, Ministry of Health and Welfare

VI. Important Contracts

NO.	Agreement	Counterparty	Period	Major Contents	Restrictions
1	Technology Transfer	Industrial Technology Research Institute.	From 1997/02	MEPG-2 Audio Decoder	Intellectual property rights, use, confidentiality, etc.
2	Licensing	Cybernetics (United States)	From 2000/04	Low Rate Coder	Intellectual property rights, use, confidentiality, etc.
3	Licensing	Saifun (Israel)	2000/05~Expirationof Saifun NROM patents	〝NROM〞	Intellectual property rights, use, confidentiality, etc.
4	Licensing	Zoran (United States)	From 2000/06	TV decoder/ 3D color signal enhancement	Intellectual property rights, use, confidentiality, etc.
5	Licensing	ARM (United Kingdom)	From 2002/08	ARM technologies	Intellectual property rights, use, confidentiality, etc.
6	Licensing	Saifun (Israel)	From 2004/04	MLC Flash	Intellectual property rights, use, confidentiality, etc.
7	Licensing	Mentor Graphics (Ireland)	From 2005/07	Operating system technology	Intellectual property rights, use, confidentiality, etc.
8	Strategic Alliance	Tower (Israel)	From 2000/12	Tower Investment	Capacity, confidentiality, etc.
9	Licensing	Qimonda	From 2011/03	Certain Flash design	Use and confidentiality, etc.
10	Joint Development	IBM.(United States)	2016/01/22~ 2019/01/21	Phase Change Memory	Intellectual property rights, use, confidentiality, etc.

11	Licensing	Creative Integrated Systems, Inc. (United States)	From 2014/04	U.S. Patent 5,241,497, 5,812,461and related patens	Licensing Warranty, Disclaimer and confidentiality, etc.
12	Settlement	Spansion (United States)	From 2015/01	Then current worldwide, patent disputes	Settlement fees and confidentiality, etc.
13	Licensing	RPX Corporation (United States)	2016/12/15~ 2019/12/14	RPX and Round Rock Patents	Intellectual property rights, use, confidentiality, etc.
14	Distribution	Avnet, Inc.	From 2017/09	International market promotion	Confidentiality, Infringement, remedies, etc.
15	Procurement	SUMCO CORPORATION (Japan)	2018/01/01~ 2020/12/31	Raw material	confidentiality, etc.
16	Procurement	Global Wafer Co., Ltd.	2018/01/01~ 2019/12/31	Raw material	confidentiality, etc.
17	Syndicated Loans	Seven banks including Taiwan Cooperative Bank	2017/11/24~ 2022/12/18	NT$7.7 billion loan	Debt ratio, current ratio, interest coverage multiples, etc.
18	Settlement and Licensing	Toshiba Corporation/ Toshiba Memory Corporation	From 2018/10/09	Then current patent disputes in Taiwan, USA and Japan	licensing, settlement fees, confidentiality, etc.
19	Syndicated Loan	Nine banks including Taiwan Cooperative Bank	2019/02/25~ 2024/02/24	NT$8 billion loan	Debt ratio, current ratio, interest coverage multiples, etc.
20	Joint Development	IBM.(United States)	2019/01/22~ 2022/01/21	Phase Change Memory	Intellectual property rights, use, confidentiality, etc.

Chapter VI. Financial Summary

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

(I) Condensed Balance Sheets

1. Condensed Consolidated Balance Sheets

Unit: NT$ thousands

Item \ Year		Financial Information for the Last Five Fiscal Years				
		2014 (adjusted) (Note 1)	2015	2016	2017	2018
Current Assets		20,859,896	18,525,140	17,468,115	24,532,556	36,677,290
Property, Plant, and Equipment		21,128,358	16,596,123	15,500,459	16,258,622	19,308,675
Intangible Assets		238,343	109,017	29,824	45,808	45,223
Other Assets		2,615,978	2,397,382	2,546,117	3,356,913	3,017,633
Total Assets		44,842,575	37,627,662	35,544,515	44,193,899	59,048,821
Current Liabilities	Before Distribution	19,029,101	9,912,438	10,053,390	13,059,869	20,152,229
	After Distribution	19,029,101	9,912,438	10,053,390	14,864,645	Note 2
Non-current Liabilities		3,207,944	9,286,384	7,171,725	6,477,683	7,536,235
Total Liabilities	Before Distribution	22,237,045	19,198,822	17,225,115	19,537,552	27,688,464
	After Distribution	22,237,045	19,198,822	17,225,115	21,342,328	Note 2
Equity Attributable to Shareholders of the Parent		22,592,429	18,420,077	18,317,714	24,655,662	31,360,023
Share Capital		35,587,740	36,171,591	36,145,881	18,047,758	18,401,670
Capital Surplus		241,652	54,936	340,713	(207,088)	(56,241)
Retained Earnings	Before Distribution	(13,812,749)	(18,304,273)	(18,651,070)	5,413,602	14,077,527
	After Distribution	(13,812,749)	(18,304,273)	(18,651,070)	3,247,871	Note 2
Other Equity		734,847	656,884	641,251	1,560,451	(903,872)
Treasury Shares		(159,061)	(159,061)	(159,061)	(159,061)	(159,061)
Non-controlling Interests		13,101	8,763	1,686	685	334
Total Equity	Before Distribution	22,605,530	18,428,840	18,319,400	24,656,347	31,360,357
	After Distribution	22,605,530	18,428,840	18,319,400	22,851,571	Note 2

Note 1: The Company has adopted the International Financial Reporting Standards (IFRS) since 2013. Starting from 2015, the Company has adopted the 2013 version of IFRS and adjusted the balance in accordance with regulations. The adjustment for the new standards for 2014 is an increase of NT$172,698 thousand for total liabilities before distribution, and a decrease of NT$ 172,698 thousand for total equity before distribution.

Note 2: 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				
		2014 (After adjustment) (Note 1)	2015	2016	2017	2018
Current Assets		19,477,331	17,395,159	16,562,886	23,575,557	35,483,232
Property, Plant, and Equipment		20,527,244	16,014,250	14,974,723	15,781,321	18,829,669
Intangible Assets		173,972	69,285	21,945	44,149	42,755
Other Assets		4,625,667	4,092,118	3,949,425	4,809,653	4,689,353
Total Assets		44,804,214	37,570,812	35,508,979	44,210,680	59,045,009
Current Liabilities	Before Distribution	19,007,250	9,867,157	10,022,158	13,078,633	20,149,508
	After Distribution	19,007,250	9,867,157	10,022,158	14,883,409	Note 2
Non-current Liabilities		3,204,535	9,283,578	7,169,107	6,476,385	7,535,478
Total Liabilities	Before Distribution	22,211,785	19,150,735	17,191,265	19,555,018	27,684,986
	After Distribution	22,211,785	19,150,735	17,191,265	21,359,794	Note 2
Equity Attributable to Owners of the Company		22,592,429	18,420,077	18,317,714	24,655,662	31,360,023
Share Capital		35,587,740	36,171,591	36,145,881	18,047,758	18,401,670
Capital Surplus		241,652	54,936	340,713	(207,088)	(56,241)
Retained Earnings	Before Distribution	(13,812,749)	(18,304,273)	(18,651,070)	5,413,602	14,077,527
	After Distribution	(13,812,749)	(18,304,273)	(18,651,070)	3,247,871	Note 2
Other Equity		734,847	656,884	641,251	1,560,451	(903,872)
Treasury Shares		(159,061)	(159,061)	(159,061)	(159,061)	(159,061)
Non-controlling Interests		-	-	-	-	-
Total Equity	Before Distribution	22,592,429	18,420,077	18,317,714	24,655,662	31,360,023
	After Distribution	22,592,429	18,420,077	18,317,714	22,850,886	Note 2

Note 1: The Company has adopted the International Financial Reporting Standards (IFRS) since 2013. Starting from 2015, the Company has adopted the 2013 version of IFRS and adjusted the balance in accordance with regulations. The adjustment for the new standards for 2014 is an increase of NT$172,698 thousand for total liabilities before distribution, and a decrease of NT$ 172,698 thousand for total equity before distribution.

Note 2: 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				
	2014 (After Adjustment)	2015	2016	2017	2018
Net Operating Revenue	22,414,213	20,927,770	24,124,973	34,196,916	36,953,032
Gross Profit	2,894,103	2,511,970	5,836,120	12,634,711	13,926,319
Income from Operations	(6,315,435)	(5,003,776)	(357,623)	5,753,206	6,509,338
Non-operating Income and Expenses	(146,569)	822,893	(113,431)	(216,729)	2,755,049
Income (loss) before Income Tax	(6,462,004)	(4,180,883)	(471,054)	5,536,477	9,264,387
Net Income (Loss) from Continuing Operations	(6,475,527)	(4,195,941)	(246,795)	5,517,309	8,992,849
Income from Discontinued Operations	-	-	-	-	-
Net Income (Loss)	(6,475,527)	(4,195,941)	(246,795)	5,517,309	8,992,849
Other Comprehensive Income, net of income tax	409,116	(323,735)	(76,995)	606,648	(943,048)
Total Comprehensive Income	(6,066,411)	(4,519,676)	(323,790)	6,123,957	8,049,801
Net Income (loss) Attributable to Shareholders of the parent	(6,453,811)	(4,187,669)	(243,013)	5,517,847	8,993,006
Net Income Attributable to Non-controlling interest	(21,716)	(8,272)	(3,782)	(538)	(157)
Comprehensive Income Attributable to Shareholders of the parent	(6,045,099)	(4,511,362)	(318,879)	6,124,501	8,049,958
Comprehensive Income Attributable to Non-controlling interest	(21,312)	(8,314)	(4,911)	(544)	(157)
Earnings (Loss) Per Share	(3.66)	(2.37)	(0.14)	3.06	4.94

Note: The Company has adopted the International Financial Reporting Standards (IFRS) since 2013. Starting from 2015, the Company has adopted the 2013 version of IFRS and adjusted the balance in accordance with regulations. The adjustment for the new standards for 2014 is an increase of NT$7,397 thousand for operating profit and loss, a decrease of NT$78,163 thousand for other comprehensive income, and a decrease of NT$70,766 thousand for comprehensive income.

2. Parent Company Only Statements of Comprehensive Income

Unit: NT$ thousands

Item \ Year	Financial Information for the Last Five Fiscal Years				
	2014 (After Adjustment)	2015	2016	2017	2018
Net Operating Revenue	22,054,390	20,537,429	23,733,107	33,500,949	36,280,727
Gross Profit	2,581,937	2,100,590	5,376,827	11,937,095	13,297,451
Income from Operations	(5,736,790)	(4,570,129)	(123,382)	5,530,009	6,391,270
Non-operating Income and Expenses	(716,896)	382,460	(351,554)	(12,162)	2,847,107
Income (Loss) before income tax	(6,453,686)	(4,187,669)	(474,936)	5,517,847	9,238,377
Net Income (Loss) from Continuing Operations	(6,453,811)	(4,187,669)	(474,936)	5,517,847	8,993,006
Income from Discontinued Operations	-	-	-	-	-
Net Income (Loss)	(6,453,811)	(4,187,669)	(243,013)	5,517,847	8,993,006
Other Comprehensive Income, net of income tax	408,712	(323,693)	(75,866)	606,654	(943,048)
Total Comprehensive Income	(6,045,099)	(4,511,362)	(318,879)	6,124,501	8,049,958
Net Income (Loss) Attributable to Shareholders of the parent	(6,453,811)	(4,187,669)	(243,013)	5,517,847	8,993,006
Net Income Attributable to Non-controlling interest	-	-	-	-	-
Comprehensive Income Attributable to Shareholders of the parent	(6,045,099)	(4,511,362)	(318,879)	6,124,501	8,049,958
Comprehensive Income Attributable to Non-controlling interest	-	-	-	-	-
Earnings (Loss) Per Share	(3.66)	(2.37)	(0.14)	3.06	4.94

Note: The Company has adopted the International Financial Reporting Standards (IFRS) since 2013. Starting from 2015, the Company has adopted the 2013 version of IFRS and adjusted the balance in accordance with regulations. The adjustment for the new standards for 2014 is an increase of NT$7,397 thousand for operating profit and loss, a decrease of NT$78,163 thousand for other comprehensive income, and a decrease of NT$70,766 thousand for comprehensive income.

(III) Independent Auditors' Opinions Over Last Five Fiscal Years

Year	Name of CPA	Audit opinions
107	Ming Hui Chen, Ching Pin Shih	An Unmodified Opinion
106	Ming Hui Chen, Ching Pin Shih	An Unmodified Opinion
105	Ming Hui Chen, Ching Pin Shih	An Unmodified Opinion
104	Ming Hui Chen, Hung Wen Huang	An Unqualified Opinion with an explanatory paragraph
103	Ming Hui Chen, Hung Wen Huang	An Unqualified Opinion

Note: The new auditing standard of the Republic of China requires "An unqualified opinion" be replaced by "An unmodified opinion" from 2016.

II. Financial Analysis for the Last Five Fiscal Years

1. Consolidated Financial Analysis - IFRS

Items analyzed (Note 2)	Year	Financial analysis for the last Five fiscal years				
		2014 (After restatement)	2015	2016	2017	2018
Financial Structure Analysis (%)	Debt ratio	49.59	51.02	48.46	44.21	46.89
	Long-term capital to property, plant and equipment ratio	122.17	167.00	164.45	191.49	201.45
Liquidity Analysis (%)	Current ratio	109.62	186.89	173.75	187.85	182.00
	Quick ratio	57.70	90.59	100.98	110.85	90.76
	Interest coverage multiples	(21.96)	(12.88)	(0.55)	26.68	65.63
Operating performance Analysis	Accounts receivable turnover (times)	6.94	6.47	6.95	7.30	7.25
	Days Sales Outstanding	52.59	56.41	52.51	50.00	50.34
	Inventory turnover (times)	2.07	1.93	2.22	2.54	1.65
	Average payable turnover (times)	9.40	9.67	6.67	4.34	2.60
	Average Inventory turnover days	176.32	189.11	164.41	143.70	221.21
	Property, plant and equipment turnover (times)	0.94	1.11	1.50	2.15	2.08
	Total assets turnover (times)	0.45	0.51	0.66	0.86	0.72
Profitability Analysis	Return on total assets (%)	(12.63)	(9.57)	0.02	14.29	17.65
	Return on equity (%)	(25.28)	(20.45)	(1.34)	25.68	32.11
	Pre-tax income to paid-in capital ratio (%)	(18.16)	(11.56)	(1.30)	30.67	50.34
	Net income ratio (%)	(28.89)	(20.05)	(1.02)	16.13	24.34
	Basic Earnings per share (NT$)	(3.66)	(2.37)	(0.14)	3.06	4.94
Cash flow	Cash flow ratio (%)	1.54	17.18	53.93	53.86	50.08
	Cash flow adequacy ratio (%)	29.62	22.06	56.89	87.65	100.94
	Cash reinvestment ratio (%)	0.25	1.35	4.30	5.30	5.83
Leverage	Operating leverage	(0.20)	(0.18)	(4.71)	1.34	1.33
	Financial leverage	0.96	0.94	0.54	1.04	1.02

Analysis of deviation over 20% for the last two years.:

- An increase in interest coverage multiples: Mainly due to the increase in the pre-tax interest income in 2018.
- A decrease in inventory turnover: Mainly due to the increase in net inventory in 2018.
- A decrease in average payable turnover Mainly due to the increase in payables in 2018.
- An increase in average inventory turnover days: Mainly due to a decrease in inventory turnover in 2018.
- An increase in return on total assets: Mainly due to the increase in net income after tax in 2018.
- An increase in return on equity: Mainly due to the increase in net income after tax in 2018.
- An increase in pre-tax income to the paid-in capital ratio: Mainly due to the increase in net income before tax in 2018.
- An increase in net income ratio: Mainly due to the increase in net income after tax in 2018.
- An increase in basic earnings per share: Mainly due to the increase in net income after tax in 2018.

Note 1: As of 2013, the Company has adopted the 2010 version of the International Financial Reporting Standards (IFRS). As of 2015, the Company has adopted the 2013 Version of IFRS and adjusted the 2014 financial statements retrospectively.

Note 2: Please refer to page 113 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 last Five fiscal years				
		2014 (After restatement)	2015	2016	2017	2018
Financial Structure Analysis (%)	Debt ratio	49.58	50.97	48.41	44.23	46.89
	Long-term capital to property, plant and equipment ratio	125.67	172.99	170.20	197.27	206.56
Liquidity Analysis (%)	Current ratio	102.47	176.29	165.26	180.26	176.10
	Quick ratio	50.87	80.49	93.71	103.95	85.16
	Interest coverage multiples	(21.94)	(12.90)	(0.56)	26.59	65.44
Operating Performance Analysis	Accounts receivable turnover (times)	6.79	6.21	6.47	6.71	7.02
	Days Sales Outstanding	53.75	58.77	56.41	54.39	51.99
	Inventory turnover (times)	2.08	1.94	2.25	2.56	1.66
	Average payable turnover (times)	9.40	9.69	6.69	4.34	2.59
	Average inventory turnover days	175.48	188.14	162.22	142.57	219.87
	Property, plant and equipment turnover (times)	0.95	1.12	1.53	2.18	2.10
	Total assets turnover (times)	0.45	0.50	0.65	0.84	0.70
Profitability Analysis	Return on total assets (%)	(12.60)	(9.56)	0.03	14.29	17.65
	Return on equity (%)	(25.23)	(20.42)	(1.32)	25.68	32.11
	Pre-tax income to paid-in capital ratio (%)	(18.13)	(11.58)	(1.31)	30.57	50.20
	Net income ratio (%)	(29.26)	(20.39)	(1.02)	16.47	24.79
	Basic Earnings per share (NT$)	(3.66)	(2.37)	(0.14)	3.06	4.94
Cash Flow	Cash flow ratio (%)	4.00	19.71	54.99	52.50	51.59
	Cash flow adequacy ratio (%)	32.35	26.36	65.72	88.36	104.79
	Cash reinvestment ratio (%)	0.64	1.55	4.40	5.19	6.07
Leverage	Operating leverage	(0.30)	(0.27)	(15.21)	1.36	1.33
	Financial leverage	0.95	0.94	0.29	1.04	1.02

Analysis of deviation over 20% for the last two years.:

- An increase in interest coverage multiples: Mainly due to the increase in the income tax and pre-tax interest in 2018.
- A decrease in inventory turnover: Mainly due to the increase in net inventory in 2018.
- A decrease in average payable turnover: Mainly due to the increase in payables in 2018.
- An increase in average inventory turnover days: Mainly due to a decrease in inventory turnover in 2018.
- An increase in return on total assets: Mainly due to the increase in net income after tax in 2018.
- An increase in return on equity: Mainly due to the increase in net income after tax in 2018.
- An increase in pre-tax income to the paid-in capital ratio: Mainly due to the increase in net income before tax in 2018.
- An increase in net income ratio: Mainly due to the increase in net income after tax in 2018.
- Increase in basic earnings per share: Mainly due to the increase in net income after tax in 2018.

Note 1: Starting from 2013, the Company has adopted the 2010 version of the International

Financial Reporting Standards. Since 2015, the Company has adopted the 2013 Version of International Financial Reporting Standards and adjusted the 2014 financial statements retrospectively.

Note 2: 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 3)
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 4)
6. Leverage
   (1) Operating Leverage = (Net Operating Revenue - Variable Operating Costs and Expenses) / Operating Income (Note 5).
   (2) Financial Leverage = Operating Income / (Operating Income - Interest Expenses).

Note 3: 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 4: 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 5: 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 6: 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 Year

Audit Committee’s Report

To: 2019 Annual Shareholders’ Meeting of Macronix International Co., Ltd.

The 2018 Financial Statements of the Company (including the parent company only financial statements), the 2018 Business Report, and the proposed 2018 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: Chiang Kao

Independent director: John C.F. Chen

Dated: March 12, 2019

IV. Financial Statements for the Most Recent Year: Please refer to pages 132 to 213 of this annual report.

V. Stand-Alone Financial Statements for the Most Recent Year Certified By the Accountant: Please refer to pages 214 to 287 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	2018	2017	Difference	%
Current Assets	36,677,290	24,532,556	12,144,734	49.50%
Non-current Assets	22,371,531	19,661,343	2,710,188	13.78%
Total Assets	59,048,821	44,193,899	14,854,922	33.61%
Current Liabilities	20,152,229	13,059,869	7,092,360	54.31%
Non-current Liabilities	7,536,235	6,477,683	1,058,552	16.34%
Total Liabilities	27,688,464	19,537,552	8,150,912	41.72%
Equity Attributed to Shareholders of the Parent	31,360,023	24,655,662	6,704,361	27.19%
Non-controlling Interest	334	685	(351)	(51.24%)
Total Equity	31,360,357	24,656,347	6,704,010	27.19%

If the difference in comparison with the previous period exceeds 20%, and the amount exceeds NT$10 million, the main reason and the impact are analyzed as follows:

- Current Assets: The increase in cash, cash equivalents, and inventory caused an increase in current assets.
- Total Assets: The increase in current assets caused an increase in total assets.
- Current Liabilities: The increase in accounts payable - related parties caused an increase in current liabilities.
- Total Liabilities: The increase in current liabilities caused an increase in total liabilities.
- Equity Attributed to Shareholders of the Parent Company: The increase in unappropriated earnings caused the increase in the parent company's equity.
- Total Equity: The increase in unappropriated earnings caused the increase in total equity.

II. Analysis of Financial Performance

Unit: NT$ thousands

Item	2018	2017	Difference	%
Net Operating Revenue	$36,953,032	$34,196,916	$2,756,116	8.06%
Operating Costs	23,026,713	21,562,205	1,464,508	6.79%
Gross Profit	13,926,319	12,634,711	1,291,608	10.22%
Realized (Unrealized) Gains from the Affiliated Companies	-	-	-	-
Realized Gross Profit	13,926,319	12,634,711	1,291,608	10.22%
Operating Expenses	7,416,981	6,881,505	535,476	7.78%
Income from Operations	6,509,338	5,753,206	756,132	13.14%
Non-operating Income and Expenses	2,755,049	(216,729)	2,971,778	1371.20%
Net Income before Tax	9,264,387	5,536,477	3,727,910	67.33%
Income Tax Expenses	271,538	19,168	252,370	1316.62%
Net Income for the Year	8,992,849	5,517,309	$3,475,540	62.99%
Other Comprehensive Income (Loss)	(943,048)	606,648	(1,549,696)	(255.45%)
Total Comprehensive Income for the Year	$8,049,801	$6,123,957	$1,925,844	31.45%

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

- Non-operating income and expenses: The property rights income in 2018 caused an increase from 2017.
- Net Income before Tax: The increase in operating income and non-operating income in 2018 caused the increase from 2017.
- Income Tax Expense: The increase in the taxable amount of non-operating income in 2018 caused the increase from 2017.
- Net Income for the Year: The increase in net operating income and non-operating income in 2018 caused an increase from 2017.
- Other Comprehensive Income (Loss): The increase on other comprehensive loss in unrealized loss on investment in equity instruments at FVTOCI in 2018 caused a decrease from 2017.
- Total Comprehensive Income for the Year: The increase in operating income and non-operating income in 2018 caused the increase from 2017.

III. Analysis of Cash Flow

(I) Cash Flow Analysis and Remedy for Liquidity Shortfall

Unit: NT$ thousands

Cash Balance 12/31/2017①	Net Cash Provided by Operating Activities in 2018②	Net Cash used in Investing and Financing Activities in2018③	Cash Balance 12/31/2018 ①+② -③	Remedy for Liquidity shortfall	
				Investing plan	Financing plan
8,633,183	10,091,608	(5,113,289)	13,611,502	None	None

Note 1: Analysis of net cash change in 2018

(1) NT$10,091.6 million net cash generated by operating activities：mainly from net income and depreciation expenses.

(2) NT$4,851.9 million net cash used in investing activities：primarily for capital expenditures.

(3) NT$621.9 million net cash used in financing activities：primarily for cash dividend payment.

(4) NT$360.6 million 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 paying capital expenditures and cash dividends by bank financing and cash on hand.

IV. Recent Years Major Capital Expenditures and Impact on Financial and Business

(I) Capital Expenditure and Source of Funds

Unit: NT$ thousands

Project	Actual or Planned Source of Capital	Actual use of Capital			Total Amount
		2016	2017	2018	(2016 until 2018)
Production equipment and advanced process equipment	Self-owned funds, bank borrowings	923,158	2,220,308	4,861,806	8,005,272

(II) Expected Benefits

Base on capital expenditures listed above, the company could enhance the ability of high-end production process and reduce unit costs to strengthen 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 2.7% of the total assets. The dividend income for fiscal year 2018 was NT$105,698 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

Under the influence of the US-China trade uncertainty, China's economic growth has slowed down. Coupled with political and economic turmoil in Europe, international institutions predict that the growth momentum for the global and major economies will slow down in 2019. In response to the uncertainty of the international economic outlook, the Central Bank estimates that the economic growth momentum of 2019 will be slightly lower than that of 2018, and therefore, on March 21st, 2019, decided during the meeting of the Board of Supervisors to maintain the current interest rate. The interest rate of the domestic financial market is still low.

The Company regularly assesses the changes in bank loan rates and actively negotiates with banks to reduce interest rates or take relevant measures to reduce the impact of interest rate fluctuations on the Company's overall operations.

2. Foreign exchange rate

As the US-China trade conflict continues, the global financial market volatility intensifies. 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 80% 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. The Company's net profit on foreign exchange in 2018 was NT$245,559,000.

3. Inflation

Due to the slowdown in global and major economies in 2019, international oil prices are expected to fall with moderate effective domestic demands. Taiwan's inflation rate is forecast to be 0.91% in 2019. Inflationary pressures and expectations are still moderate, with limited impacts on the Company's profit and loss.

(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 2018 to the printing date ofthis 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 19nm 2D NAND Flash and subsequent micrographic technology development.
   - (3) The manufacturing process of the 48nm NOR Flash and subsequent derivative developments.
3. Product
   - (1) High capacity 3D NAND Flash.
   - (2) High storage capacity 2D NAND Flash.
   - (3) High speed and automotive NOR Flash.
4. Quality and Testing
   - (1) Development of quality certification and production processes for automobiles.

※ Expected Expenditure for R&D:

The estimated R&D expenditure for 2019 is approximately NT$3.4 billion. (The expenditure includes personnel costs, equipment royalty, patent rights, trademark application fee, etc.)

(V) 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 operations and adjusts accordingly. The followings are the important domestic and overseas policies and laws change in 2018 and the Company's countermeasures:

1. Amendments of certain provisions of the Income Tax Act proposed by the Ministry of Finance was passed by the Executive Yuan on October 12, 2017. The amendments were announced by the President on February 7, 2018, and were implemented on January 1, 2018. The main amendments include increasing business income tax rate from 17% to 20%, decreasing income tax rate for a surtax on unappropriated retained earnings from 10% to 5%, abolishing the imputation system for an integrated income tax system, and deleting deductible tax accounts set up by profit-seeking enterprises for shareholders. The increase of income tax rate will raise the Company's costs.
2. The FSC announced on January 1, 2018, that following the international trend, the IFRS 9 Financial Instruments would be adopted. The FSC also revised certain provisions of the Regulations Governing the Preparation of Financial Reports by Securities Issuers. The Company has prepared the financial statements accordingly
3. The FSC announced on December 19, 2017, that IFRS 16 Leases (hereinafter "IFRS 16") would be adopted on January 1, 2019. The Company has completed the assessment and application. The effect of the application has been disclosed in the 2018 financial statements.
4. On April 27, 2018, the Ministry of Finance issued Amended Decree No.10704538150, "Regulations Governing Application of Deferred Taxation of Income Tax in Accordance with the Statute for Industrial Innovation" and the entire 12 articles, implemented from November 24, 2017, to December 31, 2019. In addition, the Ministry of Finance issued Decree No.10704685480 on December 27, 2018, to amend Articles 6 and 7, stipulating that if the employees obtain share-based payment as rewards and meet certain conditions, they may choose to use the actual transfer price or the price at which the stock was acquired or can be disposed of for income tax to be calculated. The Company will comply accordingly.
5. In order to improve the anti-tax avoidance mechanism, the Ministry of Finance set the "Regulations Governing Recognition of Income from Controlled Foreign Companies for Profit-seeking Enterprises" in the Decree No.10700675990 of December 14, 2018. The regulations prevent profit-seeking enterprises from founding controlled foreign companies with no actual operation in countries or regions with low taxes and reserving the surplus instead of distributing it to evade the obligation of paying local taxes. This obliges certain companies to bear the same tax expenses with other profit-making businesses that declare taxes in good faith. This way, the profit controlled by offshore companies should be incorporated into the parent company's business income tax regardless of allocation, which increases tax costs for companies. The Company has always paid tax in accordance with regulations. No material impact on the Company's tax expenses is expected.
6. The amendment of the Company Act was announced by the President on August 1, 2018. A total of 148 articles of the Company Act have been amended. After implementation, certain provisions have to be set out in the Articles of Incorporation prior to application. The amendments mainly include items such as the number of times of earnings distribution, the issuance and conversion of no par value stock, employee rewards distribution (the employees entitled to rewards include the ones of the controlling or subordinate companies

that meet certain criteria, as stipulated in the Articles of Incorporation), improving the authority and responsibilities of the directors and supervisors as well as the management system. The Company will comply with the laws and strengthen its corporate governance.

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

The electronics industry and semiconductor market are fluctuated by the business cycle and the rapid changes in product demands. The global memory market faces uncertainties such as the US and China's trade negotiations, which slowed down the overall demand. As a result, the oversupply drives prices dropped, causing an impact on revenue and profitability. However, Macronix has won over customer trust with high-quality and reliable products and services. Therefore, the Company has kept its product prices and steady growth.

R&D innovation is Macronix's aim, as well as the foundation for the Company's sustainable development. In view of the high-capital and technology-intensive nature of the semiconductor industry, Macronix must continuously improve productive and process technologies to reduce costs and maintain product competitiveness. Since its establishment, Macronix has focused on the research of forward-looking memory technology and the development of self-owned products. Through long-term strategic cooperation with major international technological companies, Macronix has cultivated advanced technology capabilities. Up to the end of 2018, Macronix has accumulated a total of 7,640 patents all over the world. The fruitful R&D results and strong IP foundation continue to strengthen the Company's value and long-term development.

With the development of AI and the integration of cloud computing, Big Data, and the Internet of Things (IoT), the application of memory chips has become more extensive. In order to meet the current high-performance and highly reliable trends in applications, the Company has launched extremely rapid octa flash and Read-While-Write (RWW) flash memories which are greatly efficient and reliable. The Company has also satisfied customer demands by responding to the latest features of the automotive system and safety regulation updates in a timely manner. The products have been adopted in the dashboard for the latest vehicle models by the international automobile industry. Moreover, in addition to meeting the rigorous automotive electronic verification standard AEC-Q100, Macronix also passed the IATF 16949 certification for the automotive industry quality management system in 2018. The stringent demand for quality is the signature and advantage of Macronix. Consequently, the Company received recognition and trust from high-end application customers and was selected as either a high-quality supplier or a long-term partner.

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

None.

(VII) Expected Benefits and Potential Risks of Merger and Acquisition: None.

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

The Company plans production capacity according to the market conditions, customer needs, as well as requirements of the product and technology development. In response to market and operational needs, the Company expects to invest NT$14.2 billion in capital expenditures in expanding the 12-inch fab's high-end capacity and the R&D of manufacturing process technologies. This will enable NAND Flash to advance to 19 nm and NOR Flash to 55nm. Besides creating higher revenue and profits through the mass production of high-end products, the Company is also investing in the R&D project of 3D NAND. By dedicating to the 96-layer process technology and products, as well as developing key technologies for future mainstream memory, the Company's competitiveness can be enhanced. The Company hopes to become a major supplier in this field to further increase profitability and meet customer needs. The Company will continue to monitor market changes to keep abreast of the operations and possible changes and plan accordingly in a timely manner. Through the implementation of forecast and management mechanisms, operational risks could be reduced.

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

The Company's main raw materials include silicon wafers, chemicals, and gases for production. If the demand for raw materials increases rapidly, the market price will go up and have a negative impact on the gross profit of the Company's products. It may also heighten the risks of not being able to meet the customers' needs. To ensure customers' recognition and trust, the Company's procurement policy focuses on stable sources, quality, as well as meeting the requirements of environmental regulations to fulfill its social responsibilities. In the meantime, the Company continues to source new suppliers to enhance cost competitiveness and reduce unexpected risks in the supply chain.

The Company has a relatively flexible production and stock inventory model for adapting to changes in major customers' needs. The Company's major customers are world-class corporations. In order to reduce risks resulting from the concentration of sales, the Company works closely with its customers to become long-term partners. This has always been the Company’s sales strategy. Furthermore, the Company stays up-to-date with the rapid changes in the electronics industry and actively expands new markets. In addition to consumer, communications, and computers electronics, the Company has successfully branched into sectors including automotive, industrial, IoT, smart applications, and wearables electronics so as to reduce the risk of changes in major customers' needs and the market volatility.

(X) The Impact of Mass Transfer of Equity or Change by Directors, Supervisors, or Shareholders with over than 10% Interest on the Company, Associated Risks and Response Measures: None.

(XI) The Impact of Change of Operating Rights on the Company, Associated Risk and Response Measures: None.

(XII) Litigious or Non-litigious Events

In addition to certain trademarks applications, the Company’s major disputes in 2018 are as follows:

1. For certain US patents dispute with Toshiba Corporation, and Toshiba Memory Corporation (individually or collectively "Toshiba") in the United States, the United States International Trade Commission ("ITC") ruled in favor of the Company on October 9, 2018(US time), which have been settled by Toshiba’s payments of additional 40 million USD to the Company.
2. With respect to the patent infringement claim of Toshiba for its Taiwan patent (I407450/I496160) and/or its Japanese patents (JP4510060/JP3660503/JP3853981), and the Company’s patent infringement claim against Toshiba and its affiliated companies, including Phison Electronics corporation, the parties agreed to be settled by Toshiba’s payments of 40 million USD to the Company.
3. For items 1 & 2 above, the parties have signed settlement agreement and cross license

agreements on October 9, 2018 for around 30 patents/each.

(XIII) Other Important Risks and Countermeasures:

1. Information Security Risk Assessment

The rapid technological development of mobile devices and the Internet in recent years has brought great convenience and efficiency to individuals and corporations. However, threats to information security have also become commonplace. Should a major information security breach occur, the Company's information assets could face intentional/accidental internal/external threats and damage, causing confidential information to lose its confidentiality, usability, and integrity. This could have a major impact on the Company's competitiveness, business operations, and even financial performance and reputation.

Macronix set up the "Information Security Committee" to establish an information security policy as well as promote various information security management measures to reduce the risk of a breach of information security. The committee is also dedicated to lowering the risks of any potential management incident to an acceptable degree to ensure the Company's normal operations. The preventative measures include establishing appropriate safety control mechanisms for the use of computers, regulatory information devices, and network resources. Confidential information is protected by measures such as classification, labeling, and external delivery control. Information security breach alert procedures are established. In the worst-case scenario, threats can be addressed in a timely manner to contain the damage and impact. Since expensive or complicated management measures and tools can't play their roles if the staff lack adequate security awareness, it is strengthened through annual education and training. The e-newsletter is also in place to promote information security so that all employees can do their parts in the Company's information security.

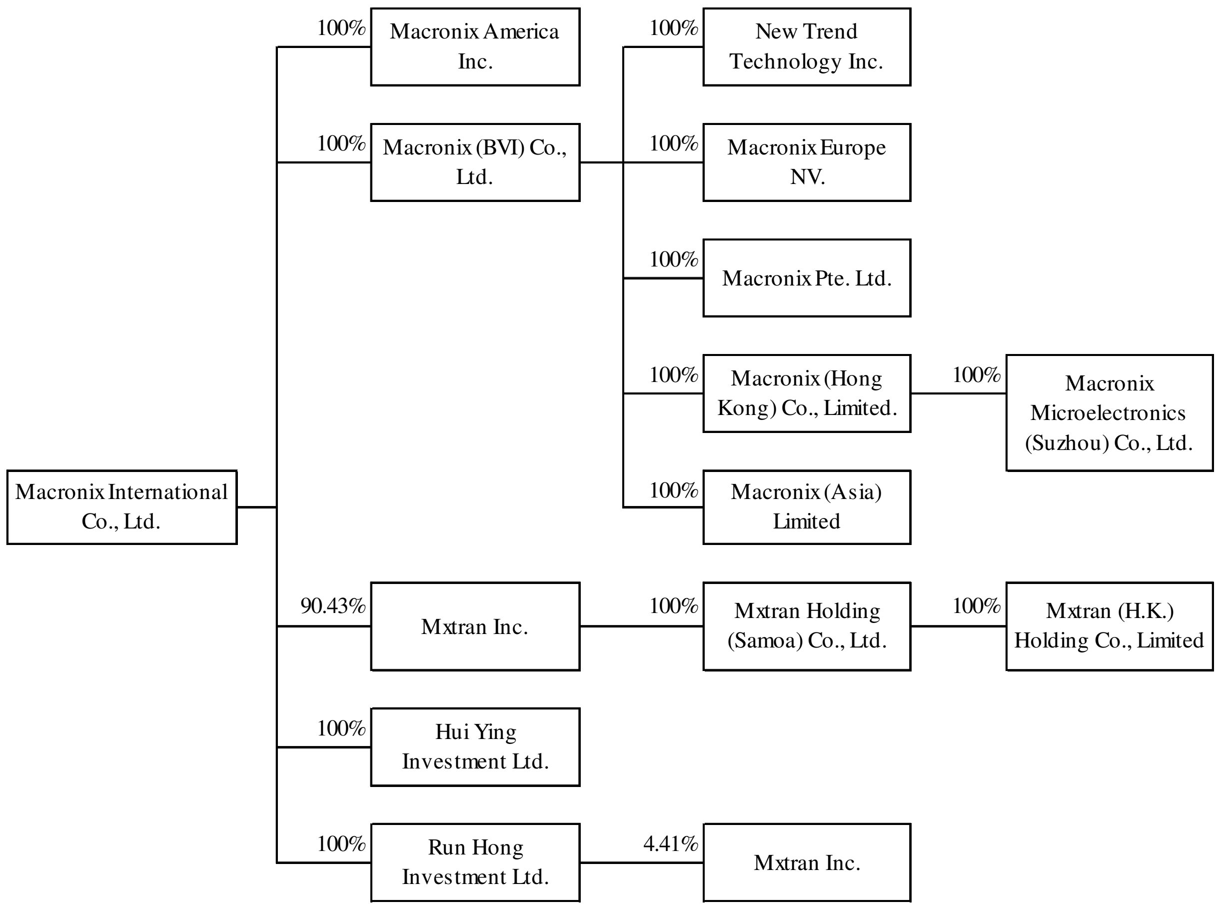
VII. Other Significant Events: None.

Chapter VIII. Special Disclosure

I. Summary of Affiliated Companies (Ended on December 31st, 2018)

(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 Milpitas, CA95035	US$100	Sales and marketing
Macronix (BVI) Co., Ltd.	February,1997	Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG1110, British Virgin Islands	US$212,048	Investment holding company
Hui Ying Investment Ltd.	May,1998	20F, 4, Min-Chuan E. Road, Sec.3, Taipei, Taiwan, R.O.C	NT$500,000	Investment
Run Hong Investment Ltd.	October,2001	19F, 4, Min-Chuan E. Road, Sec. 3, Taipei, Taiwan, R.O.C	NT$984,432	Investment
Mxtran Inc.	August.2006	9F, 16, Li-Hsin Road, Science Park, Hsinchu, Taiwan, R.O.C	NT$770,000	Combi-SIM IC and related services
Mxtran Holding (Samoa) Co., Ltd.	May,2009	Portcullis Chambers, P.O. Box 1225, Apia, Samoa	US$1,170	Investment holding company
Mxtran (H.K.) Holding Co., Limited	June,2009	Rm 1702, Sino Centre 582-592 Nathan Road, Mongkok, Hong Kong	US$790	Investment holding company
New Trend Technology Inc.	January,1999	680 N. McCarthy Blvd Milpitas, CA95035	US$26,850	IC design
Macronix Europe NV.	July,1999	Koningin, Astridlaan 49, Bus 6,1780 Wemmel, Belgium	EUR 62	After-sales services
Macronix Pte. Ltd.	August,2000	1 Marine Parade Central #11-03 Parkway Centre, Singapore 449408	SDG 174	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.	NT$11,500	Sales and marketing
Macronix Microelectronics (Suzhou) Co., Ltd.	September,2005	No.55, Su Hong Xi Street, Suzhou Industrial Park, SuZhou City, Jiangsu, China	RMB 63,996	development of integrated circuit system and software
Macronix (Asia) Limited	October,2004	Grand Pavilion, Hibiscus Way, 802 West Bay Road, P.O. Box 31119, KY1-1205, Cayman Islands	US$700	Investment holding company

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	Chih-Yuan Lu	0	0%
	Director	Miin Chyou Wu	0	0%
	Director	Dang-Hsing Yiu	0	0%
	President	Ya-Sheng Yang	0	0%
Macronix (BVI) Co., Ltd.	Director	Miin Chyou Wu	0	0%
Hui Ying Investment Ltd.	Director	Macronix International Co., Ltd. Representative: Miin Chyou Wu	-	100%
Run Hong Investment Ltd.	Director	Macronix International Co., Ltd. Representative: Miin Chyou Wu	-	100%
Mxtran Inc.	Chairman of the Board	Miin Chyou Wu	120,000	0.16%
	Director	Macronix International Co., Ltd. Representative: Dang-Hsing 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: Pei-Fu 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	Pei-Fu Yeh	0	0%
Macronix Europe NV.	Chairman of the Board	Ful-Long Ni	0	0%
	Director	Miin Chyou Wu	1	0%
	Director	Chih-Yuan Lu	0	0%
	Director	Pei-Fu Yeh	0	0%
	Director	Jon-Ten Chung	0	0%
	President	Timothy Pusey	0	0%

Company Name	Directors, Supervisors, and President		Shares Held	
	Title	Name or Representative	Number of Shares	Percentage of Shares
Macronix Pte. Ltd.	Director	Jon-Ten Chung	0	0%
	Director	Ful-Long Ni	0	0%
	Director/ President	Tan Siah Cheae	0	0%
Macronix (Hong Kong) Co., Limited.	Director	Miin Chyou Wu	0	0%
	Director	Chih-Yuan Lu	0	0%
	Director	Ful-Long Ni	0	0%
	Director	Pei-Fu Yeh	0	0%
	Director	Jon-Ten Chung	0	0%
	President	Hao-Wei Hsieh	0	0%
Macronix Microelectronics (Suzhou) Co., Ltd.	Executive Director	Miin Chyou Wu	0	0%
	President	Hsieng-Hung Chang	0	0%
	Supervisor	Hsiu-Mei Lin	0	0%
Macronix (Asia) Limited	Director	Miin Chyou 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	348,497	181,851	166,646	1,830,975	62,916	46,907	469.07
Macronix (BVI) Co., Ltd.	6,977,791	1,923,204	125	1,923,079	-	(42)	70,848	0.33
Hui Ying Investment Ltd.	500,000	97,350	100	97,250	-	(100)	8,394	NA
Run Hong Investment Ltd.	984,432	13,919	100	13,819	-	(100)	(150)	NA
Mxtran Inc.	770,000	10,191	3,719	6,472	8,900	(3,017)	(3,043)	(0.04)
Mxtran Holding (Samoa) Co., Ltd.	35,979	1,058	-	1,058	-	-	2	-
Mxtran (H.K.) Holding Co., Limited	23,880	450	-	450	-	-	1	-
New Trend Technology Inc.	882,141	299,389	-	299,389	-	(6,674)	(6,697)	(0.25)
Macronix Europe NV.	2,106	129,726	10,632	119,094	150,144	11,122	9,352	9,352
Macronix Pte. Ltd.	3,291	19,792	335	19,457	21,415	1,020	1,030	5.92
Macronix (Hong Kong) Co., Limited.	378,427	1,235,303	494,627	740,676	5,456,705	27,258	54,904	0.61
Macronix Microelectronics (Suzhou) Co., Ltd.	296,160	450,931	71,015	379,916	272,311	10,637	21,563	NA
Macronix (Asia) Limited	23,035	71,358	6,917	64,441	96,719	5,879	4,365	6.24

(II) Consolidated Financial Statements: please refer to page 133 of this annual report.

(III) Affiliation Report: None.

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

III. Subsidiaries’ Holding or Disposing the Company’s Sharesin 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$500,000	Parent company	100%	2018	None	None	None	1,956,619 shares NT$45,883 (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$23.45 per share on April 19, 2019.

IV. Other Necessary Supplement: 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, 2018 and 2017 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, 2018 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 the International Financial Reporting Standards 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

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Miin Wu
Chairman

March 12, 2019

Deloitte.

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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. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated balance sheets as of December 31, 2018 and 2017, 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, 2018 and 2017, 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, 2018. 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 Company's consolidated financial statements for the year ended December 31, 2018 are stated as follows:

<u>Recognition of revenue</u>

The Group operates principally as a supplier of memory chips. For the year ended December 31, 2018, the revenue recognized was NT$36,953,032 thousand, increasing by 8% compared to that of last year. Due to the market rebound of memory chips, the Group released certain sales orders by temporarily increasing the credit line. As such, this gives the rise of the potential risk of overstating sales. We therefore considered that testing the existence and occurrence of sales is a key audit matter of the current period.

Our audit procedures performed included, but not limited to, the following:

1. We evaluated the appropriateness of the Group's accounting policies relating to revenue recognition;

2. We understood the internal controls over the approval of sales order and shipping and test the effectiveness of those internal controls;

3. We sampled the sales documents to inspect sales details, including related transaction documents and cash collections in the audited period and the subsequent period;

4. We verified if any deviant occurred in those parties when the sales were recorded and cash was received;

5. We assessed the significant sales return or sales discount taking place in the subsequent period.

Valuation of inventory

The Group provides ROM products, NOR Flash, and NAND Flash, which are widely used in consumer electronics. As of December 31, 2018, inventory was NT$17,949,234 thousand, accounting for 30% of the total assets in the consolidated balance sheet. With the current rapid changes in technology and the improvements in manufacturing technologies, demand for memory chip market could change significantly and thereby, results 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 13 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 lower 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 Macronix International Co., Ltd. as of and for the years ended December 31, 2018 and 2017 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, 2018 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 Ming Hui Chen and Ching Pin Shih.

Deloitte & Touche
Taipei, Taiwan
Republic of China

March 12, 2019

<u>*Notice to Readers*</u>

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, 2018 AND 2017
(In Thousands of New Taiwan Dollars)

	2018		2017	
ASSETS	**Amount**	**%**	**Amount**	**%**
CURRENT ASSETS				
Cash and cash equivalents (Notes 4, 6 and 35)	$ 13,611,502	23	$ 8,633,183	20
Notes receivable and trade receivables, net (Notes 4, 12 and 35)	3,786,498	7	4,978,143	11
Receivables from related parties, net (Notes 4, 35 and 36)	695,028	1	732,888	2
Other receivables (Notes 4, 12, 35 and 36)	169,916	-	132,004	-
Inventories (Notes 4, 5 and 13)	17,949,234	30	9,872,170	22
Financial assets measured at amortized cost - current (Notes 4, 8 and 35)	26,832	-	-	-
Other current assets (Notes 17 and 19)	438,280	1	184,168	1
Total current assets	36,677,290	62	24,532,556	56
NON-CURRENT ASSETS				
Financial assets at fair value through other comprehensive income (FVTOCI) - non-current (Notes 3, 4, 7 and 35)	1,601,941	3	-	-
Available-for-sale financial assets - non-current (Notes 3, 4, 9 and 35)	-	-	2,053,087	5
Financial assets measured at cost - non-current (Notes 3, 4, 10 and 35)	-	-	90,641	-
Financial assets measured at amortized cost - non-current (Notes 3, 4, 8 and 35)	22,360	-	-	-
Debt investments with no active market - non-current (Notes 3, 11 and 35)	-	-	27,390	-
Property, plant and equipment (Notes 4, 15 and 37)	19,308,675	33	16,258,622	37
Intangible assets (Notes 4 and 16)	45,223	-	45,808	-
Deferred tax assets (Notes 4, 5 and 29)	1,184,101	2	997,664	2
Other financial assets - non-current (Notes 4, 18, 35 and 37)	190,510	-	168,505	-
Other non-current assets (Notes 17 and 19)	18,721	-	19,626	-
Total non-current assets	22,371,531	38	19,661,343	44
TOTAL	$ 59,048,821	100	$ 44,193,899	100
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Contract liabilities (Notes 3 and 27)	$ 14,913	-	$ -	-
Notes payable and trade payables (Notes 21 and 35)	2,613,758	4	2,787,531	6
Payables to related parties (Notes 35 and 36)	8,926,201	15	3,414,139	8
Accrued employees' compensation and remuneration of directors (Notes 28, 35 and 36)	2,292,435	4	1,130,162	3
Payables for purchases of equipment (Note 35)	964,872	2	673,604	1
Other payables (Notes 22 and 35)	1,446,095	2	1,469,264	3
Other payables to related parties (Notes 35 and 36)	425	-	-	-
Current tax liabilities (Notes 4, 5 and 29)	187,612	-	2,030	-
Provisions - current (Notes 4 and 24)	28,517	-	311,027	1
Current portion of long-term borrowings (Notes 20, 35 and 37)	3,334,772	6	3,178,666	7
Other current liabilities (Note 23)	342,629	1	93,446	-
Total current liabilities	20,152,229	34	13,059,869	29
NON-CURRENT LIABILITIES				
Long-term borrowings (Notes 20, 35 and 37)	5,885,318	10	4,859,729	11
Net defined benefit liabilities (Notes 4, 5 and 25)	1,640,817	3	1,610,438	4
Other non-current liabilities (Note 23)	10,100	-	7,516	-
Total non-current liabilities	7,536,235	13	6,477,683	15
Total liabilities	27,688,464	47	19,537,552	44
EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT (Notes 4 and 26)				
Share capital				
Ordinary shares	18,402,919	31	18,049,385	41
Share capital to be cancelled	(1,249)	-	(1,627)	-
Total share capital	18,401,670	31	18,047,758	41
Capital surplus	(56,241)	-	(207,088)	-
Retained earnings				
Legal reserve	541,360	1	-	-
Special reserve	74,275	-	-	-
Unappropriated earnings	13,461,892	23	5,413,602	12
Total retained earnings	14,077,527	24	5,413,602	12
Other equity	(903,872)	(2)	1,560,451	3
Treasury shares	(159,061)	-	(159,061)	-
Equity attributable to shareholders of the parent	31,360,023	53	24,655,662	56
NON-CONTROLLING INTERESTS (Note 26)	334	-	685	-
Total equity	31,360,357	53	24,656,347	56
TOTAL	$ 59,048,821	100	$ 44,193,899	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, 2018 AND 2017
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2018		2017	
	Amount	**%**	**Amount**	**%**
NET OPERATING REVENUE (Notes 4, 27 and 36)	$ 36,953,032	100	$ 34,196,916	100
OPERATING COSTS (Notes 11, 25, 28 and 36)	23,026,713	62	21,562,205	63
GROSS PROFIT	13,926,319	38	12,634,711	37
OPERATING EXPENSES (Notes 25, 28 and 36)				
Selling and marketing expenses	1,400,549	4	1,272,309	4
General and administrative expenses	1,756,892	5	1,574,883	4
Research and development expenses	4,259,540	11	4,034,313	12
Total operating expenses	7,416,981	20	6,881,505	20
INCOME FROM OPERATIONS	6,509,338	18	5,753,206	17
NON-OPERATING INCOME AND EXPENSES				
Other income (Notes 4, 28 and 36)	2,661,551	7	143,515	-
Other gains and losses (Notes 28 and 32)	236,851	1	(144,642)	-
Finance costs (Notes 4 and 28)	(143,353)	(1)	(215,602)	(1)
Total non-operating income and expenses	2,755,049	7	(216,729)	(1)
INCOME BEFORE INCOME TAX FROM CONTINUING OPERATIONS	9,264,387	25	5,536,477	16
INCOME TAX EXPENSE (Notes 4 and 29)	271,538	1	19,168	-
NET INCOME FOR THE YEAR	8,992,849	24	5,517,309	16
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit plans	(79,122)	-	(91,188)	-
Unrealized loss on investments in equity instruments at FVTOCI (Notes 26 and 35)	(958,735)	(3)	-	-
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations (Note 26)	94,809	1	(76,624)	-
Unrealized gain on available-for-sale financial assets (Note 26)	-	-	774,460	2
Other comprehensive income (loss) for the year, net of income tax	(943,048)	(2)	606,648	2
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 8,049,801	22	$ 6,123,957	18

(Continued)

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2018		2017	
	Amount	**%**	**Amount**	**%**
NET INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	$ 8,993,006	24	$ 5,517,847	16
Non-controlling interests	(157)	-	(538)	-
	$ 8,992,849	24	$ 5,517,309	16
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:				
Shareholders of the parent	$ 8,049,958	22	$ 6,124,501	18
Non-controlling interests	(157)	-	(544)	-
	$ 8,049,801	22	$ 6,123,957	18
EARNINGS PER SHARE (Note 30)				
Basic	$ 4.94		$ 3.06	
Diluted	$ 4.65		$ 2.97	

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, 2018 AND 2017
(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 (Accumulated Deficit)	Exchange Differences on Translating Foreign Operations	Unrealized Gain (Loss) on Available-for-sale Financial Assets	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Employees' Unearned Compensation	Treasury Shares	Total	Non-controlling Interests	Total Equity
BALANCE AT JANUARY 1, 2017	3,615,354	$ 36,153,535	$ (7,654)	$ 340,713	$ -	$ -	$ (18,651,070)	$ (8,565)	$ 956,774	$ -	$ (306,958)	$ (159,061)	$ 18,317,714	$ 1,686	$ 18,319,400
Net income (loss) for the year ended December 31, 2017	-	-	-	-	-	-	5,517,847	-	-	-	-	-	5,517,847	(538)	5,517,309
Other comprehensive income (loss) for the year ended December 31, 2017, net of income tax	-	-	-	-	-	-	(91,188)	(76,618)	774,460	-	-	-	606,654	(6)	606,648
Total comprehensive income (loss) for the year ended December 31, 2017	-	-	-	-	-	-	5,426,659	(76,618)	774,460	-	-	-	6,124,501	(544)	6,123,957
Capital reduction to cover accumulated deficit	(1,865,107)	(18,651,070)	-	-	-	-	18,651,070	-	-	-	-	-	-	-	-
Issue of restricted shares to employees	57,476	574,756	-	(561,699)	-	-	(13,057)	-	-	-	-	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	(8,258)	-	-	-	-	-	-	221,358	-	213,100	-	213,100
Retirement of restricted shares for employees	(2,784)	(27,836)	6,027	21,809	-	-	-	-	-	-	-	-	-	-	-
Increase (decrease) in non-controlling interests	-	-	-	347	-	-	-	-	-	-	-	-	347	(457)	(110)
BALANCE AT DECEMBER 31, 2017	1,804,939	18,049,385	(1,627)	(207,088)	-	-	5,413,602	(85,183)	1,731,234	-	(85,600)	(159,061)	24,655,662	685	24,656,347
Effect of retrospective application	-	-	-	-	-	-	2,158,766	(146,758)	(1,731,234)	112,903	-	-	393,677	-	393,677
ADJUSTED BALANCE AT JANUARY 1, 2018	1,804,939	18,049,385	(1,627)	(207,088)	-	-	7,572,368	(231,941)	-	112,903	(85,600)	(159,061)	25,049,339	685	25,050,024
Legal reserve	-	-	-	-	541,360	-	(541,360)	-	-	-	-	-	-	-	-
Special reserve	-	-	-	-	-	74,275	(74,275)	-	-	-	-	-	-	-	-
Cash dividends distributed by the Company - $1 per share	-	-	-	-	-	-	(1,804,776)	-	-	-	-	-	(1,804,776)	-	(1,804,776)
Share dividends distributed by the Company - $0.2 per share	36,095	360,955	-	-	-	-	(360,955)	-	-	-	-	-	-	-	-
Net income (loss) for the year ended December 31, 2018	-	-	-	-	-	-	8,993,006	-	-	-	-	-	8,993,006	(157)	8,992,849
Other comprehensive income (loss) for the year ended December 31, 2018, net of income tax	-	-	-	-	-	-	(79,122)	94,809	-	(958,735)	-	-	(943,048)	-	(943,048)
Total comprehensive income (loss) for the year ended December 31, 2018	-	-	-	-	-	-	8,913,884	94,809	-	(958,735)	-	-	8,049,958	(157)	8,049,801
Disposal of investments in equity instruments designated as at fair value through other comprehensive income	-	-	-	-	-	-	(99,070)	-	-	99,070	-	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	141,885	-	-	(143,924)	-	-	-	65,622	-	63,583	-	63,583
Retirement of restricted shares for employees	(742)	(7,421)	378	7,043	-	-	-	-	-	-	-	-	-	-	-
Change in capital surplus from investments in subsidiaries and joint ventures accounted for using equity method	-	-	-	1,919	-	-	-	-	-	-	-	-	1,919	-	1,919
Decrease in non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	-	(194)	(194)
BALANCE AT DECEMBER 31, 2018	1,840,292	$ 18,402,919	$ (1,249)	$ (56,241)	$ 541,360	$ 74,275	$ 13,461,892	$ (137,132)	$ -	$ (746,762)	$ (19,978)	$ (159,061)	$ 31,360,023	$ 334	$ 31,360,357

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, 2018 AND 2017
(In Thousands of New Taiwan Dollars)

	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 9,264,387	$ 5,536,477
Adjustments for:		
Depreciation expense	2,093,048	1,944,114
Amortization expense	27,322	28,241
Impairment loss recognized on trade receivables	-	53
Finance costs	143,353	215,602
Interest income	(45,991)	(25,547)
Dividend income	(105,698)	(86,724)
Compensation cost of employee restricted shares	63,583	213,100
Gain on disposal of property, plant and equipment	(35,884)	(9,747)
Gain on disposal of intangible assets	-	(8,333)
(Gain) loss on disposal of investments	(180)	2,517
Impairment loss on non-financial assets	-	1,485
Net (gain) loss on foreign currency exchange	(158,383)	237,665
Changes in operating assets and liabilities		
Notes receivable and trade receivables	1,225,401	(1,939,296)
Receivables from related parties	68,270	(206,942)
Other receivables	(35,763)	(10,406)
Inventories	(8,077,064)	(2,784,753)
Other current assets	(254,106)	18,033
Contract liabilities	(37,770)	-
Notes payable and trade payables	(182,143)	212,840
Payables to related parties	5,306,901	2,287,080
Payables for employees' compensation and director's remuneration	1,162,273	1,130,162
Other payables	1,999	303,574
Other payables to related parties	(407)	-
Provisions	(31,668)	90,908
Other current liabilities	32,900	27,807
Net defined benefit liabilities	(48,743)	(14,037)
Cash generated from operations	10,375,637	7,163,873
Interest received	43,843	24,325
Dividend received	105,695	86,714
Interest paid	(161,174)	(219,644)
Income tax paid	(272,393)	(20,777)
Net cash generated from operating activities	10,091,608	7,034,491
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from the disposal of financial assets at fair value through other comprehensive income	43,582	-
Payments for financial assets measured at amortized cost	(22,965)	-
Payments for debt investments with no active market	-	(26,916)
Proceeds from disposal of financial assets measured at cost	-	5,357
Disposal of subsidiaries	-	(3,892)

(Continued)

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(In Thousands of New Taiwan Dollars)

	2018	2017
Payments for property, plant and equipment	$ (4,861,806)	$ (2,220,308)
Proceeds from disposal of property, plant and equipment	36,963	19,351
Increase in refundable deposits	(2,970)	(2,042)
Decrease in refundable deposits	858	1,148
Payments for intangible assets	(26,768)	(50,373)
Disposal of intangible assets	-	13,000
(Increase) decrease in other financial assets	(19,772)	6,784
Decrease in other non-current assets	905	747
Net cash used in investing activities	(4,851,973)	(2,257,144)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from short-term borrowings	-	971,597
Repayments of short-term borrowings	-	(1,371,597)
Proceeds from long-term borrowings	4,800,000	10,386,886
Repayments of long-term borrowings	(3,621,981)	(12,265,577)
Proceeds from guarantee deposits received	3,353	6,495
Refund of guarantee deposits received	(310)	(987)
Decrease in other non-current liabilities	(792)	(816)
Distribution of cash dividends	(1,804,776)	-
Increase in non-controlling interests	2,623	349
Net cash used in financing activities	(621,883)	(2,273,650)
EFFECT OF EXCHANGE RATE CHANGES ON THE BALANCE OF CASH AND CASH EQUIVALENTS HELD IN FOREIGN CURRENCIES	360,567	(238,853)
NET INCREASE IN CASH AND CASH EQUIVALENTS	4,978,319	2,264,844
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR	8,633,183	6,368,339
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	$ 13,611,502	$ 8,633,183

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, 2018 AND 2017
(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) in 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 March 12, 2019.

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

a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the IFRSs) endorsed and issued into effect by the FSC

Except for the following, whenever applied, the initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Group's accounting policies:

1) IFRS 9 "Financial Instruments" and related amendment

IFRS 9 supersedes IAS 39 "Financial Instruments: Recognition and Measurement" and makes consequential amendments to IFRS 7 "Financial Instruments: Disclosures" and other standards. IFRS 9 sets out the requirements for the classification, measurement and impairment of financial assets and hedge accounting. Refer to Note 4 for information relating to the relevant accounting policies.

The Company retrospectively adopted the classification, measurement and impairment of financial assets and postponed the adoption of general hedge accounting. IFRS 9 does not apply to financial assets that were derecognized before January 1, 2018.

<u>Classification, measurement and impairment of financial assets and financial liabilities</u>

The Company elects not to restate prior reporting periods when applying the requirements for the classification, measurement and impairment of financial assets and financial liabilities under IFRS 9 with the cumulative effect of the initial application recognized at the date of initial application.

The impact on measurement categories, carrying amounts and related reconciliation for each class of the Company's financial assets and financial liabilities as of January 1, 2018 when retrospectively applying IFRS 9 is detailed below:

	Measurement Category		Carrying Amount	
Financial Asset	**IAS 39**	**IFRS 9**	**IAS 39**	**IFRS 9**
Equity securities	Cost - non-current	Fair value through other comprehensive income - non-current	$ 90,641	$ 484,318
	Available-for-sale	Fair value through other comprehensive income - non-current	2,053,087	2,053,087
Time deposits with original maturities exceeding 1 year	Debt investments with no active market	Amortized cost	27,390	27,390
Notes receivable, accounts receivable and other receivables	Loans and receivables	Amortized cost	4,978,143	4,978,143

	Carrying Amount as of December 31, 2017	Adjustments Arising from Initial Application	Adjusted Carrying Amount as of January 1, 2018
Impact on assets, liabilities and equity			
Financial assets at fair value through profit or loss - non-current	$ -	$ 2,537,405	$ 2,537,405
Available-for-sale financial assets - non-current	2,053,087	(2,053,087)	-
Financial assets measured at amortized cost - non-current	-	27,390	27,390
Financial assets measured at cost - non-current	90,641	(90,641)	-
Debt investments with no active market - non-current	27,390	(27,390)	-
Others	42,022,781	-	42,022,781
Total assets	$ 44,193,899	$ 393,677	$ 44,587,576
Total liabilities	$ 19,537,552	$ -	$ 19,537,552
Retained earnings	$ 5,413,602	$ 2,158,766	$ 7,572,368
Other equity	1,560,451	(1,765,089)	(204,638)
Others	17,682,294	-	17,682,294
Total equity	$ 24,656,347	$ 393,677	$ 25,050,024

As equity investments that were previously classified as available-for-sale financial assets under IAS 39 are not held for trading, the Company elected to designate all of these investments as at FVTOCI under IFRS 9. As a result, the related other equity - unrealized gain (loss) on available-for-sale financial assets of NT$1,731,234 thousand is reclassified and resulted in an increase in other equity - unrealized gain (loss) on financial assets at FVTOCI.

For those equity investments previously classified as financial assets measured at cost under IAS 39, since these investments were designated as at FVTOCI under IFRS 9, the value of such investments should be remeasured at fair value, and the adjustments resulted in an increase in other equity - unrealized gain (loss) on financial assets at FVTOCI of NT$393,677 thousand.

For those equity investments previously classified as available-for-sale financial assets (including financial assets measured at cost) under IAS 39, the impairment losses that the Company had recognized have been accumulated in retained earnings. Since these investments were designated as at FVTOCI under IFRS 9 and no impairment assessment is required, the adjustments resulted in an increase in other equity - unrealized gain (loss) on financial assets at FVTOCI of NT$112,903 thousand and an increase in retained earnings of NT$2,158,766 thousand on January 1, 2018.

Notes receivable, trade receivables and other receivables that were previously classified as loans and receivables under IAS 39 were classified as financial assets measured at amortized cost with an assessment of expected credit losses under IFRS 9, because these investments were held within a business model whose objective is achieved by both the collecting of contractual cash flows and the selling of financial assets.

2) IFRS 15 “Revenue from Contracts with Customers” and related amendment

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers, and will supersede IAS 18 “Revenue”, IAS 11 “Construction Contracts” and a number of revenue-related interpretations. Refer to Note 4 for information relating to the relevant accounting policies.

The Group, under IFRS 15, obtains control of the specified goods or services before they are transferred to the customers and, therefore, is acting as a principal in the transaction. Prior to the application of IFRS 15, the Group considered whether the goods or services exposed the Group to significant risks and rewards as a principal in the transaction.

Under IFRS 15, the net effect of revenue recognized and consideration received and receivable is recognized as a contract asset or a contract liability. Prior to the application of IFRS 15, deferred revenue was reduced when revenue was recognized for the relevant contract under IAS 18.

For a sale with a right of return, the Group will recognize a refund liability (other liability). Prior to the application of IFRS 15, return provisions are recognized when recognizing revenue.

The Group elects to retrospectively apply IFRS 15 to contracts that are not complete on January 1, 2018 and recognize the cumulative effect of the change in the retained earnings on January 1, 2018.

The impact on assets, liabilities and equity as of January 1, 2018 from the initial application of IFRS 15 is set out below:

	As Originally Stated	**Adjustments Arising from Initial Application**	**Restated**
Provisions - current	$ 311,027	$ (250,842)	$ 60,185
Contract liabilities - current	-	52,683	52,683
Other current liabilities	104,034	198,159	302,193
Impact on total liabilities		$ -	

The impact of continuing the application of IAS 18 instead of IFRS 15 for the year ended December 31, 2018 is detailed as follows:

Impact on assets, liabilities and equity

	December 31, 2018
Decrease in contract liabilities - current	$ (14,913)
Increase in provisions - current	306,291
Decrease in other current liabilities	(291,378)
Increase (decrease) in liabilities	$ -

b. The IFRSs issued by IASB and endorsed by FSC which will be effective in 2019

New, Revised or Amended Standards and Interpretations (the "New IFRSs")	Effective Date Announced by the IASB (Note 1)
Annual Improvements to IFRSs 2015-2017 Cycle	January 1, 2019
Amendments to IFRS 9 "Prepayment Features with Negative Compensation"	January 1, 2019 (Note 2)
IFRS 16 "Leases"	January 1, 2019
Amendments to IAS 19 "Plan Amendment, Curtailment or Settlement"	January 1, 2019 (Note 3)
Amendments to IAS 28 "Long-term Interests in Associates and Joint Ventures"	January 1, 2019
IFRIC 23 "Uncertainty Over Income Tax Treatments"	January 1, 2019

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

Note 2: The FSC permits the election for early adoption of the amendments starting from 2018.

Note 3: The Company shall apply these amendments to plan amendments, curtailments or settlements occurring on or after January 1, 2019.

1) IFRS 16 "Leases"

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17 and a number of related interpretations.

Definition of a lease

Upon initial application of IFRS 16, the Group will elect to apply IFRS 16 only to contracts entered into (or changed) on or after January 1, 2019 in order to determine whether those contracts are, or contain, a lease. Contracts identified as containing a lease under IAS 17 and IFRIC 4 will not be reassessed and will be accounted for in accordance with the transitional provisions under IFRS 16.

The Group as lessee

Upon initial application of IFRS 16, the Group will recognize right-of-use assets and lease liabilities if the right-of-use assets meet the definition for all leases on the consolidated balance sheets except for those whose payments under low-value and short-term leases will be recognized as expenses on a straight-line basis. On the consolidated statements of comprehensive income, the Group will present the depreciation expense charged on right-of-use assets separately from the interest expense accrued on lease liabilities; interest is computed using the effective interest method. On the consolidated statements of cash flows, cash payments for the principal portion of lease liabilities will be classified within financing activities; cash payments for the interest portion will be classified within operating activities. Currently, payments under operating lease contracts are recognized as expenses on a straight-line basis. Cash flows for operating leases are classified within operating activities on the consolidated statements of cash flows. Leased assets and finance lease payables are recognized for contracts classified as finance leases.

The Group anticipates applying IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized on January 1, 2019. Comparative information will not be restated.

The Group as lessor

Except for sublease transactions, the Group will not make any adjustments for leases in which it is a lessor and will account for those leases with the application of IFRS 16 starting from January 1, 2019.

The Group subleases its leasehold park dormitory to a third party. Such a sublease is classified as an operating lease under IAS 17. The Group will assess the sublease classification on the basis of the remaining contractual terms and conditions of the head lease and sublease on January 1, 2019.

Anticipated impact on assets, liabilities and equity

	Carrying Amount as of December 31, 2018	**Adjustments Arising from Initial Application**	**Adjusted Carrying Amount as of January 1, 2019**
Prepayments for leases - current	$ 438,280	$ (506)	$ 437,774
Prepayments for leases - non-current	18,721	(18,721)	-
Right-of-use assets	-	1,110,709	1,110,709
Total effect on assets	$ 457,001	$ 1,091,482	$ 1,548,483
Lease liabilities - current	$ -	$ 114,615	$ 114,615
Lease liabilities - non-current	-	976,867	976,867
Total effect on liabilities	$ -	$ 1,091,482	$ 1,091,482

As of the date the consolidated financial statements were authorized for issue, the Group access that have no material impact on the Group's financial position and financial performance.

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 3 "Definition of a Business"	January 1, 2020 (Note 2)
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, 2021
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020 (Note 3)

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

Note 2: The Group shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.

Note 3: The Group shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

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 14 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 profit or loss and other 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 Company.

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.

Before 2018, 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 5 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. Investments in associates

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor a joint venture.

The Group uses the equity method to account for its investments in associates.

Under the equity method, an investment in an associate is initially recognized at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate. The Group also recognizes the changes in the Group's share of equity of associates attributable to the Group.

When the Group applies the equity method to account for its investments in an associate or a joint venture which is an investment entity, the Group may elect to retain the fair value of investment interests in subsidiaries of the investment-entity associate or joint venture. The election is made separately for each investment-entity associate or joint venture at the later of the date on which (a) the investment-entity associate or joint venture is initially recognized, (b) the associate or joint venture becomes an investment entity, or (c) the investment-entity associate or joint venture first becomes a parent.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets and liabilities of an associate at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When the Group subscribes for additional new shares of the associate at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Group's proportionate interest in the associate. The Group records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus - changes in the Group's share of equity of associates. If the Group's ownership interest is reduced due to the additional subscription of the new shares of associate, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate is reclassified to profit or loss on the same basis as would be required if the investee had directly disposed of the related assets or liabilities. When the adjustment should be debited to capital surplus, but the capital surplus recognized from investments accounted for by the equity method is insufficient, the shortage is debited to retained earnings.

When the Group's share of losses of an associate equals or exceeds its interest in that associate (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 Group's net investment in the associate), the Group discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Group has incurred legal obligations, or constructive obligations, or made payments on behalf of that associate.

The entire carrying amount of an investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized is not allocated to any asset, including goodwill, that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date on which its investment ceases to be an associate. Any retained investment is measured at fair value at that date and the fair value is regarded as its fair value on initial recognition as a financial asset. The difference between the previous carrying amount of the associate attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate. The Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate on the same basis as would be required if that associate had directly disposed of the related assets or liabilities.

When a group entity transacts with its associate, profits and losses resulting from the transactions with the associate are recognized in the Group' consolidated financial statements only to the extent that interests in the associate are not related to the Group.

h. 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.

i. 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.

j. Impairment of tangible and intangible assets other than goodwill and assets related to contract costs

At the end of each reporting period, the Group reviews the carrying amounts of its tangible 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.

Before the Group recognizes an impairment loss from assets related to contract costs, any impairment loss on inventories related to the contract applicable under IFRS 15 shall be recognized in accordance with applicable standards. Then, impairment loss from the assets related to the contract costs is recognized to the extent that the carrying amount of the assets exceeds the remaining amount of consideration that the Group expects to receive in exchange for related goods or services less the costs which relate directly to providing those goods or services and which have not been recognized as expenses. The assets related to the contract costs are then included in the carrying amount of the cash-generating unit to which they belong for the purpose of evaluating impairment of that cash-generating unit.

When an impairment loss is subsequently reversed, the carrying amount of the corresponding asset, cash-generating unit or assets related to contract costs 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 for the asset, cash-generating unit or assets related to contract costs in prior years. A reversal of an impairment loss is recognized in profit or loss.

k. 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

<u>2018</u>

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.

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 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.

2017

Financial assets are classified into the following categories: Financial assets at fair value through profit or loss, available-for-sale financial assets, and loans and receivables.

i Financial assets at fair value through profit or loss

Financial assets are classified as at fair value through profit or loss when the financial asset is either held for trading or it is designated as at fair value through profit or loss.

Financial assets at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any dividend or interest earned on the financial asset. Fair value is determined in the manner described in Note 35.

Investments in equity instruments under financial assets at fair value through profit or loss that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives that are linked to and must be settled by delivery of such unquoted equity instruments are subsequently measured at cost less any identified impairment loss at the end of each reporting period and presented in a separate line item as financial assets carried at cost. If, in a subsequent period, the fair value of the financial assets can be reliably measured, the financial assets are remeasured at fair value. The difference between the carrying amount and the fair value is recognized in profit or loss.

ii Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated as available-for-sale or are not classified as loans and receivables, held-to-maturity investments or financial assets at fair value through profit or loss.

Available-for-sale financial assets are measured at fair value. Changes in the carrying amounts of available-for-sale monetary financial assets relating to changes in foreign currency exchange rates, interest income calculated using the effective interest method and dividends on available-for-sale equity investments are recognized in profit or loss. Other changes in the carrying amount of available-for-sale financial assets are recognized in other comprehensive income and will be reclassified to profit or loss when the investment is disposed of or is determined to be impaired.

Dividends on available-for-sale equity instruments are recognized in profit or loss when the Group's right to receive the dividends is established.

Available-for-sale equity investments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives that are linked to and must be settled by delivery of such unquoted equity investments are measured at cost less any identified impairment loss at the end of each reporting period and presented in a separate line item as financial assets carried at cost. If, in a subsequent period, the fair value of the financial assets can be reliably measured, the financial assets are remeasured at fair value. The difference between the carrying amount and fair value is recognized in other comprehensive income on financial assets. Any impairment losses are recognized in profit and loss.

iii Loans and receivables

Loans and receivables (including trade receivables, cash and cash equivalent, other receivables and long-term receivables) are measured at amortized cost using the effective interest method, less any impairment, except for short-term receivables when the effect of discounting is immaterial.

Cash equivalent includes time deposits 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.

b) Impairment of financial assets

<u>2018</u>

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.

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.

2017

Financial assets, other than those at fair value through profit or loss, are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For financial assets carried at amortized cost, such as trade receivables, assets are assessed for impairment on a collective basis even if they were assessed not to be impaired individually. Objective evidence of impairment for a portfolio of receivables could include the Group's past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period of 60 days, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets carried at amortized cost, the amount of the impairment loss recognized is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

For available-for-sale equity investments, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment.

For all other financial assets, objective evidence of impairment could include significant financial difficulty of the issuer or counterparty, breach of contract, such as a default or delinquency in interest or principal payments, it becoming probable that the borrower will enter bankruptcy or financial re-organization, or the disappearance of an active market for that financial asset because of financial difficulties.

When an available-for-sale financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

In respect of available-for-sale equity securities, impairment loss previously recognized in profit or loss is not reversed through profit or loss. Any increase in fair value subsequent to an impairment loss is recognized in other comprehensive income.

For financial assets that are carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable and other receivables are considered uncollectable, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss except for uncollectable trade receivables that are written off against the allowance account.

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.

Before 2018, on derecognition of a financial asset in its entirety, the difference between the asset’s carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. Starting from 2018, 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 a debt instrument at FVTOCI, the difference between the asset’s carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. However, 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.

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

Except the following situation, all financial liabilities are measured at amortized cost using the effective interest method.

i Financial liabilities at fair value through profit or loss

Financial liabilities are classified as at fair value through profit or loss when the financial liability is either held for trading or it is designated as at fair value through profit or loss.

Financial liabilities held for trading are stated at fair value, with any gain or loss arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any interest or dividend paid on the financial liability. Fair value is determined in the manner described in Note 35.

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.

4) Derivative financial instruments

The Group enters into foreign exchange forward contracts to manage its exposure to foreign exchange rate risks, including foreign exchange forward contracts.

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship. When the fair value of derivative financial instruments is positive, the derivative is recognized as a financial asset; when the fair value of derivative financial instruments is negative, the derivative is recognized as a financial liability.

Before 2017, derivatives embedded in non-derivative host contracts were treated as separate derivatives when they met the definition of a derivative; their risks and characteristics were not closely related to those of the host contracts; and the contracts were not measured at FVTPL. Starting from 2018, derivatives embedded in hybrid contracts that contain financial asset hosts that is within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets that is within the scope of IFRS 9 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative; their risks and characteristics are not closely related to those of the host contracts; and the host contracts are not measured at FVTPL.

l. 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.

m. Revenue recognition

<u>2018</u>

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.

<u>2017</u>

Revenue is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. Allowance for sales returns and liability for returns are recognized at the time of sale based on the seller's reliable estimate of future returns and based on past experience and other relevant factors.

1) Sale of goods

Revenue from the sale of goods is recognized when all the following conditions are satisfied:

a) The Group has transferred to the buyer the significant risks and rewards of ownership of the goods;

b) The Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;

c) The amount of revenue can be measured reliably;

d) It is probable that the economic benefits associated with the transaction will flow to the Group; and

e) The costs incurred or to be incurred in respect of the transaction can be measured reliably.

The Group does not recognize sales revenue on materials delivered to subcontractors because this delivery does not involve a transfer of risks and rewards of materials ownership.

2) Rendering of services

Service income is recognized when services are provided.

Revenue from a contract to provide services is recognized by reference to the stage of completion of the contract. The stage of completion of the contract is determined by the contractual rates as labor hours and direct expenses are incurred.

3) Royalties

Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant agreement provided that it is probable that the economic benefits will flow to the Group and the amount of revenue can be measured reliably. Royalty arrangements that are based on production, sales and other measures are recognized by reference to the underlying arrangement.

4) Dividend and interest income

Dividend income from investments is recognized when the shareholder's right to receive payment has been established provided that it is probable that the economic benefits will flow to the Group and the amount of income can be measured reliably.

Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Group and the amount of income can be measured reliably. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

n. Leasing

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

1) The Group as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

2) The Group as lessee

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

3) Leasehold land for own use

When a lease includes both land and building elements, the Group assesses the classification of each element separately as a finance or an operating lease separately based on the assessment as to whether substantially all the risks and rewards incidental to ownership of each element have been transferred to the Group. The minimum lease payments are allocated between the land and the building elements in proportion to the relative fair values of the leasehold interests in the land element and building element of the lease at the inception of the lease.

If the allocation of the lease payments can be made reliably, each element is accounted for separately in accordance with its lease classification. When the lease payments cannot be allocated reliably between the land and building elements, the entire lease is generally classified as a finance lease unless it is clear that both elements are operating leases, in which case the entire lease is classified as an operating lease.

o. 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.

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

According to the Income Tax Law, an additional tax at 10% of unappropriated earnings is provided for as income tax in the year the shareholders approve to retain the 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 and associates, 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 about 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 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 the 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. Income taxes

The realizability of the deferred tax asset mainly depends on whether sufficient future profits or taxable temporary differences will be available. In cases where the actual future profits generated are less than expected, a material reversal of deferred tax assets may arise, which would be recognized in profit or loss for the period in which such a reversal takes place.

6. CASH AND CASH EQUIVALENTS

	December 31	
	2018	**2017**
Cash on hand	$ 74	$ 188
Checking accounts and demand deposits	8,890,666	6,137,700
Cash equivalents		
Time deposits	4,720,762	2,495,295
	$ 13,611,502	$ 8,633,183

7. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME - 2018

	December 31, 2018
Non-current	
Investments in equity instruments at FVTOCI	
Domestic investments	
Listed shares	$ 1,002,225
Unlisted shares	295,529
	1,297,754
Foreign investments	
Listed shares	264,804
Unlisted shares	39,383
	$ 1,601,941

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. These investments in equity instruments were classified as available-for-sale under IAS 39. Refer to Notes 3, 9 and 10 for information relating to their reclassification and comparative information for 2017.

The Group sold their holdings of ordinary shares in Key ASIC Bhd at a fair value $43,582 thousand in July and August 2018. The related unrealized loss on financial assets at FVTOCI of NT$99,070 thousand under other equity was transferred to retained earnings.

The Group recognized a dividend income of NT$105,698 thousand for the year ended December 31, 2018, which was related to the carrying amount of NT$1,297,754 thousand in investments held as of December 31 2018.

8. FINANCIAL ASSETS MEASURED AT AMORTIZED COST - 2018

	December 31, 2018
Current	
Time deposits with original maturities exceeding 1 year	$ 26,832
Non-current	
Time deposits with original maturities exceeding 1 year	$ 22,360

As of December 31, 2018, the interest rate of time deposits with original maturities exceeding 1 year was 2.73%. The deposits were classified as debt investments with no active market under IAS 39. Refer to Notes 3 and 11 for information relating to their reclassification and comparative information for 2017.

9. AVAILABLE-FOR-SALE FINANCIAL ASSETS - 2017

	December 31, 2017
Non-current	
Domestic investments	
Listed shares	$ 1,411,374
Foreign investments	
Listed shares	641,713
	$ 2,053,087

10. FINANCIAL ASSETS MEASURED AT COST - 2017

	December 31, 2017
Non-current	
Domestic unlisted ordinary shares	$ 58,500
Overseas unlisted ordinary shares	32,141
	$ 90,641
Classified according to financial asset measurement categories	
Available-for-sale financial assets	$ 90,641

Management believed that the fair value of the above unlisted equity investments held by the Group could not be reliably measured because the range of reasonable fair value estimates was so significant. Therefore, the fair values were measured at cost less impairment at the end of the reporting period.

11. DEBT INVESTMENTS WITH NO ACTIVE MARKET - 2017

	December 31, 2017
Non-current	
Time deposits with original maturity exceeding 1 year	$ 27,390

As of December 31, 2017, the interest rate of time deposits with original maturities exceeding 1 year was 2.73%.

12. NOTES RECEIVABLE, TRADE RECEIVABLES AND OTHER RECEIVABLES

	December 31	
	2018	2017
Trade receivables		
Total amount of trade receivables measured at amortized cost	$ 3,803,310	$ 4,994,955
Less: Allowance for impairment loss	(16,812)	(16,812)
	$ 3,786,498	$ 4,978,143
Other receivables		
Tax receivable	$ 107,305	$ 123,558
Others	62,611	8,446
	$ 169,916	$ 132,004

a. Trade receivables

2018

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 applies the simplified approach to provisions for expected credit losses prescribed by IFRS 9, which permits the use of a lifetime expected credit loss provision for all trade receivables. 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 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 the different segments of the Group's customer base.

The Group writes off a trade receivable when there is information indicating that the debtor is experiencing severe financial difficulty and there is no realistic prospect of recovery of the receivable. For trade receivables that have been written off, the Group continues to engage in enforcement activity to attempt to recover the receivables which are due. Where recoveries are made, they are recognized in profit or loss.

The aging of trade receivables is as follows:

	December 31, 2018
Neither past due nor impaired	$ 3,495,246
Past due but not impaired	
Within 60 days	278,639
61-120 days	137
Over 120 days	12,476
	$ 3,786,498

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

As of December 31, 2018, the Group did not hold collateral for most of its receivables.

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

	December 31, 2018
Balance at December 31, 2018	$ 16,812

2017

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.

Before trading with any new customer, the Group assesses the potential customer's credit quality and defines credit limits based on an internal credit scoring system.

For the trade receivables balances that were past due at the end of the reporting period, the Group had not recognized an allowance for impairment loss, because there was not a significant change in credit quality and the amounts were still considered recoverable.

The aging of notes receivable and trade receivables was as follows:

	December 31, 2017
Neither past due nor impaired	$ 4,836,700
Past due but not impaired	
Within 60 days	134,372
61-120 days	5,343
Over 120 days	1,728
	$ 4,978,143

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

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

	Individually Assessed for Impairment	Assembly Assessed for Impairment	Total
Balance at January 1, 2017	$ 17,460	$ -	$ 17,460
Add: Impairment losses recognized on receivables	53	-	53
Less: Amounts written off during the year as uncollectable	(53)	-	(53)
Less: Impairment losses reversed	(648)	-	(648)
Balance at December 31, 2017	$ 16,812	$ -	$ 16,812

The Group recognized impairment loss on trade receivables amounting to NT$16,812 thousand as of December 31, 2017. This amount mainly related to customers that were experiencing severe financial difficulties. The Group did not hold any collateral over these balances.

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.

13. INVENTORIES

	December 31	
	2018	2017
Finished goods and merchandise	$ 1,368,130	$ 923,904
Work in progress	15,664,313	8,361,909
Raw materials	916,791	586,357
	$ 17,949,234	$ 9,872,170

The reversal of inventory write-downs resulting from the increase in net realizable value was included in the cost of goods sold as below.

	December 31	
	2018	2017
Inventory write-downs recognized (reversed)	$ 1,589,462	$ (528,612)

14. SUBSIDIARIES

Subsidiaries included in the consolidated financial statements

As of December 31, 2018, the Company has direct and indirect majority ownership over 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 (Mxtran HK), New Trend Technology Inc. (NTTI), Macronix (Asia) Limited (MX Asia), Macronix Pte. Ltd. (MPL), Macronix Europe NV. (MXE), Macronix (Hong Kong) Co., Limited (MXHK) and Macronix Microelectronics (Suzhou) Co., Ltd. (MXm).

			% of Ownership	
			December 31	
Investor	**Investee**	**Nature of Activities**	**2018**	**2017**
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	Combi-SIM IC and the related service	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	Investment holding company	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

15. PROPERTY, PLANT AND EQUIPMENT

	Years Ended December 31, 2018					
	Balance, Beginning of Year	**Additions**	**Disposals**	**Net Exchange Differences**	**Reclassification**	**Balance, End of Year**
Cost						
Freehold land	$ 1,252,911	$ -	$ -	$ 21,013	$ -	$ 1,273,924
Buildings	24,472,226	-	3,162	(4,603)	424,311	24,888,772
Machinery equipment	85,198,564	-	454,143	-	2,492,403	87,236,824
Research and development equipment	3,229,384	4,137	40	(624)	611,653	3,844,510
Transportation equipment	23,224	2,020	8,294	(47)	7,080	23,983
Leasehold improvements	40,132	-	-	25	-	40,157
Miscellaneous equipment	1,157,900	7,101	8,259	(223)	42,405	1,198,924
Advance payments and construction in progress	2,587,750	5,125,344	-	15	(3,577,852)	4,135,257
	117,962,091	$ 5,138,602	$ 473,898	$ 15,556	$ -	122,642,351
Accumulated depreciation and impairment						
Freehold land	369,767	$ -	$ -	$ 11,865	$ -	381,632
Buildings	19,837,641	376,192	3,162	(1,221)	-	20,209,450
Machinery equipment	78,465,322	1,489,345	454,142	-	75,533	79,576,058
Research and development equipment	1,872,724	192,851	40	(503)	(75,533)	1,989,499
Transportation equipment	21,575	1,589	7,362	36	-	15,838
Leasehold improvements	37,191	1,218	-	(7)	-	38,402
Miscellaneous equipment	1,099,249	31,853	8,113	(192)	-	1,122,797
	101,703,469	$ 2,093,048	$ 472,819	$ 9,978	$ -	103,333,676
Carrying amount at December 31, 2018	$ 16,258,622					$ 19,308,675

	Years Ended December 31, 2017						
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Individual Group Entity Effects	Reclassification	Balance, End of Year
Cost							
Freehold land	$ 1,307,700	$ -	$ -	$ (54,789)	$ -	$ -	$ 1,252,911
Buildings	24,387,886	-	1,215	(2,574)	-	88,129	24,472,226
Machinery equipment	82,761,938	-	510,111	-	-	2,946,737	85,198,564
Research and development equipment	5,971,627	4,312	188,559	(285)	(6,888)	(2,550,823)	3,229,384
Transportation equipment	24,990	-	2,650	(16)	-	900	23,224
Leasehold improvements	41,540	-	478	(930)	-	-	40,132
Miscellaneous equipment	1,148,741	5,433	34,506	(2,130)	(2,000)	42,362	1,157,900
Advance payments and construction in progress	385,626	2,729,454	-	(25)	-	(527,305)	2,587,750
	116,030,048	$ 2,739,199	$ 737,519	$ (60,749)	$ (8,888)	$ -	117,962,091
Accumulated depreciation and impairment							
Freehold land	400,705	$ -	$ -	$ (30,938)	$ -	$ -	369,767
Buildings	19,477,378	361,921	1,214	(444)	-	-	19,837,641
Machinery equipment	75,819,885	1,377,584	509,457	-	-	1,777,310	78,465,322
Research and development equipment	3,665,960	171,397	180,988	(255)	(6,080)	(1,777,310)	1,872,724
Transportation equipment	23,119	1,121	2,650	(15)	-	-	21,575
Leasehold improvements	34,366	4,105	478	(802)	-	-	37,191
Miscellaneous equipment	1,108,176	27,986	33,128	(1,972)	(1,813)	-	1,099,249
	100,529,589	$ 1,944,114	$ 727,915	$ (34,426)	$ (7,893)	$ -	101,703,469
Carrying amount at December 31, 2017	$ 15,500,459						$ 16,258,622

For the year ended December 31, 2018 and 2017, no indication of an impairment loss was present and 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, 2018 and 2017 was US$9,579 thousand, respectively.

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 37.

16. INTANGIBLE ASSETS

	Years Ended December 31, 2018					
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Impairment Loss	Balance, End of Year
Cost						
Software	$ 89,003	$ 26,768	$ 28,698	$ (199)	$ -	$ 86,874
Licenses	4,743	-	4,743	-	-	-
Others	24,722	-	11,722	-	-	13,000
	118,468	$ 26,768	$ 45,163	$ (199)	$ -	99,874
Accumulated amortization and impairment						
Software	52,945	$ 22,989	$ 28,698	$ (168)	$ -	47,068
Licenses	4,743	-	4,743	-	-	-
Others	14,972	4,333	11,722	-	-	7,583
	72,660	$ 27,322	$ 45,163	$ (168)	$ -	54,651
Carrying amounts at December 31, 2018	$ 45,808					$ 45,223

	Years Ended December 31, 2017					
	Balance, Beginning of Year	Additions	Disposals	Net Exchange Differences	Impairment Loss	Balance, End of Year
Cost						
Software	$ 166,776	$ 37,373	$ 115,006	$ (140)	$ -	$ 89,003
Licenses	10,739	-	5,994	-	-	4,745
Others	15,820	13,000	4,100	-	-	24,720
	193,335	$ 50,373	$ 125,100	$ (140)	$ -	118,468
Accumulated amortization and impairment						
Software	142,034	$ 24,729	$ 115,006	$ (143)	$ 1,331	52,945
Licenses	5,904	167	1,328	-	-	4,743
Others	15,573	3,345	4,100	-	154	14,972
	163,511	$ 28,241	$ 120,434	$ (143)	$ 1,485	72,660
Carrying amounts at December 31, 2017	$ 29,824					$ 45,808

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

Software	3-6 years
Licenses	1 years
Others	3 years

17. PREPAYMENTS FOR LEASES

	December 31	
	2018	2017
Current assets (included in other current assets)	$ 506	$ 516
Non-current assets (included in other non-current assets)	18,721	19,626
	$ 19,227	$ 20,142

Prepaid lease payments include payments for land use rights for land located in mainland China. The Group has obtained the land use right certificates.

18. OTHER FINANCIAL ASSETS

	December 31	
	2018	2017
Non-current		
Restricted time deposits (Note 37)	$ 157,665	$ 134,231
Refundable deposits (Note 35)	14,167	11,934
Long-term receivables	18,678	22,340
	$ 190,510	$ 168,505

19. OTHER ASSETS

	December 31	
	2018	2017
Current		
Prepayments	$ 435,237	$ 180,825
Offset against business tax payable	2,537	2,827
Prepayments for leases	506	516
	$ 438,280	$ 184,168
Non-current		
Prepayments for leases	$ 18,721	$ 19,626

20. BORROWINGS

Long-term borrowings

	December 31	
	2018	2017
Secured borrowings		
Loans from financial institutions	$ 7,354,650	$ 6,638,754
Unsecured borrowings		
Loans from financial institutions	1,887,500	1,430,000
	9,242,150	8,068,754
Less: Current portion	3,334,772	3,178,666
Less: Arrangement fees	22,060	30,359
Long-term borrowings	$ 5,885,318	$ 4,859,729
Interest rate	1.23%-1.97%	1.48%-2.21%

Borrowing Type	Repayment Terms	December 31 2018	December 31 2017
Secured syndicated loan denominated in NT$	From December 2017 to December 2022.	$ 6,100,000	$ 5,300,000
Secured bank borrowing denominated in NT$	From September 2017 to September 2022.	468,750	500,000
Unsecured bank borrowing denominated in NT$	From August 2017 to February 2019.	87,500	350,000
Secured bank borrowing denominated in NT$	From January 2015 to January 2020.	78,719	141,694
Secured bank borrowing denominated in JPY	From March 2014 to March 2019.	7,181	34,098
Unsecured bank borrowings denominated in NT$	From September 2018 to December 2019	800,000	-
Secured bank borrowings denominated in NT$	From September 2018 to September 2021	700,000	-
Unsecured bank borrowings denominated in NT$	From September 2018 to September 2020	400,000	-
Unsecured bank borrowings denominated in NT$	From September 2018 to September 2021	300,000	-
Unsecured bank borrowings denominated in NT$	From September 2018 to September 2020	300,000	-
Unsecured bank borrowing denominated in NT$	Pay off in January 2018.	-	210,000
Secured bank borrowing denominated in NT$	Pay off in February 2018.	-	6,000
Unsecured bank borrowing denominated in NT$	Pay off in April 2018.	-	70,000
Unsecured bank borrowing denominated in NT$	Pay off in August 2018.	-	800,000
Secured bank borrowing denominated in NT$	Pay off in September 2018.	-	290,000
Secured bank borrowing denominated in NT$	Pay off in October 2018.	-	200,000
Secured bank borrowing denominated in NT$	Pay off in December 2018.	-	166,962
Less: Current portion		3,334,772	3,178,666
Less: Arrangement fee		22,060	30,359
Total long-term borrowings		$ 5,885,318	$ 4,859,729

To repay the vested liabilities, to purchase equipment or 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.

The Group had provided notes as refundable guarantees for syndicated loan mentioned above that will be cancelled upon termination of the guarantee.

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, 2018, the Group had met the financial ratio covenants.

The details of assets pledged as collateral for long-term loans are set in Note 37.

21. NOTES PAYABLE AND TRADE PAYABLES

	December 31	
	2018	2017
Notes payable	$ -	$ 826
Trade payables	2,613,758	2,786,705
	$ 2,613,758	$ 2,787,531

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

22. OTHER PAYABLES

	December 31	
	2018	2017
Payables for bonuses	$ 256,201	$ 253,777
Payables for patents	214,709	180,449
Payables for maintenance and repairs	207,623	181,744
Others	767,562	853,294
	$ 1,446,095	$ 1,469,264

23. OTHER LIABILITIES

	December 31	
	2018	2017
Current		
Refund liabilities (Note 27)	$ 306,291	$ -
Receipts under custody	34,582	38,361
Others	1,756	55,085
	$ 342,629	$ 93,446
Non-current		
Guarantee deposits	$ 10,091	$ 6,715
Others	9	801
	$ 10,100	$ 7,516

24. PROVISIONS

	December 31	
	2018	2017
Current		
Employee benefits (a)	$ 28,517	$ 60,185
Customer returns and rebates (b) (c)	-	250,842
	$ 28,517	$ 311,027

	Employee Benefits	Customer Returns and Rebates	Total
Balance at January 1, 2018	$ 60,185	$ 250,842	$ 311,027
Effect of retrospective application of IFRS 15	-	(250,842)	(250,842)
Additional provisions recognized	28,414	-	28,414
Reversing un-usage balances/usage	(60,181)	-	(60,181)
Net exchange differences	99	-	99
Balance at December 31, 2018	$ 28,517	$ -	$ 28,517

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

b. For contracts with customers in 2017 that begin, the provision for customer returns and rebates was based on historical experience, management's judgment and other known reasons for estimated product returns and rebates that may occur in the year. The provision was recognized as a reduction of operating income in the year in which the related goods were sold.

c. Starting from 2018, the Group recognizes the estimation of sales returns and allowances as a refund liability upon initial application of IFRS 15. As of December 31, 2018, the refund liability in the amount of NT$306,291 is classified under other current liabilities.

25. 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 Law 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	
	2018	2017
Present value of defined benefit obligation	$ 1,890,484	$ 1,842,116
Fair value of plan assets	(710,318)	(665,599)
Net defined benefit liability	$ 1,180,166	$ 1,176,517

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, 2017	$ 1,881,728	$ 757,286	$ 1,124,442
Defined benefit cost			
Current service cost	6,168	-	6,168
Net interest expense	27,942	-	27,942
Return on plan assets	-	11,308	(11,308)
Recognized in profit or loss	34,110	11,308	22,802
Remeasurement			
Return on plan assets	-	(4,189)	4,189
Actuarial loss - experience adjustments	63,292	-	63,292
Actuarial loss - change in financial assumptions	-	-	-
Recognized in other comprehensive income	63,292	(4,189)	67,481
Contributions from the employer	-	31,304	(31,304)
Benefits paid	(137,014)	(130,110)	(6,904)
Balance at December 31, 2017	1,842,116	665,599	1,176,517

(Continued)

	Present Value of Defined Benefit Obligation	Fair Value of the Plan Assets	Net Defined Benefit Liabilities (Assets)
Defined benefit cost			
Current service cost	$ 5,875	$ -	$ 5,875
Net interest expense	27,316	-	27,316
Return on plan assets	-	9,910	(9,910)
Recognized in profit or loss	33,191	9,910	23,281
Remeasurement			
Return on plan assets	-	17,836	(17,836)
Actuarial loss - experience adjustments	17,672	-	17,672
Actuarial loss - change in financial assumptions	52,580	-	52,580
Recognized in other comprehensive income	70,252	17,836	52,416
Contributions from the employer	-	72,048	(72,048)
Benefits paid	(55,075)	(55,075)	-
Balance at December 31, 2018	$ 1,890,484	$ 710,318	$ 1,180,166

(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	
	2018	2017
Operating costs	$ 12,600	$ 12,406
Selling and marketing expenses	1,260	1,203
General and administration expenses	4,283	4,075
Research and development expenses	5,138	5,103
	$ 23,281	$ 22,787

Through the defined benefit plans under the Labor Standards Law, 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	
	2018	2017
Discount rate	1.25%	1.50%
Expected rate of salary increase	3.00%	3.00%
Expected return on plan assets increase	1.25%	1.50%

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	
	2018	2017
Discount rate		
0.50% increase	$ (105,932)	$ (107,722)
0.50% decrease	$ 114,591	$ 116,885
Expected rate of salary increase		
0.50% increase	$ 121,893	$ 114,570
0.50% decrease	$ (113,520)	$ (106,740)

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	
	2018	2017
The expected contributions to the plan for the next year	$ 31,032	$ 32,243
The average duration of the defined benefit obligation	11.7 years	12.3 years

The Group maintains a separate executive pension plan and the net periodic pension costs were NT$9,173 thousand and NT$11,396 thousand for the years ended December 31, 2018 and 2017, respectively.

Movements in net defined benefit liability were as follows:

	Present Value of Defined Benefit Obligation
Balance at January 1, 2017	$ 407,634
Defined benefit cost	
Current service cost	6,683
Net interest expense	4,713
Recognized in profit or loss	11,396

(Continued)

	Present Value of Defined Benefit Obligation
Remeasurement	
Actuarial loss - experience adjustments	$ 23,706
Actuarial loss - changes in financial assumptions	-
Recognized in other comprehensive income	23,706
Benefits paid	(9,455)
Balance at December 31, 2017	433,281
Defined benefit cost	
Current service cost	2,745
Net interest expense	6,428
Recognized in profit or loss	9,173
Remeasurement	
Actuarial loss - experience adjustments	21,240
Actuarial loss - changes in financial assumptions	5,748
Recognized in other comprehensive income	26,988
Benefits paid	(9,455)
Balance at December 31, 2018	$ 459,987

(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	
	2018	2017
General and administration expenses	$ 9,173	$ 11,396

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	
	2018	2017
Discount rate	1.25%	1.50%
Expected rate of salary increase	-	-
Expected return on plan assets increase	1.25%	1.50%

26. EQUITY

a. Share capital

Ordinary shares

	December 31	
	2018	2017
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)	1,840,292	1,804,939
Shares issued	$ 18,402,919	$ 18,049,385

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

The Company resolved, in the May 26, 2017 shareholder's meeting, a capital reduction for offsetting the accumulated deficit to improve the Company's financial structure. The capital reduction will amount to NT$18,651,070 thousand, representing 1,865,107 thousand shares and approximately 51% of the Company's original share capital. The reduction was approved by the FSC on June 26, 2017 and went into effect upon approval. Per the authority granted in the shareholders' meeting, the chairman of the Company determined June 29, 2017 as the basis date of the capital reduction. After the reduction, the paid-in capital would be NT$18,058,953 thousand, equivalent to 1,805,895 thousand shares.

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	
	2018	**2017**
May be used to offset a deficit, distributed as cash dividends, or transferred to share capital (1)		
Issuance of ordinary shares	$ -	$ -
Donations	37	37
Treasury share transactions	6,422	6,422
	$ 6,459	$ 6,459
May be used to offset a deficit only		
Changes in percentage of ownership interests in subsidiaries (2)	$ 4,609	$ 4,609
Treasury share transactions	21,999	20,080
	$ 26,608	$ 24,689
May not be used for any purpose		
Employee restricted shares	$ (89,308)	$ (238,236)

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, in May 26, 2017, 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 28 (f).

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.

Items referred under Rule No. 1010047490 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the Company.

The appropriation of earnings for 2017 were approved by the Company's shareholders in its meeting held on June 14, 2018. The appropriation and dividends per share were as follows:

	Appropriation of Earnings	**Dividends Per Share (NT$)**
Legal reserve	$ 541,360	
Special reserve	74,275	
Cash dividends	1,804,776	$ 1.0
Share dividends	360,955	0.2

The appropriation of earnings for 2018 has been proposed by the Company's board of directors on March 12, 2019. The appropriation and dividends per share were as follows:

	Appropriation of Earnings	**Dividends Per Share (NT$)**
Legal reserve	$ 899,301	
Special reserve	932,777	
Cash dividends	2,208,200	$ 1.2

The appropriation of earnings for 2018 are subject to the resolution of the shareholders' meeting to be held on June 18, 2019.

d. Special reserve

	For the Year Ended December 31, 2018
Beginning at January 1	$ -
Appropriations in respect of Treasury shares	74,275
Balance at December 31	$ 74,275

e. Other equity items

1) Exchange differences on translating foreign operations

	For the Year Ended December 31	
	2018	2017
Balance at January 1	$ (85,183)	$ (8,565)
Effect of retrospective application of IFRS 9	(146,758)	-
Exchange differences on translating foreign operations	94,809	(76,618)
Balance at December 31	$ (137,132)	$ (85,183)

2) Unrealized gain on available-for-sale financial assets

	Amount
Balance at January 1, 2017	$ 956,774
Unrealized gain on available-for-sale financial assets	774,460
Balance at December 31, 2017	$ 1,731,234
Balance at January 1, 2018 (IAS 39)	$ 1,731,234
Effect of retrospective application of IFRS 9	(1,731,234)
Balance at January 1, 2018 (IFRS 9)	$ -

3) Unrealized gain (loss) on financial assets at FVTOCI

	For the Year Ended December 31, 2018
Balance at January 1 (IAS 39)	$ -
Effect of retrospective application of IFRS 9	112,903
Balance at January 1 (IFRS 9)	112,903
Unrealized loss on financial assets at FVTOCI	(958,735)
Other comprehensive income recognized in the period	(845,832)
Cumulative unrealized gain on the disposal of equity instruments transferred to retained earnings	99,070
Balance at December 31	$ (746,762)

4) Employees' unearned compensation

In the meetings of shareholders on June 18, 2014 and June 16, 2016, the shareholders approved a restricted share plan for employees. Refer to Note 31 for the information on restricted shares issued.

	For the Year Ended December 31	
	2018	2017
Balance at January 1	$ (85,600)	$ (306,958)
Issuance of shares	-	-
Share-based payment expenses recognized	63,583	213,100
Adjustments for change of turnover rate	2,039	8,258
Balance at December 31	$ (19,978)	$ (85,600)

f. Non-controlling interests

	For the Year Ended December 31	
	2018	2017
Balance at January 1	$ 685	$ 1,686
Share of loss for the year	(157)	(538)
Other comprehensive income (loss) for the year		
Exchange difference on translating the financial statement of foreign entities	-	(6)
Non-controlling interest relating to outstanding vested share options held by the employees of subsidiaries	(194)	-
Disposal of subsidiaries	-	(457)
Balance at December 31	$ 334	$ 685

g. Treasury shares

The Company's shares held by its subsidiaries at December 31, 2018 and 2017 were as follows:

Name of Subsidiary	Number of Shares Held (In Thousands)	Carrying Amount	Market Price
December 31, 2018			
Hui Ying	1,957	$ 159,061	$ 35,904
December 31, 2017			
Hui Ying	1,918	$ 159,061	$ 84,786

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.

The Company implemented a capital reduction on June 29, 2017, with 1,918 thousand treasury shares remaining after the reduction; refer to Note 26 (a).

27. REVENUE

a. Segmentation of revenue from contracts with customers

	For the Year Ended December 31	
	2018	2017
Product type		
Flash	$ 23,326,091	$ 23,315,458
ROM	11,166,453	8,416,942
Foundry	2,445,263	2,432,297
Others	15,225	32,219
	$ 36,953,032	$ 34,196,916

b. Contract balances

	For the Year Ended December 31, 2018
Contract liabilities (classified as current liabilities)	$ 14,913

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, 2017
From the beginning balance of contract liabilities	
Sale of goods	$ 52,337

28. NET PROFIT (LOSS) FROM CONTINUING OPERATIONS

a. Other income

	For the Year Ended December 31	
	2018	2017
Dividend income	$ 105,698	$ 86,724
Interest income	45,991	25,547
Intellectual property income	2,473,600	-
Others	36,262	31,244
	$ 2,661,551	$ 143,515

b. Other gains and losses

	For the Year Ended December 31	
	2018	2017
Net foreign exchange gains (losses)	$ 245,559	$ (121,898)
Gains (losses) on disposal of investments	180	(2,517)
Impairment losses	-	(1,485)
Others	(8,888)	(18,742)
	$ 236,851	$ (144,642)

c. Finance costs

	For the Year Ended December 31	
	2018	2017
Interest on loans	$ 159,779	$ 215,690
Other interest expenses	1,223	18
Less: Amounts included in the cost of qualifying assets	(17,649)	(106)
	$ 143,353	$ 215,602

Information about capitalized interest was as follows:

	For the Year Ended December 31	
	2018	2017
Capitalized interest	$ 17,649	$ 106
Capitalization rate	1.45%	0.90%

d. Depreciation and amortization

	For the Year Ended December 31	
	2018	2017
An analysis of depreciation by function		
Operating costs	$ 1,769,580	$ 1,610,991
Operating expenses	323,468	333,123
	$ 2,093,048	$ 1,944,114
An analysis of amortization by function		
Operating costs	$ 9,226	$ 14,616
Operating expenses	18,096	13,625
	$ 27,322	$ 28,241

e. Employee benefits expense

	For the Year Ended December 31	
	2018	2017
Post-employment benefits (Note 25)		
Defined contribution plans	$ 252,800	$ 244,551
Defined benefit plans	32,454	34,182
	285,254	278,733
Share-based payments		
Equity-settled	63,583	213,100
Other employee benefits	7,359,029	6,750,582
Total employee benefits expense	$ 7,707,866	$ 7,242,415
An analysis of employee benefits expense by function		
Operating costs	$ 3,572,337	$ 3,339,106
Operating expenses	4,135,529	3,903,309
	$ 7,707,866	$ 7,242,415

f. Employees' compensation and remuneration of directors

In compliance with the Articles of Incorporation on May 26, 2017, 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, 2018 and 2017, the employees' estimated compensation and the remuneration of directors and supervisors for having been resolved by the board of directors on March 12, 2019 and March 16, 2018, respectively, were as follows:

Amount

	For the Year Ended December 31	
	2018	2017
Employees' compensation	$ 1,669,586	$ 997,202
Remuneration of directors	$ 222,611	$ 132,960

If there is a change in the amounts after the annual consolidated financial statements were authorized for issue, the differences are recorded as a change in the accounting estimate.

It was accumulated deficit in the years ended December 31, 2016, consequently, there is no amount of employees' compensation and remuneration of directors to be distributed.

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, 2018 and 2017.

Information on the employees' compensation and remuneration of directors resolved by the Company's board of directors in 2019 and 2018 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

29. INCOME TAXES RELATING TO CONTINUING OPERATIONS

a. Major components of income tax expense (benefit) recognized in profit or loss

	For the Year Ended December 31	
	2018	2017
Current tax		
In respect of the current year	$ 26,359	$ 19,976
Income tax on unappropriated earnings	184,257	-
Overseas income tax	247,360	-
Deferred tax		
In respect of the current year	(186,438)	(808)
Income tax expense recognized in profit or loss	$ 271,538	$ 19,168

A reconciliation of accounting loss and income tax expenses were as follows:

	For the Year Ended December 31	
	2018	2017
Income before tax from continuing operations	$ 9,624,388	$ 5,536,477
Income tax expense calculated at the statutory rate (For the year ended of 2018 and 2017 applicable for 20% and 17% respectively.)	$ 1,875,074	$ 956,334
Non-deductible expenses in determining taxable income	7,321	138,201
Non-taxable income	(23,193)	(84,181)
Realized loss on investment	(296,074)	(82,414)
Income tax unappropriated earnings	184,257	-
Unrecognized deductible temporary differences	(1,476,755)	(457,733)
Recognized (unrecognized) loss carryforwards	908	(451,039)
Income tax expense recognized in profit or loss	$ 271,538	$ 19,168

In 2017, the applicable corporate income tax rate used by the Group in the ROC is 17%. However, the Income Tax Act in the ROC was amended in 2018 and the corporate income tax rate was adjusted from 17% to 20% effective in 2018. In addition, the rate of the corporate surtax applicable to 2018 unappropriated earnings will be reduced from 10% to 5%.

As the status of 2019 appropriations of earnings is uncertain, the potential income tax consequences of 2018 unappropriated earnings which add 5% are not reliably determinable.

b. Current tax assets and liabilities

	December 31	
	2018	2017
Current tax assets		
Tax refund receivable	$ 107,305	$ 4,378
Current tax liabilities		
Income tax payable	$ 187,612	$ 2,030

c. Deferred tax assets and liabilities

The Group offset certain deferred tax assets and deferred tax liabilities which met the offset criteria.

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2018

	Opening Balance	Recognized in Profit or Loss	Closing Balance
Deferred tax assets			
Temporary differences			
Unrealized expense and losses	$ 4,826	$ 191	$ 5,017
Loss carryforwards	992,838	186,246	1,179,084
	$ 997,664	$ 186,437	$ 1,184,101

For the year ended December 31, 2017

	Opening Balance	Recognized in Profit or Loss	Closing Balance
Deferred tax assets			
Temporary differences			
Unrealized expense and losses	$ 4,018	$ 808	$ 4,826
Loss carryforwards	992,838	-	992,838
	$ 996,856	$ 808	$ 997,664

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	
	2018	2017
Loss carryforwards		
Expire in 2018	$ -	$ 131,497
Expire in 2019	653,619	659,371
Expire in 2020	82,441	82,441
Expire in 2021	131,050	131,050
Expire in 2022	184,390	184,390
Expire in 2023	97,389	2,783,339
Expire in 2024	1,303,149	6,267,507
Expire in 2025	2,587,948	2,587,948
Expire in 2026	2,902,299	3,112,795
Expire in 2027	66,966	66,231
Expire in 2028	4,541	-
	$ 8,013,792	$ 16,006,569

(Continued)

	December 31 2018	December 31 2017
Investment credits		
Research and development expenditures	$ 257,783	$ 147,545
Deductible temporary differences	$ 18,639,093	$ 12,205,241

(Concluded)

The unrecognized investment credits will expire in 2019.

e. Information about unused investment credits and unused loss carry-forwards

As of December 31, 2018, investment credits comprised of:

Law and Statutes	Tax Credit Source	Remaining Creditable Amount	Expiry Year
Statute for Industrial Innovation	Research and development expenditures	$ 66,573	2018
Statute for Industrial Innovation	Research and development expenditures	191,210	2019
		$ 257,783	

Loss carryforwards as of December 31, 2018 comprised of:

Unused Tax Amount	Expiry Year
$ 130,724	2019
16,488	2020
26,210	2021
36,878	2022
205,690	2023
1,253,501	2024
517,590	2025
580,460	2026
13,393	2027
908	2028
$ 2,781,842	

f. Income tax assessments

The Company's tax returns through 2016 have been assessed by the tax authorities.

30. EARNINGS PER SHARE

Unit: NT$ Per Share

	For the Year Ended December 31	
	2018	2017
Basic earnings per share	$ 4.94	$ 3.06
Diluted earnings per share	$ 4.65	$ 2.97

The weighted average number of shares outstanding used for the earnings per share computation was adjusted retroactively for the issuance of bonus shares on September 1, 2018. The basic and diluted earnings per share adjusted retrospectively for the year ended December 31, 2017, were as follows:

Unit: NT$ Per Share

	Before Retrospective Adjustment	After Retrospective Adjustment
Basic earnings per share	$ 3.12	$ 3.06
Diluted earnings per share	$ 3.03	$ 2.97

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	
	2018	2017
Income for the year attributable to owners of the Company	$ 8,993,006	$ 5,517,847

Weighted average number of ordinary shares outstanding (in thousand shares):

	For the Year Ended December 31	
	2018	2017
Weighted average number of ordinary shares in computation of basic earnings per share	1,822,137	1,801,061
Effect of potentially dilutive ordinary shares:		
Restricted shares to employees	15,406	34,842
Employees' compensation or bonus issue to employees	95,189	22,561
Weighted average number of ordinary shares in computation of diluted earnings per share	1,932,732	1,858,464

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.

31. SHARE-BASED PAYMENT ARRANGEMENTS

a. Employee share option plan

Mxtran

Approved by the board of directors of Mxtran on August 12, 2011, Mxtran was authorized to issue employee share options for 2,344 thousand units. For each share option, the holder may subscribe for one new share of ordinary shares of Mxtran. The options are valid for six years and exercisable at certain percentages after the second anniversary from the grant date. For any subsequent changes in Mxtran's capital surplus, the exercise price is adjusted accordingly.

Information on employee share options is as follows:

	For the Year Ended December 31	
	2017	
	Number of Options (In Thousands)	**Weighted-average Exercise Price (NT$)**
Balance at January 1	688	$ 10.00
Options cancelled	(688)	-
Balance at December 31	-	10.00

Options granted were priced using the Black-Scholes pricing model and the inputs to the model were as follows:

Grant-date share price (NT$)	$ 3.23
Exercise price (NT$)	10.00
Expected volatility	44.82%
Expected life (years)	4.25
Expected dividend yield	-
Risk-free interest rate	1.11%

For the years ended December 31, 2017, the compensation costs recognized were $0. As of December 31, 2017, the estimated percentages of forfeiture due to termination of employment over the remaining vesting period was 0%.

b. 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
2014/06/18	123,251	38,365	2014/08/28	2014/12/25	37,301	$ 7.76
		62,213	2015/03/16	2015/07/22	61,279	6.82
2016/06/16	123,535	58,971	2016/10/25	2017/01/03	57,476	4.73

To meet the vesting conditions, an employee has to meet performance and other conditions over the vesting period, as follows:

1) Remain employed by the Company within one year after the grant date; and has a current year's performance rating of "successful" (or higher) - 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 "successful" (or higher) - 30% of restricted shares will be vested;

3) Remain employed by the Company within three years after grant date; and has a current year's performance rating of "successful" (or higher) - 30% of restricted shares will be vested.

In addition to the vesting conditions, the limitations are as follows:

1) Employees, except for inheritance, should not sell, transfer, pledge, donate or in any other way dispose of the shares.

2) The shares should be held in a share trust.

3) 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.

4) The dividends of restricted share plan for employees are not restricted by existing conditions.

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	
	2018	2017
Balance at January 1	24,461	103,593
Vested	(15,970)	(32,719)
Forfeited (Notes 1 and 2)	(704)	(3,676)
Cancelled by capital reduction (Note 3)	-	42,737
Balance at December 31	7,787	24,461

Note 1: The forfeited shares for the year ended December 31, 2018 consisted of 125 thousand shares not yet cancelled and 579 thousand shares already cancelled.

Note 2: The forfeited shares for the year ended December 31, 2017 consisted of 163 thousand shares that are not yet cancelled, 2,018 thousand shares already cancelled, and 1,495 thousand shares representing the difference between granted and issued shares as of October 25, 2016.

Note 3: The number of shares cancelled in proportion to the capital reduction on June 29, 2017 was 42,737 thousand.

For the years ended December 31, 2018 and 2017, the compensation costs recognized were NT$63,583 thousand and NT$213,100 thousand, respectively.

32. DISPOSAL OF SUBSIDIARIES

On March 22, 2017, INFOMAX filed for liquidation per the resolution reached in its shareholders' meeting; therefore, the Group has no control over INFOMAX as well as the subsidiaries of INFOMAX.

a. Analysis of assets and liabilities on the date of losing control

	March 22, 2017
Current assets	
Cash and cash equivalents	$ 3,892
Other receivables	365
Others	26,792
Non-current assets	
Property, plant and equipment	995
Current liabilities	
Other payables	(822)
Net assets disposed of	$ 31,222

b. Loss on disposal of subsidiaries

	Year Ended December 31, 2017
Fair value of interest retained	$ 22,889
Net assets disposed of	(31,222)
Non-controlling interests	459
Loss on disposal	$ (7,874)

33. OPERATING LEASE ARRANGEMENTS

a. The Group as lessee

Operating leases relate to leases of land, offices, employee dormitories and office equipment with lease terms between 1 and 50 years. The Group does not have a bargain purchase options to acquire the leased land, offices, employee dormitories and office equipment at the expiration of the lease periods.

The future minimum lease payments of non-cancellable operating lease commitments were as follows:

	December 31	
	2018	2017
Not later than 1 year	$ 101,377	$ 90,693
1 - 5 years	319,190	294,905
Later than 5 years	752,158	757,101
	$ 1,172,725	$ 1,142,699

The lease payments recognized in profit or loss for the current year were as follows:

	For the Year Ended December 31	
	2018	2017
Minimum lease payments	$ 134,096	$ 125,691

b. The Group as lessor

Operating leases relate to the sole building owned by the Group with lease terms between 2 to 5 years. All operating lease contracts contain market review clauses in the event that the lessee exercises its option to renew. The lessee does not have bargain purchase options to acquire the property at the expiration of the lease periods.

The future minimum lease revenue from non-cancellable operating leases was as follows:

	December 31	
	2018	2017
Not later than 1 year	$ 3,738	$ 279
1 - 5 years	6,198	291
	$ 9,936	$ 570

34. 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.

35. 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, 2018

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Equity securities				
Securities listed in the ROC	$ 1,002,225	$ -	$ -	$ 1,002,225
Securities listed in other countries	264,804	-	-	264,804
Securities unlisted	-	-	334,912	334,912
	$ 1,267,029	$ -	$ 334,912	$ 1,601,941

December 31, 2017

	Level 1	Level 2	Level 3	Total
Available-for-sale financial assets				
Equity securities				
Securities listed in ROC	$ 1,411,374	$ -	$ -	$ 1,411,374
Securities listed in other countries	641,713	-	-	641,713
	$ 2,053,087	$ -	$ -	$ 2,053,087

There were no transfers between Level 1 and Level 2 in the current and prior periods.

2) Reconciliation of Level 3 fair value measurements of financial assets

For the year ended December 31, 2018

Financial Assets	Financial Assets at FVTOCI Equity Investments
Balance at January 1	$ 484,318
Total gain recognized in other comprehensive (unrealized gain on financial assets at FVTOCI)	(149,406)
Balance at December 31	$ 334,912
Unrealized loss	$ (149,406)

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	
	2018	**2017**
Financial assets		
Loans and receivables (i)	$ -	$ 14,672,113
Available-for-sale financial assets (ii)	-	2,143,728
Financial assets measured at amortized cost (iii)	18,502,646	-
Financial assets measured at FVTOCI	1,601,941	-
Financial liabilities		
Financial liabilities measured at amortized cost (iv)	25,463,876	17,513,095

i) The balances included loans and receivables measured at amortized cost, which comprise cash and cash equivalents, debt investments with no active market, notes receivable and trade receivables (including receivables from related parties), other receivables and other financial assets.

ii) The balances included the carrying amount of available-for-sale financial assets measured at cost.

iii) The balances included financial liabilities measured at amortized cost, which comprise cash and cash equivalents, notes receivable and trade receivables (including receivables from related parties), other receivables and other financial assets.

iv) The balances included financial liabilities measured at amortized cost, which comprise short-term loans, notes payable and trade payables (including payables to related parties), other payables (including other payables to related parties), accrued employees' compensation and remuneration of directors, payables for purchases of equipment 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 rate is for the 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**	
	2018	**2017**	**2018**	**2017**
Pre-tax profit decrease (increase)	$ 55,846	$ 106,626	$ (63,561)	$ 35,238

The Group's sensitivity analysis of the impact of the New Taiwan dollar fluctuating against the JPY showed an increase for the year ended December 31, 2018, due to the increase in the purchase amount that resulted in an increase in the balance of accounts payable in foreign currencies at the end of the period.

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, 2018 and 2017 would decrease/increase by NT$46,211 thousand and NT$40,344 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, 2018 and 2017 would have increase/decrease by NT$160,194 thousand and NT$205,309 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, 2018 and 2017, the Group's ten largest customers accounted for 50% and 51% 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, 2018

	On Demand or Less than 1 Year	1-3 Years	3-5 Years	5+ Years	Total
Non-derivative financial liabilities					
Non-interest bearing	$ 16,550,077	$ -	$ -	$ -	$ 16,550,077
Interest bearing	3,479,800	4,530,019	1,529,733	-	9,539,552
	$ 20,029,877	$ 4,530,019	$ 1,529,733	$ -	$ 26,089,629

December 31, 2017

	On Demand or Less than 1 Year	1-3 Years	3-5 Years	5+ Years	Total
Non-derivative financial liabilities					
Non-interest bearing	$ 9,474,700	$ -	$ -	$ -	$ 9,474,700
Interest bearing	3,315,848	2,691,562	2,398,833	-	8,406,243
	$ 12,790,548	$ 2,691,562	$ 2,398,833	$ -	$ 17,880,943

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.

36. 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
Modiotek Co., Ltd. (Modiotek)	Associates (Note)
MegaChips Corporation (MegaChips)	Key management personnel
Ardentec Corporation (Ardentec)	The Group is its major management authority
TM Technology, Inc. (TMTECH)	Others
Etron Technology, Inc. (Etron)	Others
Macronix Education Foundation (MXIC Education)	Others

Note: In the May 26, 2017 shareholders' meeting, the decision for the liquidation of Modiotek and the election of its liquidator were resolved. The Group has hence lost its significant influence over Modiotek and Modiotek's subsidiaries.

b. Operating revenues

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2018	2017
Sales	Key management personnel		
	MegaChips	$ 11,104,912	$ 8,657,954
	Others	604	1,058
	Associates	-	41
		$ 11,105,516	$ 8,659,053

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 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 2018	2017
Key management personnel		
MegaChips	$ 11,056,200	$ 5,595,024

Materials purchased from related parties were for manufacturing process. The payment term was 30 days after monthly closing and after acceptanceof materials.

d. Receivables from related parties

Line Items	Related Parties Categories/Name	December 31 2018	2017
Receivables from related parties, net	Key management personnel MegaChips	$ 695,028	$ 732,888
Other receivables	Key management personnel MegaChips	$ 5	$ -

The outstanding trade receivables from related parties are unsecured. For the years ended December 31, 2018 and 2017, no impairment loss was recognized for trade receivables from related parties.

e. Payables to related parties

Line Items	Related Parties Categories/Name	December 31 2018	2017
Payables to related parties	Key management personnel		
	MegaChips	$ 8,849,935	$ 3,339,853
	The Group is its major management authority	76,266	74,286
		$ 8,926,201	$ 3,414,139
Other payables to related parties	Other Etron	$ 425	$ -

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 2018	2017
Manufacturing expenses	The Group is its major management authority		
	Ardentec	$ 269,306	$ 257,879

(Continued)

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2018	2017
Operating expenses	Others		
	MXIC Education	$ 21,368	$ 11,000
	Others	867	-
	Associates	-	1
		$ 22,235	$ 11,001
IT service revenue	Associates		
	Modiotek	$ -	$ 330
Rental revenue	Associates		
	Modiotek	$ -	$ 963

(Concluded)

The manufacturing expense of related parties were comparable to those with other vendors. The payment term was 75 days after monthly closing.

The Group leases offices to associates (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 Group provided the IT service to 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 2018	2017
Short-term benefits	$ 675,119	$ 471,986
Post-employment benefits	9,173	11,400
Share-based payments	8,965	27,257
Other long-term employee benefits	(2)	116
	$ 693,255	$ 510,759

The remuneration of key executives was determined by the remuneration committee based on the performance of individuals and market trends.

37. 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 2018	2017
Property, plant and equipment, net	$ 9,927,203	$ 10,244,901
Pledge deposits (classified as other financial assets - non-current)	157,665	134,231
	$ 10,084,868	$ 10,379,132

38. 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, 2018 and 2017 were as follows:

a. As of December 31, 2018 and 2017, unused letters of credit amounted to approximately NT$0 thousand and NT$405,485 thousand, respectively.

b. Unrecognized commitments are as follows:

	December 31	
	2018	2017
Acquisition of property, plant and equipment	$ 6,819,449	$ 655,993

c. In January 2016, the Company entered into a phase-change memory technology development agreement with IBM, and the agreement is from January 2016 to January 2019. Under the agreement, both parties share the related expenditures of the technology development, and all payments have been made by the Company. In January 2019, the Company again signed an agreement with IBM to continue the joint development of phase-change memory technology, and the agreement is January 2019 to January 2022.

d. In March 2017, the Company filed a complaint with the International Trade Commission and the US District Court in the Southern District of California against Toshiba Corporation and its subsidiaries for infringement of the Company's US patents. Toshiba Corporation ("Toshiba") subsequently filed a petition in the US Patent Trial and Appeal Board for the Inter Partes Review of certain claims of US Patent, No. 6788602 and No. 8035417, claiming that they were invalid. In October 2017, Toshiba also filed a complaint in Taiwan against the Company for infringement of its Taiwan patents. In November 2017, Toshiba filed a complaint in the Japan Patent Office for infringement of its Japan patents. In April 2018, the Company filed a complaint in the Taiwan Intellectual Property Court against Toshiba Corporation and its subsidiaries for infringement of the Company's patents. Regarding the aforementioned cases, both parties have settled, and have been announced in October 2018. (Please refer to at the Market Observation Post System website of the Taiwan Stock Exchange, http://mops.twse.com.tw/mops/web/t05st01).

39. 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, 2018

	Foreign Currencies	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 29,851,090	0.2782	$ 8,304,573
USD	121,931	30.715	3,745,111
			$ 12,049,684

(Continued)

	Foreign Currencies	Exchange Rate	Carrying Amount
Financial liabilities			
Monetary items			
JPY	$ 32,135,822	0.2782	$ 8,940,186
USD	61,324	30.715	1,883,567
			$ 10,823,753

(Concluded)

December 31, 2017

	Foreign Currencies	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 14,757,728	0.2642	$ 3,898,992
USD	188,955	29.76	5,623,301
			$ 9,522,293
Financial liabilities			
Monetary items			
JPY	13,423,969	0.2642	$ 3,546,613
USD	69,526	29.76	2,069,094
			$ 5,615,707

For the years ended December 31, 2018 and 2017, realized and unrealized net foreign exchange (losses) gains were NT$245,559 thousand and NT$(121,898) 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.

40. SEPARATELY DISCLOSED ITEMS

Information on significant transactions and information on investees:

a. Financing provided to others: None

b. Endorsements/guarantees provided: None

c. Marketable securities held (excluding investment in subsidiaries, associates and joint ventures): Table 1 (attached)

d. Marketable securities acquired and disposed of at costs or prices of at least NT$300 million or 20% of the paid-in capital: None

e. Acquisition of individual real estate at costs of at least NT $300 million or 20% of the paid-in capital: None

f. Disposal of individual real estate at prices of at least NT$300 million or 20% of the paid-in capital: None

g. Total purchases from or sales to related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 2 (attached)

h. Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 3 (attached)

i. Trading in derivative instruments: None

j. Intercompany relationships and significant intercompany transactions: Table 4 (attached)

k. Information on investees: Table 5 (attached)

l. 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 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: Table 4 (attached)

41. 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		Segment Income (Loss) from Operations and Net Income (Loss)	
	For the Year Ended December 31		For the Year Ended December 31	
	2018	2017	2018	2017
Memory products and wafer fabrication	$ 36,944,132	$ 34,184,459	$ 6,508,358	$ 5,759,447
IC design	8,900	12,457	980	(6,241)
Total	$ 36,953,032	$ 34,196,916	6,509,338	5,753,206
Other income			2,661,551	143,515
Other gains and losses			236,851	(144,642)
Finance costs			(143,353)	(215,602)
Income before tax			$ 9,264,387	$ 5,536,477

b. Segment total assets and liabilities

	December 31	
	2018	2017
Segment assets		
Memory products and wafer fabrication	$ 57,664,018	$ 43,016,576
IC design	10,192	11,155
Total segment assets	57,674,210	43,027,731
Uncollected assets	1,374,611	1,166,168
Consolidated total assets	$ 59,048,821	$ 44,193,899
Segment liabilities		
Memory products and wafer fabrication	$ 18,277,034	$ 11,495,026
IC design	3,719	2,093
Total segment liabilities	18,280,753	11,497,119
Uncollected liabilities	9,407,711	8,040,433
Consolidated total liabilities	$ 27,688,464	$ 19,537,552

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	
	2018	2017	2018	2017
Taiwan	$ 29,889,845	$ 26,493,795	$ 18,872,753	$ 15,825,984
China	5,460,127	6,292,478	202,258	209,012
Others	1,603,060	1,410,643	297,608	289,060
	$ 36,953,032	$ 34,196,916	$ 19,372,619	$ 16,324,056

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	
	2018	2017
Customer A	$ 11,104,912	$ 8,657,954

TABLE 1

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

MARKETABLE SECURITIES HELD
DECEMBER 31, 2018
(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, 2018				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	$ 934,749	7.33	$ 934,749	None
	United Industrial Gases Co., Ltd.	None	〃	6,671,877	267,075	3.06	267,075	None
	Aetas Technology Inc.	None	〃	145,850	-	0.29	-	None
	Zowie Technology Co., Ltd.	None	〃	20,426	-	0.12	-	None
	Quality Test System Inc.	None	〃	4,538,333	-	14.64	-	None
MXBVI	Shares							
	Chipbond Technology Corporation	None	Financial assets at FVTOCI - non-current	1,088,319	67,476	0.17	67,476	None
	Tower Semiconductor Ltd.	None	〃	584,893	264,804	0.56	264,804	None
	Global Strategic Investment Fund (Cayman)	None	〃	490,000	16,405	2.52	16,405	None
	Global Strategic Investment Fund (Samoa)	None	〃	1,739,783	22,978	4.90	22,978	None
Hui Ying	Shares							
	Macronix International Co., Ltd.	The Company	Financial assets at FVTOCI - non-current	1,956,619	35,904	0.11	35,904	None
	Raio Technology Co., Ltd.	None	〃	1,165,690	28,454	10.14	28,454	None

TABLE 2

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, 2018
(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 Corporation	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Sales	$ 11,104,912	31	30 days after monthly closing	Note 36	Note 36	$ 695,028	16	-
	MXHK	Indirect subsidiary	Sales	4,983,410	14	45 days after monthly closing	Note 36	Note 36	379,948	9	-
	MXA	Subsidiary	Sales	1,416,231	4	Net 60 days	Note 36	Note 36	132,915	3	-
	MegaChips Corporation	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Purchase	11,056,200	61	30 days after monthly closing and after acceptance of materials	Note 36	Note 36	8,849,935	77	-
MXHK	The Company	Indirect subsidiary	Purchase	US$ 166,643	100	45 days after monthly closing	No material difference	No material difference	US$ 12,375	100	-
MXA	The Company	Subsidiary	Purchase	US$ 47,132	100	Net 60 days	No material difference	No material difference	US$ 4,327	100	-

TABLE 3

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, 2018
(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 Corporation	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	$ 695,028	15.55 times	$ -	-	JPY 2,455,944 thousand	$ -
	MXHK	Indirect subsidiary	379,948	6.79 times	-	-	US$ 9,190 thousand	-
	MXA	Subsidiary	132,915	8.07 times	-	-	US$ 3,207 thousand	-

TABLE 4

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2018
(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
MXIC	MXHK	1	Sales	$ 4,983,410	Note 2	13
			Notes receivable and trade receivables	379,948		1
	MXE	1	Operating expenses	148,877		-
			Other payables	51,940		-
	MXA	1	Sales	1,416,231	Note 2	4
			Operating expenses	228,565		1
			Notes receivable and trade receivables	132,915		-
			Other payables	78,108		-
	Mxtran	1	Rental revenue	435	Note 3	-
	MX Asia	1	Operating expenses	97,019		-
			Other payables	22,786		-
MXHK	MXm	3	Operating expenses	265,270		1

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 5

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

INFORMATION ON INVESTEES
FOR THE YEAR ENDED DECEMBER 31, 2018
(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, 2018			Net Income (Loss) of the Investee	Share of Profit (Loss)	Note
				December 31, 2018	December 31, 2017	Shares	%	Carrying Amount			
The Company	MXA	San Jose, California, USA.	Sales and marketing	$ 2,640	$ 2,640	100,000	100.00	$ 153,352	$ 46,907	$ 46,907	Subsidiary
	MXBVI	Tortola, British Virgin Islands	Investment holding company	7,348,057	7,348,057	212,048,000	100.00	1,894,118	70,848	70,848	Subsidiary
	Hui Ying	Taipei, Taiwan	Investment	500,000	500,000	-	100.00	61,346	8,394	6,475	Subsidiary
	Run Hong	Taipei, Taiwan	Investment	984,432	984,432	-	100.00	13,819	(150)	(150)	Subsidiary
	Mxtran	Hsinchu, Taiwan	Combi-SIM IC and related services	755,287	755,287	69,627,323	90.43	5,853	(3,043)	(2,752)	Subsidiary
MXBVI	NTTI	San Jose, California, USA.	IC design	882,141	874,418	26,850,000	100.00	299,389	(6,697)	Note	Subsidiary
	MXE	Belgium	After-sales service	2,106	2,106	999	100.00	119,095	9,352	Note	Subsidiary
	MPL	Singapore	After-sales service	3,291	3,291	174,000	100.00	19,458	1,030	Note	Subsidiary
	MXHK	Hong Kong	Sales and marketing	378,427	378,427	89,700,000	100.00	740,677	54,904	Note	Subsidiary
	MX Asia	Cayman Island	Investment holding company	26,325	26,325	700,000	100.00	64,441	4,365	Note	Subsidiary
Run Hong	Mxtran	Hsinchu, Taiwan	Combi-SIM IC and related services	40,318	40,318	3,393,200	4.41	285	(3,043)	Note	Subsidiary
Mxtran	Mxtran Samoa	Samoa	Investment holding company	35,979	35,979	1,170,000	100.00	1,058	2	Note	Subsidiary
Mxtran Samoa	Mxtran HK	Hong Kong	Investment holding company	23,880	23,880	6,152,000	100.00	450	1	Note	Subsidiary

Note: Under relevant regulations, no disclosure of investment gain (loss) is needed.

MACRONIX INTERNATIONAL CO., LTD. AND SUBSIDIARY

INFORMATION ON INVESTMENT IN MAINLAND CHINA
FOR THE YEAR ENDED DECEMBER 31, 2018
(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, 2018	Remittance of Funds		Accumulated Outward Remittance for Investment from Taiwan as of December 31, 2018	Net Income (Loss) of the Investee	% Ownership for Direct or Indirect Investment	Investment Gain (Loss) (Note 1)	Carrying Amount as of December 31, 2018	Accumulated Repatriation of Investment Income as of December 31, 2018
					Outward	Inward						
MXm	Development of integrated circuit system and software	$ 296,160	MXHK (Note 2)	$ 296,160	$ -	$ -	$ 296,160	$ 21,563	100	$ 21,563	$ 379,925	$ -

Accumulated Outward Remittance for Investment in Mainland China as of December 31, 2018	Investment Amount Authorized by the Investment Commission, MOEA	Upper Limit on the Amounts of Investment Stipulated by Investment Commission, MOEA
$ 296,160	$ 296,160	(Note 3)

Note 1: The amount was recognized based on the unreviewed 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.

Note 3: As the Company has obtained the certificate of being qualified for operating headquarters issued by the Industrial Development Bureau, MOEA in March 2017, the upper limit on investments in mainland China pursuant to “Principle of investment or Technical Cooperation in Mainland China” is not applicable.

Macronix International Co., Ltd.

Parent Company Only Financial Statements for the Years Ended December 31, 2018 and 2017 and Independent Auditors' Report

Deloitte.

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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, 2018 and 2017, 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, 2018 and 2017, 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, 2018. 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, 2018 are stated as follows:

<u>Recognition of revenue</u>

The Company operates principally as a supplier of memory chips. For the year ended December 31, 2018, the revenue recognized was NT$36,280,727 thousand, increasing by 8% compared to that of last year. Due to the market rebound of memory chips, the Company released certain sales orders by temporarily increasing the credit line. As such, this gives the rise of the potential risk of overstating sales. We therefore considered that testing the existence and occurrence of sales is a key audit matter of the current period.

Our audit procedures performed included, but not limited to, the following:

1. We evaluated the appropriateness of the Company's accounting policies relating to revenue recognition;

2. We understood the internal controls over the approval of sales order and shipping and tested the effectiveness of those internal controls;

3. We sampled the sales documents to inspect sales details, including related transaction documents and cash collections in the audited period and the subsequent period;

4. We verified if any deviant occurred in those parties when the sales were recorded and cash was received;

5. We assessed the significant sales return or sales discount taking place in the subsequent period.

Valuation of inventory

The Company provides ROM products, NOR Flash, and NAND Flash, which are widely used in consumer electronics. As of December 31, 2018, inventory was NT$17,906,555 thousand, accounting for 30% of the total assets. With the current rapid changes in technology and the improvements in manufacturing technologies, demand for memory chip market could change significantly and thereby, results 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) and 11 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 lower 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, 2018 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 Ming Hui Chen and Ching Pin Shih.

Deloitte & Touche
Taipei, Taiwan
Republic of China

March 12, 2019

<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, 2018 AND 2017
(In Thousands of New Taiwan Dollars)

	2018		2017	
ASSETS	**Amount**	**%**	**Amount**	**%**
CURRENT ASSETS				
Cash and cash equivalents (Notes 4, 6 and 32)	$ 12,712,172	22	$ 7,438,187	17
Notes receivable and trade receivables, net (Notes 4, 10, 32 and 34)	3,094,833	5	3,990,528	9
Receivables from related parties, net (Notes 4, 32 and 33)	1,208,039	2	2,039,793	5
Other receivables (Notes 4,10, 32 and 33)	143,687	-	126,544	-
Inventories (Notes 4 and 11)	17,906,555	30	9,796,393	22
Other current assets (Note 16)	417,946	1	184,112	-
Total current assets	35,483,232	60	23,575,557	53
NON-CURRENT ASSETS				
Financial assets at fair value through other comprehensive income (FVTOCI) - non-current (Notes 4, 7 and 32)	1,201,824	2	-	-
Available-for-sale financial assets - non-current (Notes 4, 8 and 32)	-	-	1,349,993	3
Financial assets measured at cost - non-current (Notes 4, 9 and 32)	-	-	58,500	-
Investments accounted for using equity method (Notes 4 and 12)	2,128,488	4	2,249,939	5
Property, plant and equipment (Notes 4, 13 and 34)	18,829,669	32	15,781,321	36
Intangible assets (Notes 4 and 14)	42,755	-	44,149	-
Deferred tax assets (Notes 4 and 26)	1,179,084	2	992,838	2
Other financial assets - non-current (Notes 4, 15, 32 and 34)	179,957	-	158,383	1
Total non-current assets	23,561,777	40	20,635,123	47
TOTAL	$ 59,045,009	100	$ 44,210,680	100
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Contract liabilities (Note 24)	$ 13,598	-	$ -	-
Notes payable and trade payables (Notes 18 and 32)	2,611,878	4	2,786,652	6
Payables to related parties (Notes 32 and 33)	8,926,201	15	3,414,139	8
Accrued employees' compensation and remuneration of directors (Notes 25 and 32)	2,292,435	4	1,130,162	3
Payables for purchases of equipment (Note 32)	964,872	2	673,604	1
Other payables (Notes 19 and 32)	1,310,443	2	1,339,747	3
Other payables to related parties (Notes 32 and 33)	160,112	-	170,106	-
Current tax liabilities (Note 26)	184,257	-	-	-
Provisions - current (Notes 4 and 21)	14,106	-	294,513	1
Current portion of long-term borrowings (Notes 17, 32 and 34)	3,334,772	6	3,178,666	7
Other current liabilities (Note 20)	336,834	1	91,044	-
Total current liabilities	20,149,508	34	13,078,633	29
NON-CURRENT LIABILITIES				
Long-term borrowings (Notes 17, 32 and 34)	5,885,318	10	4,859,729	11
Net defined benefit liabilities (Notes 4 and 22)	1,640,069	3	1,609,941	4
Other non-current liabilities (Note 20)	10,091	-	6,715	-
Total non-current liabilities	7,535,478	13	6,476,385	15
Total liabilities	27,684,986	47	19,555,018	44
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY (Notes 4 and 23)				
Share capital				
Ordinary shares	18,402,919	31	18,049,385	41
Share capital to be cancelled	(1,249)	-	(1,627)	-
Total share capital	18,401,670	31	18,047,758	41
Capital surplus	(56,241)	-	(207,088)	-
Retained earnings				
Legal reserve	541,360	1	-	-
Special reserve	74,275	-	-	-
Unappropriated earnings	13,461,892	23	5,413,602	12
Total retained earnings	14,077,527	24	5,413,602	12
Other equity	(903,872)	(2)	1,560,451	3
Treasury shares	(159,061)	-	(159,061)	-
Total equity	31,360,023	53	24,655,662	56
TOTAL	$ 59,045,009	100	$ 44,210,680	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, 2018 AND 2017
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2018		2017	
	Amount	%	Amount	%
NET OPERATING REVENUE (Notes 4, 24 and 33)	$ 36,280,727	100	$ 33,500,949	100
OPERATING COSTS (Notes 4, 11, 22, 25 and 33)	23,002,158	63	21,529,215	65
GROSS PROFIT	13,278,569	37	11,971,734	35
REALIZED (UNREALIZED) GAIN ON TRANSACTIONS WITH SUBSIDIARIES AND ASSOCIATES (Note 4)	18,882	-	(34,639)	-
REALIZED GROSS PROFIT	13,297,451	37	11,937,095	35
OPERATING EXPENSES (Notes 4, 22, 25 and 33)				
Selling and marketing expenses	991,162	3	894,865	3
General and administrative expenses	1,655,468	4	1,477,606	4
Research and development expenses	4,259,551	12	4,034,615	12
Total operating expenses	6,906,181	19	6,407,086	19
INCOME FROM OPERATIONS	6,391,270	18	5,530,009	16
NON-OPERATING INCOME AND EXPENSES				
Other income (Notes 25 and 33)	2,624,372	7	119,197	-
Other gains and losses (Note 25)	244,760	1	(124,920)	-
Finance costs (Notes 4 and 25)	(143,353)	-	(215,602)	(1)
Share of profit of subsidiaries, associates and joint ventures (Notes 4 and 12)	121,328	-	209,163	1
Total non-operating income and expenses	2,847,107	8	(12,162)	-
INCOME BEFORE INCOME TAX FROM CONTINUING OPERATIONS	9,238,377	26	5,517,847	16
INCOME TAX EXPENSE (Notes 4 and 26)	245,371	1	-	-
NET INCOME FOR THE YEAR	8,993,006	25	5,517,847	16

(Continued)

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2018		2017	
	Amount	**%**	**Amount**	**%**
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit plans	$ (79,122)	-	$ (91,188)	-
Unrealized loss on investments in equity instruments at FVTOCI	(567,696)	(2)	-	-
Share of other comprehensive loss of subsidiaries accounted for using the equity method	(391,039)	(1)	-	-
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations (Notes 4 and 23)	94,809	-	(76,541)	-
Unrealized gain on available-for-sale financial assets (Notes 4 and 23)	-	-	490,743	1
Exchange differences on translating foreign operations of associates accounted for using the equity method (Notes 4 and 23)	-	-	(77)	-
Unrealized gain on available-for-sale financial assets of associates accounted for using the equity method (Notes 4 and 23)	-	-	283,717	1
Other comprehensive income (loss) for the year, net of income tax	(943,048)	(3)	606,654	2
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 8,049,958	22	$ 6,124,501	18
EARNINGS PER SHARE (Note 27)				
Basic	$ 4.94		$ 3.06	
Diluted	$ 4.65		$ 2.97	

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, 2018 AND 2017
(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 (Accumulated Deficit)	Exchange Differences on Translating Foreign Operations	Unrealized Gain on Available-for-sale Financial Assets	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Employee Unearned Compensation	Treasury Shares	Total Equity
BALANCE AT JANUARY 1, 2017	3,615,354	$ 36,153,535	$ (7,654)	$ 340,713	$ -	$ -	$ (18,651,070)	$ (8,565)	$ 956,774	$ -	$ (306,958)	$ (159,061)	$ 18,317,714
Net income for the year ended December 31, 2017	-	-	-	-	-	-	5,517,847	-	-	-	-	-	5,517,847
Other comprehensive income (loss) for the year ended December 31, 2017, net of income tax	-	-	-	-	-	-	(91,188)	(76,618)	774,460	-	-	-	606,654
Total comprehensive income (loss) for the year ended December 31, 2017	-	-	-	-	-	-	5,426,659	(76,618)	774,460	-	-	-	6,124,501
Capital reduction to cover accumulated deficit	(1,865,107)	(18,651,070)	-	-	-	-	18,651,070	-	-	-	-	-	-
Issue of restricted shares to employees	57,476	574,756	-	(561,699)	-	-	(13,057)	-	-	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	(8,258)	-	-	-	-	-	-	221,358	-	213,100
Retirement of restricted shares for employees	(2,784)	(27,836)	6,027	21,809	-	-	-	-	-	-	-	-	-
Change in capital surplus from investments in subsidiaries accounted for using equity method	-	-	-	347	-	-	-	-	-	-	-	-	347
BALANCE AT DECEMBER 31, 2017	1,804,939	18,049,385	(1,627)	(207,088)	-	-	5,413,602	(85,183)	1,731,234	-	(85,600)	(159,061)	24,655,662
Effect of retrospective application	-	-	-	-	-	-	2,158,766	(146,758)	(1,731,234)	112,903	-	-	393,677
ADJUSTED BALANCE AT JANUARY 1, 2018	1,804,939	18,049,385	(1,627)	(207,088)	-	-	7,572,368	(231,941)	-	112,903	(85,600)	(159,061)	25,049,339
Legal reserve	-	-	-	-	541,360	-	(541,360)	-	-	-	-	-	-
Special reserve	-	-	-	-	-	74,275	(74,275)	-	-	-	-	-	-
Cash dividends distributed by the Company - $1 per share	-	-	-	-	-	-	(1,804,776)	-	-	-	-	-	(1,804,776)
Share dividends distributed by the Company - $0.2 per share	36,095	360,955	-	-	-	-	(360,955)	-	-	-	-	-	-
Net income for the year ended December 31, 2018	-	-	-	-	-	-	8,993,006	-	-	-	-	-	8,993,006
Other comprehensive income (loss) for the year ended December 31, 2018, net of income tax	-	-	-	-	-	-	(79,122)	94,809	-	(958,735)	-	-	(943,048)
Total comprehensive income (loss) for the year ended December 31, 2018	-	-	-	-	-	-	8,913,884	94,809	-	(958,735)	-	-	8,049,958
Disposal of investments in equity instruments designated as at fair value through other comprehensive income	-	-	-	-	-	-	(99,070)	-	-	99,070	-	-	-
Compensation cost of restricted shares for employees	-	-	-	141,885	-	-	(143,924)	-	-	-	65,622	-	63,583
Retirement of restricted shares for employees	(742)	(7,421)	378	7,043	-	-	-	-	-	-	-	-	-
Change in capital surplus from investments in subsidiaries accounted for using equity method	-	-	-	1,919	-	-	-	-	-	-	-	-	1,919
BALANCE AT DECEMBER 31, 2018	1,840,292	$ 18,402,919	$ (1,249)	$ (56,241)	$ 541,360	$ 74,275	$ 13,461,892	$ (137,132)	$ -	$ (746,762)	$ (19,978)	$ (159,061)	$ 31,360,023

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, 2018 AND 2017
(In Thousands of New Taiwan Dollars)

	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 9,238,377	$ 5,517,847
Adjustments for:		
Depreciation expense	2,076,231	1,922,176
Amortization expense	26,405	26,932
Finance costs	143,353	215,602
Interest income	(29,830)	(15,750)
Dividend income	(102,920)	(84,181)
Compensation cost of employee restricted shares	63,583	213,100
Share of loss of subsidiaries and associates	(121,328)	(209,163)
Gain on disposal of property, plant and equipment	(36,148)	(10,164)
(Gain) loss on disposal of investments	(180)	2,517
Unrealized (gain) loss on transactions with subsidiaries and associates	(18,882)	34,639
Net (gain) loss on foreign currency exchange	(181,535)	279,218
Changes in operating assets and liabilities		
Notes receivable and trade receivables	929,451	(1,500,845)
Receivables from related parties	862,164	(675,022)
Other receivables	(16,624)	(9,068)
Inventories	(8,110,162)	(2,803,010)
Other current assets	(233,834)	(6,426)
Contract liabilities	(39,085)	-
Notes payable and trade payables	(183,144)	212,623
Payables to related parties	5,306,901	2,287,080
Payables for employees' compensation and director's remuneration	1,162,273	1,130,162
Other payables	(14,723)	301,238
Other payables to related parties	(10,826)	41,028
Provisions	(59,861)	93,264
Other current liabilities	70,391	36,610
Net defined benefit liabilities	(48,994)	(13,533)
Cash generated from operations	10,671,053	6,986,874
Interest received	29,312	15,071
Dividend received	102,920	84,181
Interest paid	(161,174)	(219,644)
Income tax paid	(247,360)	-
Net cash generated from operating activities	10,394,751	6,866,482

(Continued)

MACRONIX INTERNATIONAL CO., LTD.

PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(In Thousands of New Taiwan Dollars)

	2018	2017
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from disposal of financial assets measured at cost	$ -	$ 5,357
Payments for property, plant and equipment	(4,848,563)	(2,210,532)
Proceeds from disposal of property, plant and equipment	36,928	10,819
Increase in refundable deposits	(2,070)	(208)
Decrease in refundable deposits	215	77
Payments for intangible assets	(25,011)	(49,136)
(Increase) decrease in other financial assets	(19,719)	4,997
Net cash used in investing activities	(4,858,220)	(2,238,626)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from short-term borrowings	-	971,597
Repayments of short-term borrowings	-	(1,371,597)
Proceeds from long-term borrowings	4,800,000	10,386,886
Repayments of long-term borrowings	(3,621,981)	(12,265,577)
Proceeds from guarantee deposits received	3,353	6,495
Refund of guarantee deposits received	(310)	(987)
Distribution of cash dividends	(1,804,776)	-
Net cash used in financing activities	(623,714)	(2,273,183)
EFFECT OF EXCHANGE RATE CHANGES ON THE BALANCE OF CASH AND CASH EQUIVALENTS HELD IN FOREIGN CURRENCIES	361,168	(239,263)
NET INCREASE IN CASH AND CASH EQUIVALENTS	5,273,985	2,115,410
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR	7,438,187	5,322,777
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	$ 12,712,172	$ 7,438,187

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, 2018 AND 2017
(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) in 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 March 12, 2019.

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

a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the IFRSs) endorsed and issued into effect by the FSC

   Except for the following, whenever applied, the initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Company's accounting policies:

   1) IFRS 9 "Financial Instruments" and related amendment

      IFRS 9 supersedes IAS 39 "Financial Instruments: Recognition and Measurement" and makes consequential amendments to IFRS 7 "Financial Instruments: Disclosures" and other standards. IFRS 9 sets out the requirements for the classification, measurement and impairment of financial assets and hedge accounting. Refer to Note 4 for information relating to the relevant accounting policies.

      The Company retrospectively adopted the classification, measurement and impairment of financial assets and postponed the adoption of general hedge accounting. IFRS 9 does not apply to financial assets that were derecognized before January 1, 2018.

Classification, measurement and impairment of financial assets and financial liabilities

The Company elects not to restate prior reporting periods when applying the requirements for the classification, measurement and impairment of financial assets and financial liabilities under IFRS 9 with the cumulative effect of the initial application recognized at the date of initial application.

The impact on measurement categories, carrying amounts and related reconciliation for each class of the Company's financial assets and financial liabilities as of January 1, 2018 when retrospectively applying IFRS 9 is detailed below:

	Measurement Category		Carrying Amount	
Financial Asset	**IAS 39**	**IFRS 9**	**IAS 39**	**IFRS 9**
Equity securities	Cost - non-current	Fair value through other comprehensive income - non-current	$ 58,500	$ 419,527
	Available-for-sale	Fair value through other comprehensive income - non-current	1,349,993	1,349,993
Notes receivable, accounts receivable	Loans and receivables	Amortized cost	3,990,528	3,990,528

	IAS 39 Carrying Amount as of December 31, 2017	Adjustments Arising from Initial Application	IFRS 9 Adjusted Carrying Amount as of January 1, 2018
Impact on assets, liabilities and equity			
Financial assets at fair value through profit or loss - non-current	$ -	$ 1,769,520	$ 1,769,520
Available-for-sale financial assets - non-current	1,349,993	(1,349,993)	-
Financial assets measured at cost - non-current	58,500	(58,500)	-
Investment accounted for using equity method (Note)	2,249,939	32,650	2,282,589
Others	40,552,248	-	40,552,248
Total assets	$ 44,210,680	$ 393,677	$ 44,604,357
Total liabilities	$ 19,555,018	$ -	$ 19,555,018
Retained earnings	$ 5,413,602	$ 2,158,766	$ 7,572,368
Other equity	1,560,451	(1,765,089)	(204,638)
Others	17,681,609	-	17,681,609
Total equity	$ 24,655,662	$ 393,677	$ 25,049,339

Note: The adjustments were due to the financial assets measured at cost - non-current held by the subsidiaries accounted for under equity method.

As equity investments that were previously classified as available-for-sale financial assets under IAS 39 are not held for trading, the Company elected to designate all of these investments as at FVTOCI under IFRS 9. As a result, the related other equity - unrealized gain (loss) on available-for-sale financial assets of NT$1,731,234 thousand is reclassified and resulted in an increase in other equity - unrealized gain (loss) on financial assets at FVTOCI.

For those equity investments previously classified as financial assets measured at cost under IAS 39, since these investments were designated as at FVTOCI under IFRS 9, the value of such investments should be remeasured at fair value, and the adjustments resulted in an increase in other equity - unrealized gain (loss) on financial assets at FVTOCI of NT$393,677 thousand.

For those equity investments previously classified as available-for-sale financial assets (including financial assets measured at cost) under IAS 39, the impairment losses that the Company had recognized have been accumulated in retained earnings. Since these investments were designated as at FVTOCI under IFRS 9 and no impairment assessment is required, the adjustments resulted in an increase in other equity - unrealized gain (loss) on financial assets at FVTOCI of NT$112,903 thousand and an increase in retained earnings of NT$2,158,766 thousand on January 1, 2018.

Notes receivable, trade receivables and other receivables that were previously classified as loans and receivables under IAS 39 were classified as financial assets measured at amortized cost with an assessment of expected credit losses under IFRS 9, because these investments were held within a business model whose objective is achieved by both the collecting of contractual cash flows and the selling of financial assets.

2) IFRS 15 “Revenue from Contracts with Customers” and related amendment

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers, and will supersede IAS 18 “Revenue”, IAS 11 “Construction Contracts” and a number of revenue-related interpretations. Refer to Note 4 for information relating to the relevant accounting policies.

The Company, under IFRS 15, obtains control of the specified goods or services before they are transferred to the customers and, therefore, is acting as a principal in the transaction. Prior to the application of IFRS 15, the Group considered whether the goods or services exposed the Group to significant risks and rewards as a principal in the transaction.

Under IFRS 15, the net effect of revenue recognized and consideration received and receivable is recognized as a contract asset or a contract liability. Prior to the application of IFRS 15, deferred revenue was reduced when revenue was recognized for the relevant contract under IAS 18.

For a sale with a right of return, the Group will recognize a refund liability (other liability). Prior to the application of IFRS 15, return provisions are recognized when recognizing revenue.

The Company elects to retrospectively apply IFRS 15 to contracts that are not complete on January 1, 2018 and recognize the cumulative effect of the change in the retained earnings on January 1, 2018.

The impact on assets, liabilities and equity as of January 1, 2018 from the initial application of IFRS 15 is set out below:

	As Originally Stated	**Adjustments Arising from Initial Application**	**Restated**
Provisions - current	$ 294,513	$ (248,045)	$ 46,468
Contract liabilities - current	-	52,683	52,683
Other current liabilities	101,632	195,362	296,994
Total liabilities impact		$ -	

The impact of continuing the application of IAS 18 instead of IFRS 15 for the year ended December 31, 2018 is detailed as follows:

Impact on assets, liabilities and equity

	December 31, 2018
Decrease in contract liabilities - current	$ (13,598)
Increase in provisions - current	302,717
Decrease in other current liabilities	(289,119)
Increase (decrease) in liabilities	$ -

b. The IFRSs issued by IASB and endorsed by FSC which will be effective in 2019

New, Revised or Amended Standards and Interpretations (the "New IFRSs")	Effective Date Announced by the IASB (Note 1)
Annual Improvements to IFRSs 2015-2017 Cycle	January 1, 2019
Amendments to IFRS 9 "Prepayment Features with Negative Compensation"	January 1, 2019 (Note 2)
IFRS 16 "Leases"	January 1, 2019
Amendments to IAS 19 "Plan Amendment, Curtailment or Settlement"	January 1, 2019 (Note 3)
Amendments to IAS 28 "Long-term Interests in Associates and Joint Ventures"	January 1, 2019
IFRIC 23 "Uncertainty Over Income Tax Treatments"	January 1, 2019

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

Note 2: The FSC permits the election for early adoption of the amendments starting from 2018.

Note 3: The Company shall apply these amendments to plan amendments, curtailments or settlements occurring on or after January 1, 2019.

1) IFRS 16 "Leases"

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17 and a number of related interpretations.

Definition of a lease

Upon initial application of IFRS 16, the Company will elect to apply IFRS 16 only to contracts entered into (or changed) on or after January 1, 2019 in order to determine whether those contracts are, or contain, a lease. Contracts identified as containing a lease under IAS 17 and IFRIC 4 will not be reassessed and will be accounted for in accordance with the transitional provisions under IFRS 16.

The Group as lessee

Upon initial application of IFRS 16, the Company will recognize right-of-use assets and lease liabilities if the right-of-use assets meet the definition for all leases on the consolidated balance sheets except for those whose payments under low-value and short-term leases will be recognized as expenses on a straight-line basis. On the statements of comprehensive income, the Company will present the depreciation expense charged on right-of-use assets separately from the interest expense accrued on lease liabilities; interest is computed using the effective interest method. On the statements of cash flows, cash payments for the principal portion of lease liabilities will be classified within financing activities; cash payments for the interest portion will be classified within operating activities. Currently, payments under operating lease contracts are recognized as expenses on a straight-line basis. Cash flows for operating leases are classified within operating activities on the statements of cash flows. Leased assets and finance lease payables are recognized for contracts classified as finance leases.

The Company anticipates applying IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized on January 1, 2019. Comparative information will not be restated.

The Company as lessor

Except for sublease transactions, the Company will not make any adjustments for leases in which it is a lessor and will account for those leases with the application of IFRS 16 starting from January 1, 2019.

The Company subleases its leasehold park dormitory to a third party. Such a sublease is classified as an operating lease under IAS 17. The Company will assess the sublease classification on the basis of the remaining contractual terms and conditions of the head lease and sublease on January 1, 2019.

Anticipated impact on assets, liabilities and equity

	Carrying Amount as of December 31, 2018	**Adjustments Arising from Initial Application**	**Adjusted Carrying Amount as of January 1, 2019**
Right-of-use assets	$ -	$ 1,050,929	$ 1,050,929
Total effect on assets	$ -	$ 1,050,929	$ 1,050,929
Lease liabilities - current	$ -	$ 91,370	$ 91,370
Lease liabilities - non-current	-	959,559	959,559
Total effect on liabilities	$ -	$ 1,050,929	$ 1,050,929

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 3 "Definition of a Business"	January 1, 2020 (Note 2)
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, 2021
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020 (Note 3)

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

Note 2: The Group shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.

Note 3: The Group shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

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 and IFRSs as endorsed and issued into effect by the FSC.

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 and associates, share of other comprehensive income of subsidiaries and associates 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 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 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 tangible and intangible assets other than goodwill and assets related to contract costs

At the end of each reporting period, the Company reviews the carrying amounts of its tangible 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.

Before the Group recognizes an impairment loss from assets related to contract costs, any impairment loss on inventories related to the contract applicable under IFRS 15 shall be recognized in accordance with applicable standards. Then, impairment loss from the assets related to the contract costs is recognized to the extent that the carrying amount of the assets exceeds the remaining amount of consideration that the Group expects to receive in exchange for related goods or services less the costs which relate directly to providing those goods or services and which have not been recognized as expenses. The assets related to the contract costs are then included in the carrying amount of the cash-generating unit to which they belong for the purpose of evaluating impairment of that cash-generating unit.

When an impairment loss is subsequently reversed, the carrying amount of the corresponding asset, cash-generating unit or assets related to contract costs 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 for the asset, cash-generating unit or assets related to contract costs 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

2018

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.

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.

2017

Financial assets are classified into the following categories: Financial assets at fair value through profit or loss, available-for-sale financial assets, and loans and receivables.

i Financial assets at fair value through profit or loss

Financial assets are classified as at fair value through profit or loss when the financial asset is either held for trading or it is designated as at fair value through profit or loss.

Financial assets at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any dividend or interest earned on the financial asset. Fair value is determined in the manner described in Note 32.

Investments in equity instruments under financial assets at fair value through profit or loss that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives that are linked to and must be settled by delivery of such unquoted equity instruments are subsequently measured at cost less any identified impairment loss at the end of each reporting period and presented in a separate line item as financial assets carried at cost. If, in a subsequent period, the fair value of the financial assets can be reliably measured, the financial assets are remeasured at fair value. The difference between the carrying amount and the fair value is recognized in profit or loss.

ii Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated as available-for-sale or are not classified as loans and receivables, held-to-maturity investments or financial assets at fair value through profit or loss.

Available-for-sale financial assets are measured at fair value. Changes in the carrying amounts of available-for-sale monetary financial assets relating to changes in foreign currency exchange rates, interest income calculated using the effective interest method and dividends on available-for-sale equity investments are recognized in profit or loss. Other changes in the carrying amount of available-for-sale financial assets are recognized in other comprehensive income and will be reclassified to profit or loss when the investment is disposed of or is determined to be impaired.

Dividends on available-for-sale equity instruments are recognized in profit or loss when the Company's right to receive the dividends is established.

Available-for-sale equity investments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives that are linked to and must be settled by delivery of such unquoted equity investments are measured at cost less any identified impairment loss at the end of each reporting period and presented in a separate line item as financial assets carried at cost. If, in a subsequent period, the fair value of the financial assets can be reliably measured, the financial assets are remeasured at fair value. The difference between the carrying amount and fair value is recognized in other comprehensive income on financial assets. Any impairment losses are recognized in profit and loss.

iii Loans and receivables

Loans and receivables (including trade receivables, cash and cash equivalent, other receivables and long-term receivables) are measured at amortized cost using the effective interest method, less any impairment, except for short-term receivables when the effect of discounting is immaterial.

Cash equivalent includes time deposits 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.

b) Impairment of financial assets

2018

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.

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.

2017

Financial assets, other than those at fair value through profit or loss, are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For financial assets carried at amortized cost, such as trade receivables, assets are assessed for impairment on a collective basis even if they were assessed not to be impaired individually. Objective evidence of impairment for a portfolio of receivables could include the Company’s past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period of 60 days, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets carried at amortized cost, the amount of the impairment loss recognized is the difference between the asset’s carrying amount and the present value of estimated future cash flows, discounted at the financial asset’s original effective interest rate.

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

For available-for-sale equity investments, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment.

For all other financial assets, objective evidence of impairment could include significant financial difficulty of the issuer or counterparty, breach of contract, such as a default or delinquency in interest or principal payments, it becoming probable that the borrower will enter bankruptcy or financial re-organization, or the disappearance of an active market for that financial asset because of financial difficulties.

When an available-for-sale financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

In respect of available-for-sale equity securities, impairment loss previously recognized in profit or loss is not reversed through profit or loss. Any increase in fair value subsequent to an impairment loss is recognized in other comprehensive income.

For financial assets that are carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable and other receivables are considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss except for uncollectable trade receivables that are written off against the allowance account.

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.

Before 2018, on derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. Starting from 2018, 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 a debt instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. However, 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

Except the following situation, all financial liabilities are measured at amortized cost using the effective interest method:

i Financial liabilities at fair value through profit or loss

Financial liabilities are classified as at fair value through profit or loss when the financial liability is either held for trading or it is designated as at fair value through profit or loss.

Financial liabilities held for trading are stated at fair value, with any gain or loss arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any interest or dividend paid on the financial liability. Fair value is determined in the manner described in Note 32.

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.

4) Derivative financial instruments

The Company enters into foreign exchange forward contracts to manage its exposure to foreign exchange rate risks, including foreign exchange forward contracts.

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship. When the fair value of derivative financial instruments is positive, the derivative is recognized as a financial asset; when the fair value of derivative financial instruments is negative, the derivative is recognized as a financial liability.

Before 2017, derivatives embedded in non-derivative host contracts were treated as separate derivatives when they met the definition of a derivative; their risks and characteristics were not closely related to those of the host contracts; and the contracts were not measured at FVTPL. Starting from 2018, derivatives embedded in hybrid contracts that contain financial asset hosts that is within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets that is within the scope of IFRS 9 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative; their risks and characteristics are not closely related to those of the host contracts; and the host contracts are not measured at FVTPL.

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

2018

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.

2017

Revenue is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. Allowance for sales returns and liability for returns are recognized at the time of sale based on the seller's reliable estimate of future returns and based on past experience and other relevant factors.

1) Sale of goods

Revenue from the sale of goods is recognized when all the following conditions are satisfied:

a) The Company has transferred to the buyer the significant risks and rewards of ownership of the goods;

b) The Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;

c) The amount of revenue can be measured reliably;

d) It is probable that the economic benefits associated with the transaction will flow to the Company; and

e) The costs incurred or to be incurred in respect of the transaction can be measured reliably.

The Company does not recognize sales revenue on materials delivered to subcontractors because this delivery does not involve a transfer of risks and rewards of materials ownership.

2) Rendering of services

Service income is recognized when services are provided.

Revenue from a contract to provide services is recognized by reference to the stage of completion of the contract. The stage of completion of the contract is determined by the contractual rates as labor hours and direct expenses are incurred.

3) Royalties

Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant agreement provided that it is probable that the economic benefits will flow to the Company and the amount of revenue can be measured reliably. Royalty arrangements that are based on production, sales and other measures are recognized by reference to the underlying arrangement.

4) Dividend and interest income

Dividend income from investments is recognized when the shareholder's right to receive payment has been established provided that it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably.

Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

m. Leasing

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

1) The Company as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

2) The Company as lessee

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

3) Leasehold land for own use

When a lease includes both land and building elements, the Company assesses the classification of each element separately as a finance or an operating lease separately based on the assessment as to whether substantially all the risks and rewards incidental to ownership of each element have been transferred to the Company. The minimum lease payments are allocated between the land and the building elements in proportion to the relative fair values of the leasehold interests in the land element and building element of the lease at the inception of the lease.

If the allocation of the lease payments can be made reliably, each element is accounted for separately in accordance with its lease classification. When the lease payments cannot be allocated reliably between the land and building elements, the entire lease is generally classified as a finance lease unless it is clear that both elements are operating leases, in which case the entire lease is classified as an operating lease.

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. 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.

p. Share-based payment arrangements

The fair value at the grant date of the restricted shares for employees 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 other equity - unearned employee benefit. 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.

q. 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.

r. Taxation

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

1) Current tax

According to the Income Tax Law, an additional tax at 10% of unappropriated earnings is provided for as income tax in the year the shareholders approve to retain the 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 and associates, 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 about 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 estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods 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 the historical experience with product sales of a similar nature. Changes in market conditions may have a material impact on the estimation of net realizable value.

b. Recognition and measurement of defined benefit plans

The net defined liabilities and the resulting defined benefit costs under defined benefit pension plans are calculated using the projected unit credit method. Actuarial assumptions comprise the discount rates, rates of employee turnover, and 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 the expense and the liabilities.

c. Income taxes

The realizability of the deferred tax asset mainly depends on whether sufficient future profits or taxable temporary differences will be available. In cases where the actual future profits generated are less than expected, a material reversal of deferred tax assets may arise, which would be recognized in profit or loss for the period in which such a reversal takes place.

6. CASH AND CASH EQUIVALENTS

	December 31	
	2018	2017
Cash on hand	$ -	$ 3
Checking accounts and demand deposits	8,577,335	5,679,020
Cash equivalents		
Time deposits	4,134,837	1,759,164
	$ 12,712,172	$ 7,438,187

7. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME - 2018

	December 31, 2018
Non-current	
Investments in equity instruments at FVTOCI	
Domestic investments	
Listed shares	$ 934,749
Unlisted shares	267,075
	$ 1,201,824

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. These investments in equity instruments were classified as available-for-sale under IAS 39. Refer to Notes 3, 8 and 9 for information relating to their reclassification and comparative information for 2017.

The Company recognized dividends income of NT$102,920 thousand and NT$84,181 thousand for the years ended December 31, 2018 and 2017, respectively, which were related to the carrying amount of NT$1,201,824 thousand in investments held as of December 31, 2018.

8. AVAILABLE-FOR-SALE FINANCIAL ASSETS - 2017

	December 31, 2017
Non-current	
Domestic investments	
Listed shares	$ 1,349,993

9. FINANCIAL ASSETS MEASURED AT COST - 2017

	December 31, 2017
Non-current	
Domestic unlisted ordinary shares	$ 58,500
Classified according to financial asset measurement categories	
Available-for-sale financial assets	$ 58,500

Management believed that the fair value of the above unlisted equity investments held by the Company could not be reliably measured because the range of reasonable fair value estimates was so significant. Therefore, the fair values were measured at cost less impairment at the end of the reporting period.

10. NOTES RECEIVABLE, TRADE RECEIVABLES AND OTHER RECEIVABLES

	December 31	
	2018	2017
Trade receivables		
Total amount of trade receivable measured at amortized cost	$ 3,111,645	$ 4,007,340
Less: Allowance for impairment loss	(16,812)	(16,812)
	$ 3,094,833	$ 3,990,528
Other receivables		
Tax receivable	$ 106,140	$ 122,219
Others	37,547	4,325
	$ 143,687	$ 126,544

a. Trade receivables

2018

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 applies the simplified approach to provisions for expected credit losses prescribed by IFRS 9, which permits the use of a lifetime expected credit loss provision for all trade receivables. 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 Company writes off a trade receivable when there is information indicating that the debtor is experiencing severe financial difficulty and there is no realistic prospect of recovery of the receivable. For trade receivables that have been written off, the Company continues to engage in enforcement activity to attempt to recover the receivables which are due. Where recoveries are made, they are recognized in profit or loss.

The aging of trade receivables is as follows:

	December 31, 2018
Neither past due nor impaired	$ 2,880,922
Past due but not impaired	
Within 60 days	201,298
61-120 days	137
Over 120 days	12,476
	$ 3,094,833

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

As of December 31, 2018, the Company did not hold collateral for most of its receivables.

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

	December 31, 2018
Balance at December 31, 2018	$ 16,812

2017

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.

Before trading with any new customer, the Company assesses the potential customer's credit quality and defines credit limits based on an internal credit scoring system.

For the trade receivables balances that were past due at the end of the reporting period, the Company had not recognized an allowance for impairment loss, because there was not a significant change in credit quality and the amounts were still considered recoverable.

The aging of notes receivable and trade receivables was as follows:

	December 31, 2017
Neither past due nor impaired	$ 3,908,666
Past due but not impaired	
Within 60 days	74,791
61-120 days	5,343
Over 120 days	1,728
	$ 3,990,528

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

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

	Individually Assessed for Impairment	Assembly Assessed for Impairment	Total
Balance at January 1 and December 31, 2017	$ 16,812	$ -	$ 16,812

The Company recognized impairment loss on trade receivables amounting to NT$16,812 thousand as of December 31, 2017. This amount mainly related to customers that were experiencing severe financial difficulties. The Company did not hold any collateral over these balances.

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.

11. INVENTORIES

	December 31	
	2018	2017
Finished goods and merchandise	$ 1,328,106	$ 849,581
Work in progress	15,662,467	8,360,455
Raw materials	915,982	586,357
	$ 17,906,555	$ 9,796,393

The reversal of inventory write-downs resulting from the increase in the net realizable value was included in the cost of goods sold as below.

	December 31	
	2018	2017
Inventory write-downs recognized (reversed)	$ 1,590,792	$ (527,675)

12. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

	December 31	
	2018	2017
Investment in subsidiaries	$ 2,128,488	$ 2,249,939

a. Investments in subsidiaries

	December 31	
	2018	2017
Macronix America Inc. (MXA)	$ 153,352	$ 105,331
Macronix (BVI) Co., Ltd. (MXBVI)	1,894,118	2,097,567
Hui Ying Investment Ltd. (Hui Ying)	61,346	24,498
Run Hong Investment Ltd. (Run Hong)	13,819	13,968
Mxtran Inc. (Mxtran)	5,853	8,575
	$ 2,128,488	$ 2,249,939

	Proportion of Ownership and Voting Rights	
	December 31	
Name of Subsidiaries	2018	2017
MXA	100.00%	100.00%
MXBVI	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, 2018 and 2017 were based on the subsidiaries' financial statements which have been audited for the same years.

13. PROPERTY, PLANT AND EQUIPMENT

	Years Ended December 31, 2018				
	Balance, Beginning of Year	Additions	Disposals	Reclassification	Balance, End of Year
Cost					
Freehold land	$ 598,076	$ -	$ -	$ -	$ 598,076
Buildings	24,246,262	-	3,162	424,311	24,667,411
Machinery equipment	85,198,563	-	454,142	2,492,404	87,236,825
Research and development equipment	3,163,935	-	40	611,652	3,775,547
Transportation equipment	21,740	-	6,770	7,080	22,050
Leasehold improvements	3,230	-	-	-	3,230
Miscellaneous equipment	1,057,978	-	6,426	42,405	1,093,957
Advance payments and construction in progress	2,587,750	5,125,359	-	(3,577,852)	4,135,257
	116,877,534	$ 5,125,359	$ 470,540	$ -	121,532,353
Accumulated depreciation					
Buildings	19,784,245	$ 369,379	$ 3,162	$ -	20,150,462
Machinery equipment	78,465,322	1,489,346	454,142	75,533	79,576,059
Research and development equipment	1,815,735	189,621	40	(75,533)	1,929,783
Transportation equipment	20,238	1,395	5,990	-	15,643
Leasehold improvements	1,463	538	-	-	2,001
Miscellaneous equipment	1,009,210	25,952	6,426	-	1,028,736
	101,096,213	$ 2,076,231	$ 469,760	$ -	102,702,684
Carrying amount at December 31, 2018	$ 15,781,321				$ 18,829,669

	Years Ended December 31, 2017				
	Balance, Beginning of Year	Additions	Disposals	Reclassification	Balance, End of Year
Cost					
Freehold land	$ 598,076	$ -	$ -	$ -	$ 598,076
Buildings	24,159,347	-	1,214	88,129	24,246,262
Machinery equipment	82,761,938	-	510,112	2,946,737	85,198,563
Research and development equipment	5,733,753	-	18,995	(2,550,823)	3,163,935
Transportation equipment	23,490	-	2,650	900	21,740
Leasehold improvements	3,230	-	-	-	3,230
Miscellaneous equipment	1,024,580	-	8,964	42,362	1,057,978
Advance payments and construction in progress	385,626	2,729,429	-	(527,305)	2,587,750
	114,690,040	$ 2,729,429	$ 541,935	$ -	116,877,534
Accumulated depreciation					
Buildings	19,430,269	$ 355,190	$ 1,214	$ -	19,784,245
Machinery equipment	75,819,885	1,377,584	509,457	1,777,310	78,465,322
Research and development equipment	3,444,834	167,206	18,995	(1,773,310)	1,815,735
Transportation equipment	21,767	1,121	2,650	-	20,238
Leasehold improvements	925	538	-	-	1,463
Miscellaneous equipment	997,637	20,537	8,964	-	1,009,210
	99,715,317	$ 1,922,176	$ 541,280	$ -	101,096,213
Carrying amount at December 31, 2017	$ 14,974,723				$ 15,781,321

For the year ended December 31, 2018 and 2017, no indication of an impairment loss was present and no impairment assessment was performed.

The above items of property, plant and equipment are depreciated on a straight-line basis over their following 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 34.

14. INTANGIBLE ASSETS

	Year Ended December 31, 2018			
Item	Balance, Beginning of Year	Additions	Disposals	Balance, End of Period
Cost				
Software	$ 65,238	$ 25,011	$ 19,671	$ 70,578
Others	13,000	-	-	13,000
	78,238	$ 25,011	$ 19,671	83,578
Accumulated amortization				
Software	30,839	$ 22,072	$ 19,671	33,240
Others	3,250	4,333	-	7,583
	34,089	$ 26,405	$ 19,671	40,823
Carrying amounts at December 31, 2018	$ 44,149			$ 42,755

Item	Year Ended December 31, 2017			
	Balance, Beginning of Year	Additions	Disposals	Balance, End of Period
Cost				
Software	$ 139,400	$ 36,136	$ 110,298	$ 65,238
Others	-	13,000	-	13,000
	139,400	$ 49,136	$ 110,298	78,238
Accumulated amortization				
Software	117,455	$ 23,682	$ 110,298	30,839
Others	-	3,250	-	3,250
	117,455	$ 26,932	$ 110,298	34,089
Carrying amounts at December 31, 2017	$ 21,945			$ 44,149

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

Software	3 years
Others	3 years

15. OTHER FINANCIAL ASSETS

	December 31	
	2018	2017
Non-current		
Restricted time deposits (Note 34)	$ 157,665	$ 133,810
Refundable deposits (Note 32)	4,088	2,233
Long-term receivables	18,204	22,340
	$ 179,957	$ 158,383

16. OTHER ASSETS

	December 31	
	2018	2017
Current		
Prepayments	$ 417,946	$ 184,112

17. BORROWINGS

Long-term borrowings

	December 31 2018	December 31 2017
Secured borrowings		
Loans from financial institutions	$ 7,354,650	$ 6,638,754
Unsecured borrowings		
Loans from financial institutions	1,887,500	1,430,000
	9,242,150	8,068,754
Less: Current portion	3,334,772	3,178,666
Less: Arrangement fees	22,060	30,359
Long-term borrowings	$ 5,885,318	$ 4,859,729
Interest rate	1.23%-1.97%	1.48%-2.21%

Borrowing Type	Repayment Terms	December 31 2018	December 31 2017
Secured syndicated loan denominated in NT$	From December 2017 to December 2022.	$ 6,100,000	$ 5,300,000
Secured bank borrowing denominated in NT$	From September 2017 to September 2022.	468,750	500,000
Unsecured bank borrowing denominated in NT$	From August 2017 to February 2019.	87,500	350,000
Secured bank borrowing denominated in NT$	From January 2015 to January 2020.	78,719	141,694
Secured bank borrowing denominated in JPY	From March 2014 to March 2019.	7,181	34,098
Unsecured bank borrowings denominated in NT$	From September 2018 to December 2019	800,000	-
Secured bank borrowings denominated in NT$	From September 2018 to September 2021	700,000	-
Unsecured bank borrowings denominated in NT$	From September 2018 to September 2020	400,000	-
Unsecured bank borrowings denominated in NT$	From September 2018 to September 2021	300,000	-
Unsecured bank borrowings denominated in NT$	From September 2018 to September 2020	300,000	-
Unsecured bank borrowing denominated in NT$	Pay off in January 2018.	-	210,000
Secured bank borrowing denominated in NT$	Pay off in February 2018.	-	6,000
Unsecured bank borrowing denominated in NT$	Pay off in April 2018.	-	70,000
Unsecured bank borrowing denominated in NT$	Pay off in August 2018.	-	800,000

(Continued)

Borrowing Type	Repayment Terms	December 31 2018	December 31 2017
Secured bank borrowing denominated in NT$	Pay off in September 2018.	$ -	$ 290,000
Secured bank borrowing denominated in NT$	Pay off in October 2018.	-	200,000
Secured bank borrowing denominated in NT$	Pay off in December 2018.	-	166,962
Less: Current portion		3,334,772	3,178,666
Less: Arrangement fee		22,060	30,359
Total long-term borrowings		$ 5,885,318	$ 4,859,729

(Concluded)

To repay the vested liabilities, to purchase equipment or 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.

The Company had provided notes as refundable guarantees for syndicated loan mentioned above that will be cancelled upon termination of the guarantee.

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 consolidated financial statements. For the year ended December 31, 2018, the Company had met the financial ratio covenants.

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

18. NOTES PAYABLE AND TRADE PAYABLES

	December 31 2018	December 31 2017
Notes payable	$ -	$ 826
Trade payables	2,611,878	2,785,826
	$ 2,611,878	$ 2,786,652

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

19. OTHER PAYABLES

	December 31 2018	December 31 2017
Other payables		
Payables for bonuses	$ 251,067	$ 245,112
Payables for patents	214,709	180,449
Payables for maintenance and repairs	207,623	181,744
Payables for remuneration in lien of unused paid-leave	66,240	56,167
Others	570,804	676,275
	$ 1,310,443	$ 1,339,747

20. OTHER LIABILITIES

	December 31 2018	December 31 2017
Current		
Refund liabilities (Note 21)	$ 302,717	$ -
Temporary credits	146	52,683
Receipts under custody	33,971	38,361
	$ 336,834	$ 91,044
Non-current		
Guarantee deposits	$ 10,091	$ 6,715

21. PROVISIONS

	December 31 2018	December 31 2017
Current		
Employee benefits (a)	$ 14,106	$ 46,468
Customer returns and rebates (b) (c)	-	248,045
	$ 14,106	$ 294,513

	Employee Benefits	Customer Returns and Rebates	Total
Balance at January 1, 2018	$ 46,468	$ 248,045	$ 294,513
Effect of retrospective application of IFRS 15	-	(248,045)	(248,045)
Additional provisions recognized	14,106	-	14,106
Reversing un-usage balances/usage	(46,468)	-	(46,468)
Balance at December 31, 2018	$ 14,106	$ -	$ 14,106

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

b. For contracts with customers in 2017 that begin, the provision for customer returns and rebates was based on historical experience, management's judgment and other known reasons for estimated product returns and rebates that may occur in the year. The provision was recognized as a reduction of operating income in the year in which the related goods were sold.

c. Starting from 2018, the Company recognizes the estimation of sales returns and allowances as a refund liability upon initial application of IFRS 15. As of December 31, 2018, the refund liability in the amount of NT$302,717 is classified under other current liabilities.

22. 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 Law 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 consolidated balance sheets in respect of the Company's defined benefit plans were as follows:

	December 31	
	2018	**2017**
Present value of defined benefit obligation	$ 1,890,484	$ 1,842,116
Fair value of plan assets	(710,318)	(665,599)
Net defined benefit liability	$ 1,180,166	$ 1,176,517

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, 2017	$ 1,881,728	$ 757,286	$ 1,124,442
Defined benefit cost			
Current service cost	6,168	-	6,168
Net interest expense	27,942	-	27,942
Return on plan assets	-	11,308	(11,308)
Recognized in profit or loss	34,110	11,308	22,802
Remeasurement			
Return on plan assets	-	(4,189)	4,189
Actuarial loss - experience adjustments	63,292	-	63,292
Actuarial loss - change in financial assumptions	-	-	-
Recognized in other comprehensive income	63,292	(4,189)	67,481
Contributions from the employer	-	31,304	(31,304)
Benefits paid	(137,014)	(130,110)	(6,904)
Balance at December 31, 2017	1,842,116	665,599	1,176,517
Defined benefit cost			
Current service cost	5,875	-	5,875
Net interest expense	27,316	-	27,316
Return on plan assets	-	9,910	(9,910)
Recognized in profit or loss	33,191	9,910	23,281
Remeasurement			
Return on plan assets	-	17,836	(17,836)
Actuarial loss - experience adjustments	17,672	-	17,672
Actuarial loss - change in financial assumptions	52,580	-	52,580
Recognized in other comprehensive income	70,252	17,836	52,416
Contributions from the employer	-	72,048	(72,048)
Benefits paid	(55,075)	(55,075)	-
Balance at December 31, 2018	$ 1,890,484	$ 710,318	$ 1,180,166

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	
	2018	2017
Operating costs	$ 12,600	$ 12,406
Selling and marketing expenses	1,260	1,203
General and administration expenses	4,283	4,075
Research and development expenses	5,138	5,103
	$ 23,281	$ 22,787

Through the defined benefit plans under the Labor Standards Law, 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	
	2018	**2017**
Discount rate	1.25%	1.50%
Expected rate of salary increase	3.00%	3.00%
Expected return on plan assets increase	1.25%	1.50%

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	
	2018	**2017**
Discount rate		
0.50% increase	$ (105,932)	$ (107,722)
0.50% decrease	$ 114,591	$ 116,885
Expected rate of salary increase		
0.50% increase	$ 121,893	$ 114,570
0.50% decrease	$ (113,520)	$ (106,740)

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	
	2018	**2017**
The expected contributions to the plan for the next year	$ 31,032	$ 32,243
The average duration of the defined benefit obligation	11.7 years	12.3 years

The Company maintains a separate executive pension plan and the net periodic pension costs were NT$9,173 thousand and NT$11,396 thousand for the years ended December 31, 2018 and 2017, respectively.

Movements in net defined benefit liability were as follows:

	Present Value of Defined Benefit Obligation
Balance at January 1, 2017	$ 407,634
Defined benefit cost	
Current service cost	6,683
Net interest expense	4,713
Recognized in profit or loss	11,396
Remeasurement	
Actuarial loss - experience adjustments	23,706
Actuarial loss - changes in financial assumptions	-
Recognized in other comprehensive income	23,706
Benefits paid	(9,455)
Balance at December 31, 2017	433,281
Defined benefit cost	
Current service cost	2,745
Net interest expense	6,428
Recognized in profit or loss	9,173
Remeasurement	
Actuarial loss - experience adjustments	21,240
Actuarial loss - changes in financial assumptions	5,748
Recognized in other comprehensive income	26,988
Benefits paid	(9,455)
Balance at December 31, 2018	$ 459,987

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	
	2018	2017
General and administration expenses	$ 9,173	$ 11,396

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	
	2018	2017
Discount rate	1.25%	1.50%
Expected rate of salary increase	-	-
Expected return on plan assets increase	1.25%	1.50%

23. EQUITY

a. Share capital

Ordinary shares

	December 31 2018	December 31 2017
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)	1,840,292	1,804,939
Share issued	$ 18,402,919	$ 18,049,385

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

The Company resolved, in the May 26, 2017 shareholder's meeting, a capital reduction for offsetting the accumulated deficit to improve the Company's financial structure. The capital reduction will amount to NT$18,651,070 thousand, representing 1,865,107 thousand shares and approximately 51% of the Company's original share capital. The reduction was approved by the FSC on June 26, 2017 and went into effect upon approval. Per the authority granted in the shareholders' meeting, the chairman of the Company determined June 29, 2017 as the basis date of the capital reduction. After the reduction, the paid-in capital would be NT$18,058,953 thousand, equivalent to 1,805,895 thousand shares.

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 2018	December 31 2017
May be used to offset a deficit, distributed as cash dividends, or transferred to share capital (1)		
Issuance of ordinary shares	$ -	$ -
Donations	37	37
Treasury share transactions	6,422	6,422
	$ 6,459	$ 6,459
May be used to offset a deficit only		
Changes in percentage of ownership interests in subsidiaries (2)	$ 4,609	$ 4,609
Treasury share transactions	21,999	20,080
	$ 26,608	$ 24,689
May not be used for any purpose		
Employee restricted shares	$ (89,308)	$ (238,236)

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, in May 26, 2017, 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 25 (f).

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.

Items referred under Rule No. 1010047490 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the Company.

The appropriation of earnings for 2017 were approved by the Company's shareholders in its meeting held on June 14, 2018. The appropriation and dividends per share were as follows:

	Appropriation of Earnings	Dividends Per Share (NT$)
Legal reserve	$ 541,360	
Special reserve	74,275	
Cash dividends	1,804,776	$ 1.0
Share dividends	360,955	0.2

The appropriation of earnings for 2018 has been proposed by the Company's board of directors on March 12, 2019. The appropriation and dividends per share were as follows:

	Appropriation of Earnings	Dividends Per Share (NT$)
Legal reserve	$ 899,301	
Special reserve	932,777	
Cash dividends	2,208,200	$ 1.2

The appropriation of earnings for 2018 are subject to the resolution of the shareholders' meeting to be held on June 18, 2019.

d. Special reserve

	For the Year Ended December 31, 2018
Beginning at January 1	$ -
Appropriations in respect of Treasury Shares	74,275
Balance at December 31	$ 74,275

e. Other equity items

1) Exchange differences on translating foreign operations

	For the Year Ended December 31	
	2018	2017
Balance at January 1	$ (85,183)	$ (8,565)
Effect of retrospective application of IFRS 9	(146,758)	-
Exchange differences on translating foreign operations	94,809	(76,618)
Balance at December 31	$ (137,132)	$ (85,183)

2) Unrealized gain on available-for-sale financial assets

	For the Year Ended December 31, 2017
Balance at January 1	$ 956,774
Unrealized gain on available-for-sale financial assets	774,460
Balance at December 31	$ 1,731,234
Balance at January 1, 2018 (IAS 39)	$ 1,731,234
Effect of retrospective application of IFRS 9	(1,731,234)
Balance at January 1, 2018 (IFRS 9)	$ -

3) Unrealized gain (loss) on financial assets at FVTOCI

	For the Year Ended December 31, 2018
Balance at January 1 (IAS 39)	$ -
Effect of retrospective application of IFRS 9	112,903
Balance at January 1 (IFRS 9)	112,903
Unrealized loss on financial assets at FVTOCI	(958,735)
Other comprehensive income recognized in the period	(845,832)
Cumulative unrealized gain on the disposal of equity instruments transferred to retained earnings	99,070
Balance at December 31	$ (746,762)

4) Employees' unearned compensation

In the meetings of shareholders on June 18, 2014 and June 16, 2016, the shareholders approved a restricted share plan for employees. Refer to Note 28 for the information on restricted shares issued.

	For the Year Ended December 31	
	2018	2017
Balance at January 1	$ (85,600)	$ (306,958)
Share-based payment expenses recognized	63,583	213,100
Adjustments for change of turnover rate	2,039	8,258
Balance at December 31	$ (19,978)	$ (85,600)

f. Treasury shares

The Company's shares held by its subsidiaries at December 31, 2018 and 2017 were as follows:

Name of Subsidiary	Number of Shares Held (In Thousands)	Carrying Amount	Market Price
December 31, 2018			
Hui Ying	1,957	$ 159,061	$ 35,904
December 31, 2017			
Hui Ying	1,918	$ 159,061	$ 84,786

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.

The Company implemented a capital reduction on June 29, 2017, with 1,918 thousand treasury shares remaining after the reduction; refer to Note 23 (a).

24. REVENUE

a. Segmentation of revenue from contracts with customers

	For the Year Ended December 31	
	2018	2017
Product type		
Flash	$ 22,665,939	$ 22,634,580
ROM	11,166,444	8,416,884
Foundry	2,445,263	2,432,296
Others	3,081	17,189
	$ 36,280,727	$ 33,500,949

b. Contract balances

	For the Year Ended December 31, 2018
Contract liabilities (classified as current liabilities)	$ 13,598

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	
	2018	2017
From the beginning balance of contract liabilities		
Sale of goods	$ 52,337	$ -

25. NET PROFIT (LOSS) FROM CONTINUING OPERATIONS

a. Other income

	For the Year Ended December 31	
	2018	2017
Dividend income	$ 102,920	$ 84,181
Interest income	29,830	15,750
Intellectual property income	2,473,600	-
Others	18,022	19,266
	$ 2,624,372	$ 119,197

b. Other gains and losses

	For the Year Ended December 31	
	2018	2017
Net foreign exchange gains (losses)	$ 245,065	$ (121,990)
Gains (losses) on disposal of investments	180	(2,517)
Other losses	(485)	(413)
	$ 244,760	$ (124,920)

c. Finance costs

	For the Year Ended December 31	
	2018	2017
Interest on loans	$ 159,779	$ 215,690
Other interest expenses	1,223	18
Less: Amounts included in the cost of qualifying assets	(17,649)	(106)
	$ 143,353	$ 215,602

Information about capitalized interest was as follows:

	For the Year Ended December 31	
	2018	2017
Capitalized interest	$ 17,649	$ 106
Capitalization rate	1.45%	0.90%

d. Depreciation and amortization

	For the Year Ended December 31	
	2018	2017
An analysis of depreciation by function		
Operating costs	$ 1,769,579	$ 1,610,990
Operating expenses	306,652	311,186
	$ 2,076,231	$ 1,922,176
An analysis of amortization by function		
Operating costs	$ 9,226	$ 14,615
Operating expenses	17,179	12,317
	$ 26,405	$ 26,932

e. Employee benefits expense

	For the Year Ended December 31	
	2018	2017
Post-employment benefits (Note 22)		
Defined contribution plans	$ 192,865	$ 191,112
Defined benefit plans	32,454	34,182
	225,319	225,294
Share-based payments		
Equity-settled	63,583	213,100
Other employee benefits	6,778,343	6,230,577
Total employee benefits expense	$ 7,067,245	$ 6,668,971
An analysis of employee benefits expense by function		
Operating costs	$ 3,572,553	$ 3,340,496
Operating expenses	3,494,692	3,328,475
	$ 7,067,245	$ 6,668,971

f. Employees' compensation and remuneration of directors

In compliance with the Company Act as amended in May 2015 and 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, 2018 and 2017, the employees' estimated compensation and the remuneration of directors and supervisors for having been resolved by the board of directors on March 12, 2019 and March 16, 2018, respectively, were as follows:

Amount

	For the Year Ended December 31	
	2018	2017
Employees' compensation	$ 1,669,586	$ 997,202
Remuneration of directors	$ 222,611	$ 132,960

If there is a change in the amounts after the annual consolidated financial statements were authorized for issue, the differences are recorded as a change in the accounting estimate.

It was accumulated deficit in the years ended December 31, 2016, consequently, there is no amount of employees' compensation and remuneration of directors to be distributed.

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, 2018 and 2017.

Information on the employees' compensation and remuneration of directors resolved by the Company's board of directors in 2019 and 2018 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

26. INCOME TAXES RELATING TO CONTINUING OPERATIONS

a. Major components of income tax expense (benefit) recognized in profit or loss:

	For the Year Ended December 31	
	2018	**2017**
Current tax		
Income tax on unappropriated earnings	$ 184,257	$ -
Overseas income tax	247,360	-
Deferred tax		
In respect of the current year	(186,246)	-
Income tax expense recognized in profit or loss	$ 245,371	$ -

A reconciliation of accounting loss and income tax expenses is as follows:

	For the Year Ended December 31	
	2018	**2017**
Income before tax from continuing operations	$ 9,238,377	$ 5,517,847
Income tax expense calculated at the statutory rate	$ 1,847,675	$ 938,034
Non-deductible expenses in determining taxable income	7,321	138,133
Non-taxable income	(23,193)	(84,181)
Realized loss on investment	(296,074)	(72,622)
Income tax on unappropriated earnings	184,257	-
Unrecognized temporary differences	(1,288,369)	(456,845)
Recognized loss carryforwards	(186,246)	(462,519)
Income tax expense recognized in profit or loss	$ 245,371	$ -

In 2017, the applicable corporate income tax rate used by the Group in the ROC is 17%. However, the Income Tax Act in the ROC was amended and the corporate income tax rate was adjusted from 17% to 20% effective in 2018. In addition, the rate of the corporate surtax applicable to 2018 unappropriated earnings will be reduced from 10% to 5%.

As the status of 2019 appropriations of earnings is uncertain, the potential income tax consequences of 2018 unappropriated earnings are not reliably determinable.

b. Current tax assets and liabilities

	December 31	
	2018	**2017**
Current tax assets		
Tax refund receivable	$ 3,409	$ 4,364
Current tax liabilities		
Income tax payable	$ 184,257	$ -

c. Deferred tax assets and liabilities

The Company offset certain deferred tax assets and deferred tax liabilities which met the offset criteria.

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2018

Deferred Tax Assets	Opening Balance	Recognized in Profit or Loss	Closing Balance
Loss carryforwards	$ 992,838	$ 186,246	$ 1,179,084

For the year ended December 31, 2017

Deferred Tax Assets	Opening Balance	Recognized in Profit or Loss	Closing Balance
Loss carryforwards	$ 992,838	$ -	$ 992,838

d. Deductible temporary differences, unused loss carryforwards and unused investment credits for which no deferred assets have been recognized in the parent company only balance sheets

	December 31	
	2018	2017
Loss carryforwards		
Expire in 2023	$ -	$ 2,685,950
Expire in 2024	1,152,670	6,117,028
Expire in 2025	2,520,314	2,520,314
Expire in 2026	2,873,493	3,083,989
	$ 6,546,477	$ 14,407,281
Investment credits		
Research and development expenditures	$ 257,783	$ 147,545
Deductible temporary differences	$ 18,621,158	$ 12,185,832

The unrecognized investment credits will expire in 2019.

e. Information about unused investment credits and unused loss carry-forward

As of December 31, 2018, 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	$ 66,573	2018
Statute for Industrial Innovation	Research and development expenditures	191,210	2019
		$ 257,783	

Loss carryforwards as of December 31, 2018 comprised of:

Unused Tax Amount	Expiry Year
$ 186,212	2023
1,223,405	2024
504,063	2025
574,699	2026
$ 2,488,379	

f. Income tax assessments

The Company's tax returns through 2016 have been assessed by the tax authorities.

27. EARNINGS PER SHARE

Unit: NT$ Per Share

	For the Year Ended December 31	
	2018	2017
Basic earnings per share	$ 4.94	$ 3.06
Diluted earnings per share	$ 4.65	$ 2.97

The weighted average number of shares outstanding used for the earnings per share computation was adjusted retroactively for the issuance of bonus shares on September 1, 2018. The basic and diluted earnings per share adjusted retrospectively for the year ended December 31, 2017, are as follows:

Unit: NT$ Per Share

	Before Retrospective Adjustment	After Retrospective Adjustment
Basic earnings per share	$ 3.12	$ 3.06
Diluted earnings per share	$ 3.03	$ 2.97

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	
	2018	2017
Income for the year attributable to owners of the Company	$ 8,993,006	$ 5,517,847

Weighted average number of ordinary shares outstanding (in thousand shares):

	For the Year Ended December 31	
	2018	2017
Weighted average number of ordinary shares in computation of basic earnings per share	1,822,137	1,801,061
Effect of potentially dilutive ordinary shares:		
Restricted shares to employees	15,406	34,842
Employees' compensation or bonus issue to employees	95,189	22,561
Weighted average number of ordinary shares in computation of diluted earnings per share	1,932,732	1,858,464

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.

28. 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
2014/06/18	123,251	38,365	2014/08/28	2014/12/25	37,301	$ 7.76
		62,213	2015/03/16	2015/07/22	61,279	6.82
2016/06/16	123,535	58,971	2016/10/25	2017/01/03	57,476	4.73

To meet the vesting conditions, an employee has to meet performance and other conditions over the vesting period, as follows:

1) Remain employed by the Company within one year after the grant date; and has a current year's performance rating of "successful" (or higher) - 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 "successful" (or higher) - 30% of restricted shares will be vested;

3) Remain employed by the Company within three years after grant date; and has a current year's performance rating of "successful" (or higher) - 30% of restricted shares will be vested.

In addition to the vesting conditions, the limitations are as follows:

1) Employees, except for inheritance, should not sell, transfer, pledge, donate or in any other way dispose of the shares.

2) The shares should be held in a share trust.

3) 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 Company's issued ordinary shares.

4) The dividends of restricted share plan for employees are not restricted by existing conditions.

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	
	2018	2017
Balance at January 1	24,461	103,593
Vested	(15,970)	(32,719)
Forfeited (Notes 1 and 2)	(704)	(3,676)
Cancelled by capital reduction (Note 3)	-	(42,737)
Balance at December 31	7,787	24,461

Note 1: The forfeited shares for the year ended December 31, 2018 consisted of 125 thousand shares not yet cancelled and 579 thousand shares already cancelled.

Note 2: The forfeited shares for the year ended December 31, 2017 consisted of 163 thousand shares that are not yet cancelled, 2,018 thousand shares already cancelled, and 1,495 thousand shares representing the difference between granted and issued shares as of October 25, 2016.

Note 3: The number of shares cancelled in proportion of the capital reduction on June 29, 2017 was 42,737 thousand.

For the years ended December 31, 2018 and 2017, the compensation costs recognized were NT$63,583 thousand and NT$213,100 thousand, respectively.

29. DISPOSAL OF SUBSIDIARIES

On March 22, 2017, INFOMAX filed for liquidation per the resolution reached in its shareholders' meeting; therefore, the Company has no control over INFOMAX as well as the subsidiaries of INFOMAX. For details about the disposal of INFOMAX, refer to Note 32 to the consolidated financial statements for the year ended December 31, 2018.

30. OPERATING LEASE ARRANGEMENTS

The Company as lessee

Operating leases relate to leases of land and offices with lease terms between 5 and 20 years. The Company does not have a bargain purchase options to acquire the leased land and offices at the expiration of the lease periods.

The future minimum lease payments of non-cancellable operating lease commitments were as follows:

	December 31	
	2018	2017
Not later than 1 year	$ 81,979	$ 75,119
1-5 years	306,306	285,351
Later than 5 years	752,158	757,101
	$ 1,140,443	$ 1,117,571

The lease payments recognized in profit or loss for the current year were as follows:

	For the Year Ended December 31	
	2018	2017
Minimum lease payments	$ 81,549	$ 76,354

31. 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.

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 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, 2018

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Equity securities				
Securities listed in ROC	$ 934,749	$ -	$ -	$ 934,749
Securities unlisted in ROC	-	-	267,075	267,075
	$ 934,749	$ -	$ 267,075	$ 1,201,824

December 31, 2017

	Level 1	Level 2	Level 3	Total
Available-for-sale financial assets				
Equity securities				
Securities listed in ROC	$ 1,349,993	$ -	$ -	$ 1,349,993

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 nine months ended December 31, 2018

Financial Assets	Financial Assets at FVTOCI Equity Investments
Balance at January 1	$ 419,527
Total gain recognized in other comprehensive (unrealized gain on financial assets at FVTOCI)	(152,452)
Balance at December 31	$ 267,075
Unrealized loss	$ (152,452)

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	
	2018	2017
Financial assets		
Loans and receivables (i)	$ -	$ 13,753,435
Available-for-sale financial assets (ii)	-	1,408,493
Financial assets measured at amortized cost (iii)	17,338,688	-
Financial assets measured at FVTOCI	1,201,824	-
Financial liabilities		
Financial liabilities measured at amortized cost (iv)	25,486,031	17,542,217

i) The balances included loans and receivables measured at amortized cost, which comprise cash and cash equivalents, notes receivable and trade receivables (including receivables from related parties), other receivables and other financial assets.

ii) The balances included the carrying amount of available-for-sale financial assets measured at cost.

iii) The balances included financial liabilities measured at amortized cost, which comprise cash and cash equivalents, notes receivable and trade receivables (including receivables from related parties), other receivables and other financial assets.

iv) The balances included financial liabilities measured at amortized cost, which comprise short-term loans, notes payable and trade payables (including payables to related parties), other payables (including other payables to related parties), accrued employees' compensation and remuneration of directors, payables for purchases of equipment 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 rate is for the 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**	
	2018	**2017**	**2018**	**2017**
Pre-tax profit decrease (Increase)	$ 68,504	$ 141,578	($64,714)	$ 33,789

The Company's sensitivity analysis of the impact of the New Taiwan dollar fluctuating against the JPY showed an increase for the year ended December 31, 2018, due to the increase in the balance of accounts payable in JPY currencies at the end of the period.

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, 2018 and 2017 would decreased/increased by NT$46,211 thousand and NT$40,344 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, 2018 and 2017 would have increased/decreased by NT$120,182 thousand and NT$134,999 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, 2018 and 2017, the Company's ten largest customers accounted for 57% and 63% 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 Group's financial liabilities based on contractual and undiscounted payments, including principal and estimated interest.

December 31, 2018

	On Demand or Less than 1 Year	1-3 Years	3-5 Years	5+ Years	Total
Non-derivative financial liabilities					
Non-interest bearing	$ 16,568,718	$ -	$ -	$ -	$ 16,568,718
Interest bearing	3,479,800	4,530,019	1,529,733	-	9,539,552
	$ 20,048,518	$ 4,530,019	$ 1,529,733	$ -	$ 26,108,270

December 31, 2017

	On Demand or Less than 1 Year	1-3 Years	3-5 Years	5+ Years	Total
Non-derivative financial liabilities					
Non-interest bearing	$ 9,514,410	$ -	$ -	$ -	$ 9,514,410
Interest bearing	3,315,848	2,691,562	2,398,833	-	8,406,243
	$ 12,830,258	$ 2,691,562	$ 2,398,833	$ -	$ 17,920,653

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

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
Infomax Communication Co., Ltd. (INFOMAX) (Note 29)	Subsidiary
Mxtran Inc. (Mxtran)	Subsidiary
Macronix (Hong Kong) Co., Limited (MXHK)	Indirect subsidiary
Macronix Europe NV. (MXE)	Indirect subsidiary
Macronix Pte. Ltd. (MPL)	Indirect subsidiary
Macronix (Asia) Limited (MX Asia)	Indirect subsidiary
Modiotek Co., Ltd. (Modiotek)	Associates (Note)
MegaChips Corporation (MegaChips)	Key management personnel
Ardentec Corporation (Ardentec)	The Company is its major management authority
TM Technology, Inc. (TMTECH)	Others
Etron Technology, Inc. (Etron)	Others
Macronix Education Foundation (MXIC Education)	Others

Note: In the May 26, 2017 shareholders' meeting, the decision for the liquidation of Modiotek and the election of its liquidator were resolved. The Company has hence lost its significant influence over Modiotek and Modiotek's subsidiaries.

b. Operating revenues

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2018	2017
Sales	Key management personnel		
	MegaChips	$ 11,104,912	$ 8,657,954
	Subsidiaries		
	MXHK	4,983,410	5,772,861
	Others	1,416,372	1,246,750
	Others	604	1,058
	Associates	-	41
		$ 17,505,298	$ 15,678,664

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 2018	2017
Key management personnel		
MegaChips	$ 11,056,200	$ 5,595,024

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 2018	2017
Receivables from related parties, net	Subsidiaries		
	MXHK	$ 379,948	$ 1,088,918
	MXA	132,915	217,987
	Others	148	-
	Key management personnel		
	MegaChips	695,028	732,888
		$ 1,208,039	$ 2,039,793
Other receivables	Subsidiaries		
	MXHK	$ 137	$ 167
	Mxtran	82	118
	Key management personnel	5	-
		$ 224	$ 285

The outstanding trade receivables from related parties are unsecured. For the year ended December 31, 2018 and 2017, no impairment loss was recognized for trade receivables from related parties.

e. Payables to related parties

Line Items	Related Parties Categories/Name	December 31 2018	December 31 2017
Payables to related parties	Key management personnel		
	MegaChips	$ 8,849,935	$ 3,339,853
	The Company is its major management authority	76,266	74,286
		$ 8,926,201	$ 3,414,139
Other payables to related parties	Subsidiaries		
	MXA	$ 78,108	$ 102,035
	MXE	51,940	36,978
	MX Asia	22,786	24,694
	Others	6,852	6,399
	Others	426	-
		$ 160,112	$ 170,106

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 2018	For the Year Ended December 31 2017
Manufacturing expense	The Company is its major management authority		
	Ardentec	$ 269,306	$ 257,879
Operating expense	Subsidiaries		
	MXA	$ 228,565	$ 213,428
	MXE	148,877	133,831
	MXAsia	97,019	87,643
	Others	21,478	18,333
	Others		
	MXIC Education	21,368	11,000
	Others	867	-
	Associates	-	1
		$ 518,174	$ 464,236
IT service revenue	Subsidiaries		
	Mxtran	$ 326	$ 342
	Others	-	8
	Associates		
	Modiotek	-	282
		$ 326	$ 632

(Continued)

Line Items	Related Parties Categories/Name	For the Year Ended December 31 2018	2017
Rental revenue	Subsidiaries		
	Mxtran	$ 435	$ 884
	Others	-	8
	Associates		
	Modiotek	-	963
		$ 435	$ 1,855

(Concluded)

The manufacturing expense and operating expense of related parties were comparable to those with other vendors. The payment term was between 30 to 75 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 2018	2017
Short-term benefits	$ 635,779	$ 433,980
Post-employment benefits	9,173	11,396
Share-based payments	8,965	27,257
Other long-term employee benefits	(2)	116
	$ 653,915	$ 472,749

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 2018	2017
Property, plant and equipment, net	$ 9,927,203	$ 10,244,901
Pledge deposits (classified as other financial assets - non-current)	157,665	133,810
	$ 10,084,868	$ 10,378,711

35. 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, 2018 and 2017 were as follows:

a. As of December 31, 2018 and 2017, unused letters of credit amounted to approximately $0 thousand and $405,485 thousand, respectively.

b. Unrecognized commitments are as follows:

	December 31	
	2018	**2017**
Acquisition of property, plant and equipment	$ 6,819,449	$ 655,993

c. In January 2016, the Company entered into a phase-change memory technology development agreement with IBM, and the agreement is from January 2016 to January 2019. Under the agreement, both parties share the related expenditures of the technology development, and all payments have been made by the Company. In January 2019, the Company again signed an agreement with IBM to continue the joint development of phase-change memory technology, and the agreement is January 2019 to January 2022.

d. In March 2017, the Company filed a complaint with the International Trade Commission and the US District Court in the Southern District of California against Toshiba Corporation and its subsidiaries for infringement of the Company's US patents. Toshiba Corporation ("Toshiba") subsequently filed a petition in the US Patent Trial and Appeal Board for the Inter Partes Review of certain claims of US Patent, No. 6788602 and No. 8035417, claiming that they were invalid. In October 2017, Toshiba also filed a complaint in Taiwan against the Company for infringement of its Taiwan patents. In November 2017, Toshiba filed a complaint in the Japan Patent Office for infringement of its Japan patents. In April 2018, the Company filed a complaint in the Taiwan Intellectual Property Court against Toshiba Corporation and its subsidiaries for infringement of the Company's patents. Regarding the aforementioned cases, both parties have settled, and have been announced in October 2018. (Please refer to at the Market Observation Post System website of the Taiwan Stock Exchange, http://mops.twse.com.tw/mops/web/t05st01).

36. 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, 2018

	Foreign Currencies	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 29,851,090	0.2782	$ 8,304,573
USD	138,577	30.715	4,256,383
			$ 12,560,956

(Continued)

	Foreign Currencies	Exchange Rate	Carrying Amount
Non-monetary items			
Investments accounted for using the equity method			
USD	$ 66,660	30.715	$ 2,047,470
Financial liabilities			
Monetary items			
JPY	32,177,273	0.2782	$ 8,951,717
USD	64,233	30.715	1,972,923
			$ 10,924,640

(Concluded)

December 31, 2017

	Foreign Currencies	Exchange Rate	Carrying Amount
Financial assets			
Monetary items			
JPY	$ 14,714,045	0.2642	$ 3,887,451
USD	232,784	29.76	6,927,667
			$ 10,815,118
Non-monetary items			
Investments accounted for using the equity method			
USD	74,022	29.76	$ 2,202,898
Financial liabilities			
Monetary items			
JPY	13,435,126	0.2642	$ 3,549,560
USD	74,207	29.76	2,208,387
			$ 5,757,947

For the years ended December 31, 2018 and 2017, realized and unrealized net foreign exchange gains (losses) were NT$245,065 thousand and NT$(121,990) 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.

37. SEPARATELY DISCLOSED ITEMS

a. Information on significant transactions and information on investees:

1) Financing provided to others: None

2) Endorsements/guarantees provided: None

3) Marketable securities held (excluding investment in subsidiaries, associates and joint controlled entities): 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: None

7) Total purchases from or sales to related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 2 (attached)

8) Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital: Table 3 (attached)

9) Trading in derivative instruments: None

10) Information on investees: Table 4 (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 5 (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

TABLE 1

MACRONIX INTERNATIONAL CO., LTD.

MARKETABLE SECURITIES HELD
DECEMBER 31, 2018
(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, 2018				Shares as Collateral
				Shares/Units (In Thousands)	Carrying Amount	Percentage of Ownership (%)	Fair Value (Note)	
The Company	Shares							
	Ardentec Corporation	The Company serves as member of its board of directors	Financial assets at FVTOCI – non current	35,951,871	$ 934,749	7.33	$ 934,749	None
	United Industrial Gases Co., Ltd.	None	”	6,671,877	267,075	3.06	267,075	None
	Aetas Technology Inc.	None	”	145,850	-	0.29	-	None
	Zowie Technology Co., Ltd.	None	”	20,426	-	0.12	-	None
	Quality Test System Inc.	None	”	4,538,333	-	14.64	-	None
MXBVI	Shares							
	Chipbond Technology Corporation	None	Financial assets at FVTOCI – non current	1,088,319	67,476	0.17	67,476	None
	Tower Semiconductor Ltd.	None	”	584,893	264,804	0.56	264,804	None
	Global Strategic Investment Fund (Cayman)	None	”	490,000	16,405	2.52	16,405	None
	Global Strategic Investment Fund (Samoa)	None	”	1,739,783	22,978	4.90	22,978	None
Hui Ying	Shares							
	Macronix International Co., Ltd.	The Company	Financial assets at FVTOCI – non current	1,956,619	35,904	0.11	35,904	None
	Raio Technology Co., Ltd.	None	”	1,165,690	28,454	10.14	28,454	None

TABLE 2

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, 2018
(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 Corporation	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Sales	$ 11,104,912	31	30 days after monthly closing	Note 33	Note 33	$ 695,028	16	-
	MXHK	Indirect subsidiary	Sales	4,983,410	14	45 days after monthly closing	Note 33	Note 33	379,948	9	-
	MXA	Subsidiary	Sales	1,416,231	4	Net 60 days	Note 33	Note 33	132,915	3	-
	MegaChips Corporation	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	Purchase	11,056,200	61	30 days after monthly closing and after acceptance of materials	Note 33	Note 33	8,849,935	77	
MXHK	The Company	Indirect subsidiary	Purchase	US$ 166,643	100	45 days after monthly closing	No material difference	No material difference	US$ 12,375	100	-
MXA	The Company	Subsidiary	Purchase	US$ 47,132	100	Net 60 days	No material difference	No material difference	US$ 4,327	100	-

TABLE 3

MACRONIX INTERNATIONAL CO., LTD.

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
DECEMBER 31, 2018
(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 Corporation	Its subsidiary, Shun Ying Investment, is represented in MXIC's board of directors	$ 695,028	15.55 times	$ -	-	JPY 2,455,944 thousand	$ -
	MXHK	Indirect subsidiary	379,948	6.79 times	-	-	US$ 9,190 thousand	-
	MXA	Subsidiary	132,915	8.07 times	-	-	US$ 3,207 thousand	-

TABLE 4

MACRONIX INTERNATIONAL CO., LTD.

INFORMATION ON INVESTEES
FOR THE YEAR ENDED DECEMBER 31, 2018
(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, 2018			Net Income (Loss) of the Investee	Share of Profit (Loss)	Note
				December 31, 2018	December 31, 2017	Shares	%	Carrying Amount			
The Company	MXA	San Jose, California, USA.	Sales and marketing	$ 2,640	$ 2,640	100,000	100.00	$ 153,352	$ 46,907	$ 46,907	Subsidiary
	MXBVI	Tortola, British Virgin Islands	Investment holding company	7,348,057	7,348,057	212,048,000	100.00	1,894,118	70,848	70,848	Subsidiary
	Hui Ying	Taipei, Taiwan	Investment	500,000	500,000	-	100.00	61,346	8,394	6,475	Subsidiary
	Run Hong	Taipei, Taiwan	Investment	984,432	984,432	-	100.00	13,819	(150)	(150)	Subsidiary
	Mxtran	Hsinchu, Taiwan	Combi-SIM IC and related services	755,287	755,287	69,627,323	90.43	5,853	(3,043)	(2,752)	Subsidiary
MXBVI	New Trend Technology Inc.	San Jose, California, USA.	IC design	882,141	874,418	26,850,000	100.00	299,389	(6,697)	Note	Subsidiary
	Macronix Europe NV.	Belgium	After-sales service	2,106	2,106	999	100.00	119,095	9,352	Note	Subsidiary
	Macronix Pte. Ltd.	Singapore	After-sales service	3,291	3,291	174,000	100.00	19,458	1,030	Note	Subsidiary
	MXHK	Hong Kong	Sales and marketing	378,427	378,427	89,700,000	100.00	740,677	54,904	Note	Subsidiary
	Macronix (Asia) Limited	Cayman Island	Investment holding company	26,325	26,325	700,000	100.00	64,441	4,365	Note	Subsidiary
Run Hong	Mxtran	Hsinchu, Taiwan	Combi-SIM IC and related services	40,318	40,318	3,393,200	4.41	285	(3,043)	Note	Subsidiary
Mxtran	Mxtran Holding (Samoa) Co., Ltd. (Mxtran Samoa)	Samoa	Investment holding company	35,979	35,979	1,170,000	100.00	1,058	2	Note	Subsidiary
Mxtran Samoa	Mxtran (H.K.) Holding Co., Limited	Hong Kong	Investment holding company	23,880	23,880	6,152,000	100.00	450	1	Note	Subsidiary

Note : Under relevant regulations, no disclosure of investment gain (loss) is needed.

MACRONIX INTERNATIONAL CO., LTD.

INFORMATION ON INVESTMENT IN MAINLAND CHINA
FOR THE YEARS ENDED DECEMBER 31, 2018
(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, 2018	Remittance of Funds		Accumulated Outward Remittance for Investment from Taiwan as of December 31, 2018	Net Income (Loss) of the Investee	% Ownership for Direct or Indirect Investment	Investment Gain (Loss) (Note 2)	Carrying Amount as of December 31, 2018	Accumulated Repatriation of Investment Income as of December 31, 2018
					Outward	Inward						
MXm	Development of integrated circuit system and software	$ 296,160	MXHK (Note 2)	$ 296,160	$ -	$ -	$ 296,160	$ 21,563	100	$ 21,563	$ 379,925	$ -

Accumulated Outward Remittance for Investment in Mainland China as of December 31, 2018	Investment Amount Authorized by the Investment Commission, MOEA	Upper Limit on the Amounts of Investment Stipulated by Investment Commission, MOEA
$ 296,160	$ 296,160	(Note 3)

Note 1: The amount was recognized based on the unreviewed 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.

Note 3: As the Company has obtained the certificate of being qualified for operating headquarters issued by the Industrial Development Bureau, MOEA in March 2017, the upper limit on investments in mainland China pursuant to "Principle of investment or Technical Cooperation in Mainland China" is not applicable.

Macronix International Co., Ltd.

Chairman：Miin Chyou Wu