TWSE 3443

2019

ANNUAL REPORT

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GUC
Global Unichip Corporation

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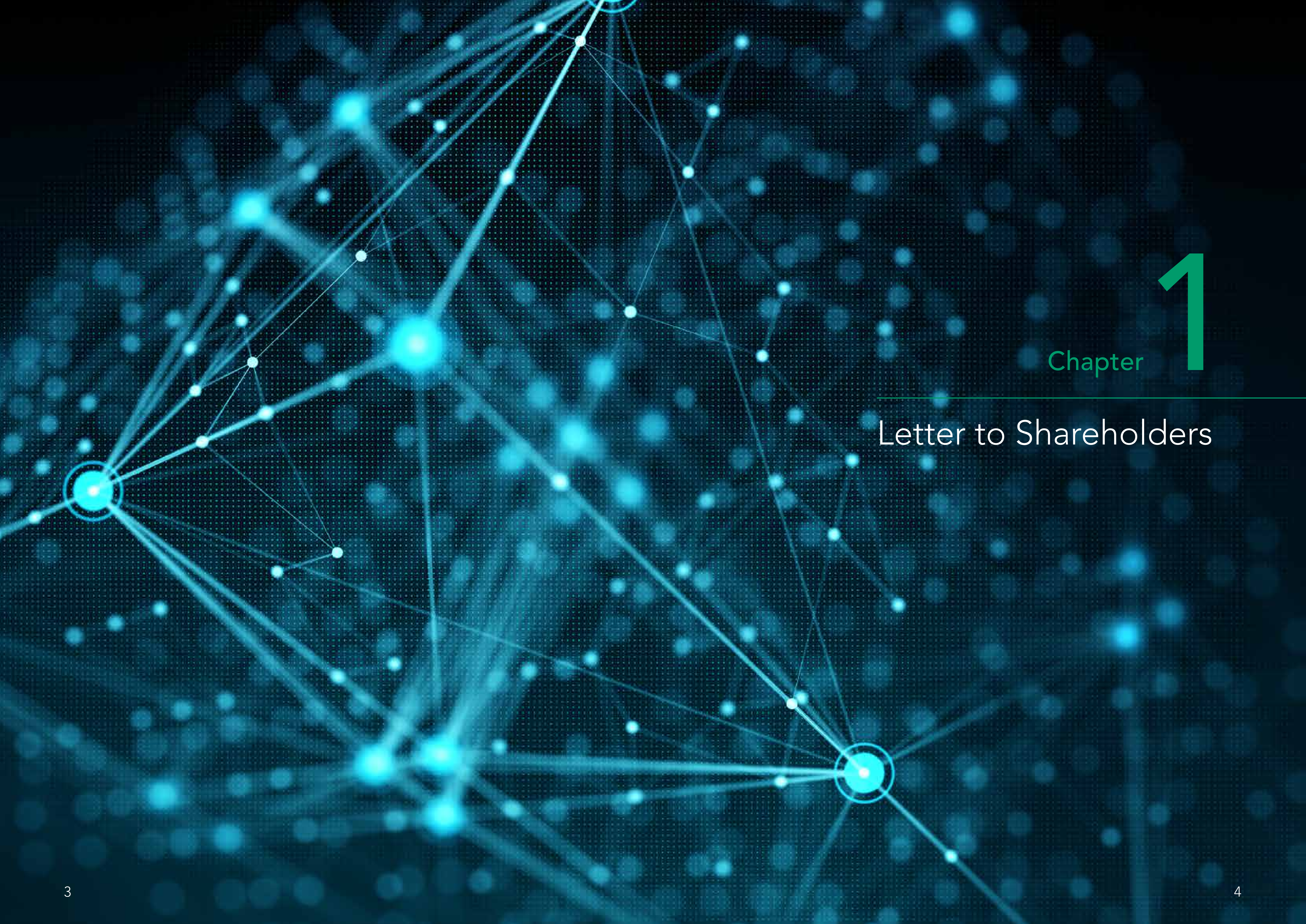
Table of Content



Chapter 1

Letter to Shareholders

Letter to Shareholders

Dear Shareholders,

International market was fluctuating in 2019. Market was conservative because of US-China trade war and slowed global semiconductor growth. Meanwhile, bitcoin prices have been steadily declining throughout 2019 since the peak of the bitcoin craze in last two years. Facing the headwinds in business caused by the weak global economy and geopolitical tension, GUC actively responded to rapid market changes, thanks to our employees' dedication, GUC achieving full year consolidated net revenues of NT $10.71 billion and consolidated earnings per share of NT $4.73.

2019 Business Overview

US-China trade war which started in the middle of 2018 continued till end of 2019, and the tug-of-war between two super power is more severe and the "tension" turned high since mid of June, 2019. The uncertainty of the global economy has made customers become more conservative. In consumer market, particularly in some sectors GUC focused, we see a weaker than expected performance. Worldwide semiconductor market is slower in 2019 due to a general industry DoI correction and uncertainties from trade war. Meanwhile, due to the plunge in bitcoin prices after 2018, the crypto-mining boom is over in 2H19 and bitcoin application was not GUC's major revenue generator anymore in 2019. Facing such severe market challenges, both NRE and Turnkey were negatively affected, which resulting in decline of full year consolidated net revenues and profit. When excluding contribution of bitcoin business, 2019 observed a positive growth of revenue, which was driven by the diversified demand of system companies from SSD、AI、HPC and 5G.

In 2019, to keep ahead of competition, GUC not only provided our customers the most advanced ASICs and packaging technology, we also provided complete one-stop-shopping IC manufacturing management service, with close alliance with important partners and world-class system customers. GUC already invested in research and development on 5nm design flow and key IPs, in order to meet customers' large designs needs of fast introduction, quick resolution of customer problems and successful signoff, and help raise prospective system and IC companies' market leading positions

2019 Financial Performance

Total revenues for 2019 was NT$10,710 million, down by 20% compared to NT$13,460 million in 2018. Net income was NT$633 million, down by 36% compared to the previous year. 2019 EPS was NT$4.73, down by 36% compared to 2018 EPS of NT$7.37, mainly due to a diminishing of bitcoin and a general industry DoI correction. Gross margin for 2019 was 33%, operating margin was 6.5%, and net profit margin was 5.9%.

2019 Technological Development

Design capability for the most advanced process nodes is the key factor in ensuring revenue and profit growth for ASIC design service companies. In 2019, about 20% revenue of GUC is for 7nm & 16/12nm process nodes. In order to maintain our technology leading position, GUC continued investment in research and development. In addition, our patent portfolio consists of 332 patents at the end of 2019 to demonstrate GUC's continued ability to innovate.

GUC's remarkable technology breakthrough and innovative achievement in 2019 are as follows:

- GUC 5nm design flow is in place, and the 1st GUC 5nm test chip was successfully taped out in 1Q19, with silicon verified at the end of 2019.
- GUC has successfully developed 6nm design flow, and the first 6nm test chip in 2020 will be taped out in March, launching 6nm production plan for leading customers.
- HPC ASIC chips using tsmc advanced process together with 2.5D packaging technology tailored for hyperscale data centers enter production in 2020.
- 5G ASIC chip developed in 2018 has been into mass production since 1Q19, succeeding on time to market.
- The total system solution of chiplet interconnect over tsmc InFO or CoWoS interposer by GUC 6nm/7nm D2D (Die to Die) IP will be silicon proven in 4Q20.
- GUC 16nm HBM2 IP successfully enables data-center AI training chip into production in 2020.
- In combination of tsmc CoWoS packaging technology, GUC provides world-1st, silicon-proven 7nm HBM2E-3.2G IP (PHY & Controller) total solution, with a live demo at tsmc 2019 North America OIP.
- In combination of tsmc CoWoS packaging technology, GUC provides world-1st 5nm HBM2E-3.2G IP (PHY & Controller) total solution, with silicon verified in 1Q20.
- GUC 12nm sub-6G high-speed ADC is silicon-proven, a significant technical milestone through close collaboration with 5G wireless leading customer.
- GUC 7nm 16G SerDes targeting AI/HPC/Networking applications is silicon proven.
- GUC 7nm 32G SerDes that was taped out in Oct'19 will be silicon verified in 2Q20.
- GUC 12nm 32G SerDes that was taped out in Aug'19 is silicon verified.
- GUC 7nm Pipeline TCAM with Redundancy was taped out in 1Q20.

2020 Outlook

Although global semiconductor business in 2019, excluding memory, dropped due to geopolitical tension, there was, since Q4/'19, a recovery from inventory correction, plus trend of stabilization of trade war, the macro market trend for 2020 is positive. In micro market, particularly in HPC where AI/ML takes big part of it and Networking which is promoted by 5G, will see stronger growth, which will become the focus of system companies and is expected to derivative considerable business opportunities for ASIC design services. More system customers relying on design service companies and China's push for its own semiconductor industry driven by the U.S.-China trade war will continue to increase the scale and value of the global ASIC market. Furthermore, customer appreciates GUC's capability in advanced technology and total SiP solutions which is very appealing to needs for technology migration and performance jump.

In summary, 2020 will be a year full of challenges and opportunities for GUC, to grab this opportunity of growth, GUC will actively enhance our technology and professional design ability and continue to expand our market share in ASIC design services.

Expected Sales

Benefit from diversified end applications, demand from system customers who want to differentiate from competitors, and China's push for its own semiconductor industry, global ASIC design demand keeps increasing, which will drive GUC's future operational growth, and revenue contribution from advanced process nodes will keep increasing. It is worth mentioning that because AI products need using leading edge technologies driven by performance requirement, which become GUC's learning vehicles in using the most advanced process technology and packaging technology of important partners. But due to the increasing complexity of algorithm, it will take average of 2 to 3 years based on conservative estimate, from production lead time observation. GUC will continue our roadmap in advanced IP and Packaging solution to enable AI, 5G Networking and HPC businesses, and expect our past investment will pays off soon so we will continue profitable growth path.

Production and Marketing Policy

Looking into 2020, GUC will gradually improve hit rate, increase long-term profitability, and keep choosing projects with a more cautious attitude. At the same time, we will continue to implement core competition strategies, actively improve the quality of design service, and enhance stickiness of current customers and secure long-term profitability.

advanced technology and packaging is very appealing to needs in ASIC in HPC area, and GUC will benefit from close alliance with important partners, and continuous investment on advanced IP, which frequently needed by AI、Networking and HPC projects.

The Impact of External Competiveness, Regulatory, Environment, and Macroeconomics

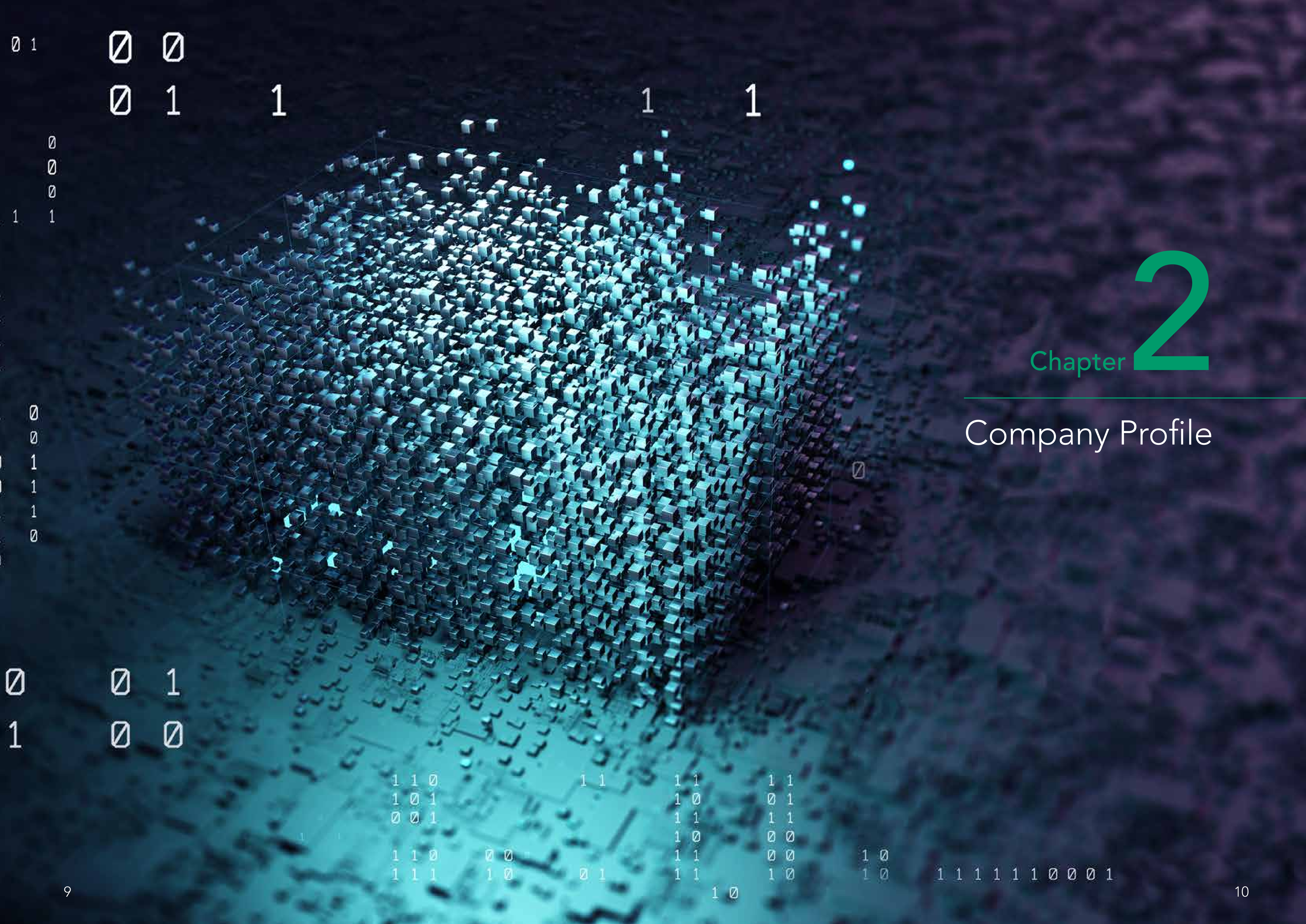
In addition to focusing on technology development, GUC values corporate governance and has always sought to fulfill our corporate social responsibility. Not only independently but also through close cooperation with our upstream and downstream suppliers. GUC was also awarded "the Top 5% companies" in the Information Disclosure Assessment and Evaluation of Listed Companies by Taiwan Stock Exchange for 5 consecutive years, and is the only IC design company to have earned this honor. Furthermore, GUC has compiled a Corporate Social Responsibility (CSR) report every year since 2011, specifically exposing how we can effectively improve our information transparency in response to important issues such as economic, environmental, social, and corporate governance that stakeholders are concerned about.

Looking into 2020, impact on supply chain due to trade war, ASIC demand from worldwide system customers, anti-U.S trend in China, and the complexity increase of advanced technology projects are challenges and opportunities that GUC must pay attention to. GUC will continue to invest on advanced technology IP, design engineering and advanced packaging advanced technology, and collaborate with world-class partners and customers to enable more advanced technology development and continuous innovation. GUC will move towards the goal of profitability growth and create more value for shareholders and customers.

Finally, thank once again with sincerity for all shareholders、customers、vendors、and the society for your continuing support. We will work hard to create reasonable return for our shareholders continuously.

Global Unichip Corporation

F. C. Tseng	Ken Chen
Chairman	President



Chapter 2

Company Profile

Company Profile

Company Overview

GUC is the Flexible ASIC LeaderTM whose customers target IC devices to leading edge computing, communications and consumer applications. Based in Hsin-chu, GUC has developed a global reputation with a presence in China, Europe, Japan, Korea, and North America. GUC is publicly traded on the Taiwan Stock Exchange under the symbol 3443.

1. Date of establishment: January 22, 1998

2. Corporate history

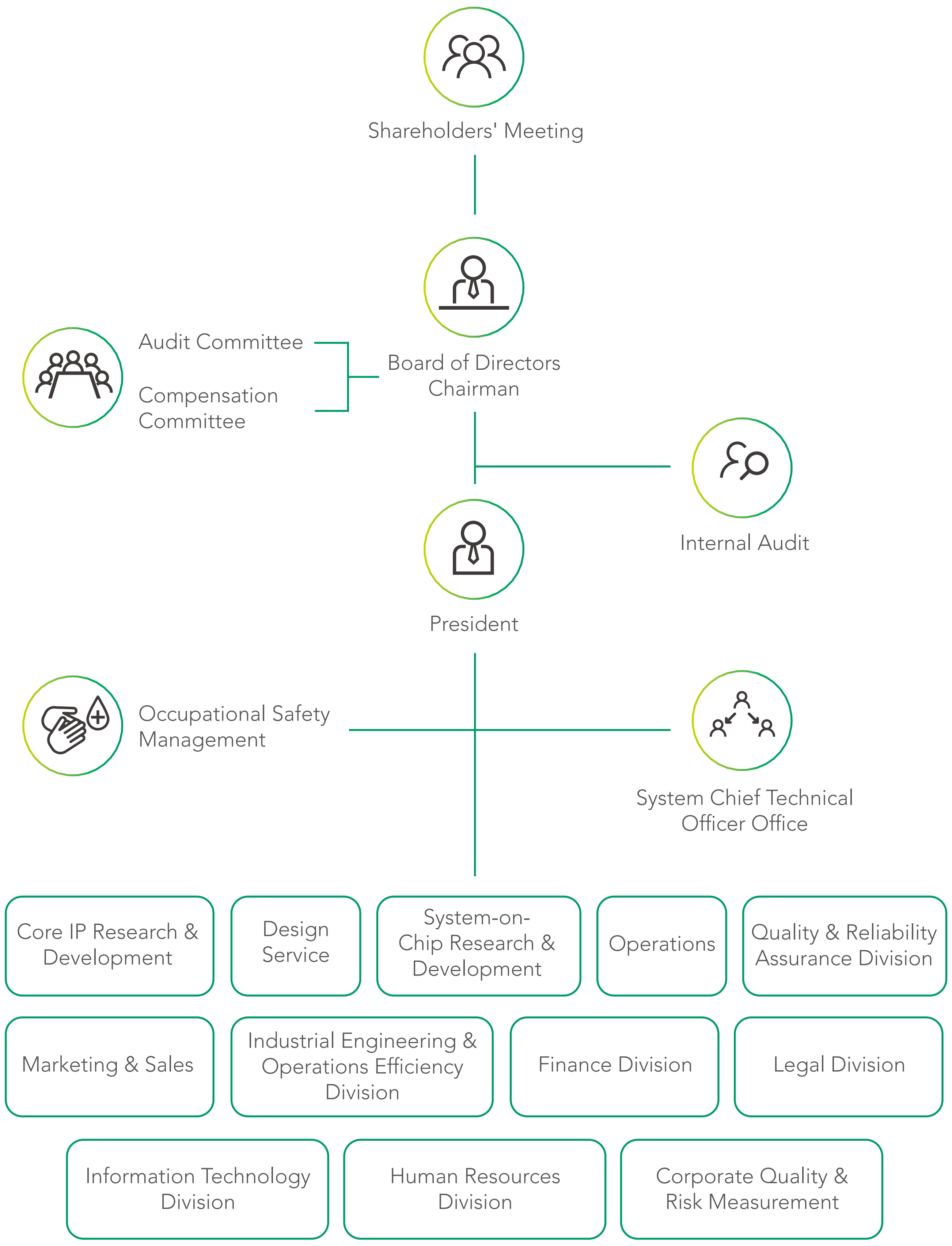
Jan. 1998	The Company founded under the company name Chuangyi Electronics Corporation with a paid-up capital of NT$4.06 million.
Oct. 1998	Approved for construction inside the Hsinchu Science Park. The Company officially changed its name to Global Unichip Corporation (GUC).
Jul. 1999	The first DSP Core taped out.
Dec. 2000	Completed validation process down to 0.18-micron.
Jan. 2001	Passed ISO9001 certification.
Oct. 2001	Received the 8th "Taiwan Small and Medium Enterprise Creativity and Research Award" from the Ministry of Economic Affairs for its JPEG Codec Image Compression/ Decompression Silicon IP.
Jan. 2003	The merger with Asian Technology Corporation became official, with Dr. F.C. Tseng elected as the company chairman.
May 2004	Moved to the current custom-built location at: No. 10, Li-Hsin 6th Rd., Hsinchu Science Park.
Jun. 2004	Accomplished the first successful tape-out on a 0.13-micron process.
Dec. 2004	Accomplished the first successful tape-out on a 90nm process.
Mar.2006	Accomplished the first successful tape-out of a 65nm test chip.
Jun. 2006	The high speed USB2.0 OTG solution UINF-0041 successfully passed the USB-IF certification tests. GUC became the first USB-IF non-member global provider to receive certification.
Sep. 2006	Received the "Industrial Technology Advancement Award - Excellent Enterprise Innovation Award" from the Department of Industrial Technology, Ministry of Economic Affairs.
Nov. 2006	The Company's common shares listed on the Taiwan Stock Exchange.
Jan. 2007	Successfully taped out Taiwan's first 65nm chip; the product was used in digital cameras.
May 2007	Successfully taped out the company's first 45nm test chip.
Jul. 2007	Received the Deloitte Taiwan 2007 Technology Fast 50 Award.
Dec. 2007	Commenced mass production of the first 65nm IC used for portable TVs.
Apr. 2008	Launched the first industry-wide SiP production flow to help customers shorten time-to-market.
May 2008	Ranked #3 in the "50 Best Operating Performance Companies in 2007" published by Common Wealth Magazine.
Jun. 2008	Harvard Business School published a case study featuring GUC.
Jul. 2008	Received the Deloitte Taiwan 2008 Technology Fast 50 Award.
Nov. 2008	Received the Deloitte Asia Pacific 2008 Technology Fast 500 Award.
Nov. 2008	Awarded the "2008 Amiable Workplace" prize by the Council of Labor Affairs, Executive Yuan.
Nov. 2008	Recognized as an "Excellent Healthy Workplace" by the Bureau of Health Promotion, Department of Health.
Dec. 2008	GUC and Andes Technology jointly launched the 90nm-based 660MHz N1213 hard core processor designed to provide a competitive option for customers.
Dec. 2008	Achieved Sony Green Partner certification.
Jan. 2009	Successfully taped out the 40nm PCIe GenII PHY test-chip.
Feb. 2009	Successfully completed the design and tape out of an ultra-large 15mmX15mm, 50 million logic-gate IC design and verified it on the first pilot run.
Mar. 2009	Successfully developed the dynamic voltage frequency scaling design flow and verified it on an ARM1176 dual-core test chip. The product was implemented for a customer's design and completed a successful pilot run.
Sep. 2009	TSMC 40nm high-speed interface 1G/10G/XAUI Serdes IP design was verified upon first tape out.
Sep. 2009	Awarded the "HRD InnoPrize" by the Council of Labor Affairs, Executive Yuan.
Oct. 2009	Received "The Best Environmental Protection Award" by Hsinchu Science Park Administration.
Oct. 2009	Developed the industry's first high-end DFT design processes. Successfully developed production tests operating frequencies over 1GHz. Developed and verified AC-JTAG1149.6 and IO-AC testing procedures for customers' design projects.
Nov. 2009	President Jim Lai awarded the "National Manager Excellence Award" by the Chinese Professional Management Association.
Nov. 2009	Received the Deloitte 2009 Asia Pacific Technology Fast 500 Award.
Feb. 2010	Successfully developed the DDR 40G 1.6Gbps physical layer.
Mar. 2010	GUC received the "Certificate of Corporation Governance System CG6005 General Assessment" from the Taiwan Corporate Governance Association.
May 2010	Successfully completed the design and tape out of a 40nm IC design project and verified on the first pilot run.

May 2010	Successfully developed and completed pilot run of a customized 40nm 10G EPON chipset.
Jun. 2010	Received an "A+" rating in the “7th Information Disclosure Assessment and Evaluation of Listed Companies.”
Aug. 2010	Received the "10th Cultural Benefactor Bronze Award" from the Council for Cultural Affairs, Executive Yuan.
Aug. 2010	Successfully helped customers develop a 40nm 4G LTE mobile phone baseband chip using 3D SiP technology.
Nov. 2010	Received the "Benchmark of Taiwan TrainQuali System (TTQS)" award from the Bureau of Employment and Vocational Training, Council of Labor Affairs.
Dec. 2010	Successfully developed the USB3.0 device end controller.
Jun. 2011	Received an "A+" rating and a top 10 ranking in the “8th Information Disclosure Assessment and Evaluation of Listed Companies.”
Aug. 2011	Received the "First Annual Innovation Award of Monte Jade in Taiwan" from Monte Jade Science and Technology Association of Taiwan.
Oct. 2011	GUC refined its business and technology model as “The Flexible ASIC ServicesTM”, including SoC integration, implementation methodologies, and integrated manufacturing.
Nov. 2011	GUC's USB 3.0 Device Controller IP passed the USB-IF test for SuperSpeed Products.
Dec. 2011	Named GSA 2011 Outstanding Asia-Pacific Semiconductor Company.
Dec. 2011	Achieved Gigahertz+ frequency on ARM Cortex-A9 Processor using a Synopsys IC compiler.
Jun. 2012	Received an "A++" rating and was ranked as one of the top 10 companies in the “9th Information Disclosure Assessment and Evaluation of Listed Companies.”
Dec. 2012	Delivered 28nm DDR3-2133/LPDDR2 Combo IP.
Dec. 2012	PLDA and GUC announced industry’s first successful PCIe Gen 3 Controller and PHY Combination on TSMC’s 28nm HPM process technology.
Dec. 2012	Received the "2012 Most Outstanding Landscape Award" from the Hsinchu Science Park Administration.
Jan. 2013	Unveiled the first IPD ASIC service.
Jan. 2013	Successfully validated a 28nm GPU/CPU platform.
Mar. 2013	Unveiled New 28nm Data Converter IP family that covers DAC, ADC and thermal sensor macros.
Jul. 2013	Received an "A++" rating in the “10th Information Disclosure Assessment and Evaluation of Listed Companies.”
Jul. 2013	Successful taped out a 20-nanometer SoC test chip.
Dec. 2013	GUC and M31 Technology bundled USB 3.0 Peripheral Device Controller and PHY IP.
Dec. 2013	Chairman Dr. F.C. Tseng awarded the “7th Pan-Wen Yuan Prize.”

Apr. 2014	Licensed Arteris FlexNoC Fabric IP for 16nm System-on-Chip (SoC) IP verification platform.
Apr. 2014	GUC and Verisense announced strategic alliance to provide Israeli ASIC Customers access to best-in-class “spec-to-production” solutions.
May 2014	Announced silicon-proven DDR4 IP on TSMC’s 16nm process, making it one of GUC’s first IP available on TSMC’s 16nm FinFET process.
Aug. 2014	Received an "A++" rating in the “11th Information Disclosure Assessment and Evaluation of Listed Companies.”
Oct. 2014	GUC completed its first production design on TSMC’s 16FF+ process.
Nov. 2014	Opened new Japan Design Center.
Jan. 2015	GUC and Credo Semiconductor developed high-performance networking solutions manufactured on TSMC's 16-nm FinFET+ process technology.
Feb. 2015	Unveiled industry’s most complete Data Converter IP product line.
Mar. 2015	Utilized Cadence analog IP to implement WiGig-enabled SoC on a 28nm process. Achieved first silicon success using the industry’s first Tri-Band analog front-end IP.
Mar. 2015	Relocated North America office to 2851 Junction Ave.
Apr. 2015	PLDA and GUC delivered fully integrated PCI Express Gen 4 solution for TSMC’s 16nm FinFET+ process.
Apr. 2015	Demonstrated TSMC 16nm Low Leakage USB 3.1 PHY IP.
Dec. 2015	Assisted bitcoin clients to accomplish first 16nm chip tape out.
Feb. 2016	Jointly developed USB3.1 PHY/Controller IP.
Mar. 2016	Announced LPDDR4 IP progress and reaffirms DIMM application of DDR3/4 commitment.
Mar. 2016	Delivered 28G Multi-Standard SerDes IP.
Aug. 2016	GUC President Jim Lai announced retirement. Dr. Ken Chen appointed as new President.
Oct. 2016	Design team and Marketing personnel certified for ISO26262 automotive personal qualification AFSP (Automotive Functional Safety Professional) by SGS-TUV Germany.
Dec. 2016	Opened new Netherlands Office.
Feb. 2017	Unveiled Solid State Drive ASIC Capabilities. The SSD solution covers application-specific front end design capabilities, advanced node design flow experience, robust manufacturing management, and a production-proven IP set targeting TSMC 28HPC+ process technologies.
Mar. 2017	PCIe 3 PHY IP & PLDA EP Controller Combo passed compliance test.
Apr. 2017	GUC appointed semiconductor industry veteran Igor Elkanovich as its System Chief Technical Officer (CTO). Mr. Elkanovich drives the company's effort to upgrade system capabilities.

Jun. 2017	GUC successfully taped out a 16nm, second-generation High Bandwidth Memory (HBM) PHY and controller with verified interposer design and CoWoS Package. The innovative ultra-high capacity memory ASIC solution will meet the demanding requirements of artificial intelligence (AI), deep learning (DL), and a variety of high-performance computing (HPC) applications.
Jul. 2017	Opened new Korea Office.
Aug. 2017	Achieved SGS-TUV ISO26262 Certification.
Oct. 2017	Achieved ISO 13485:2016 Certification for medical device components.
Oct. 2017	Announced the first customer ASIC tape out on 12nm process.
Nov. 2017	Successfully taped out 16nm TCAM Compiler.
Nov. 2017	Opened Tainan office.
Nov. 2017	Opened Nanjing, China Office. The office provides a broad range of ASIC services to the fast-growing China market.
Dec. 2017	Announced the first customer ASIC tape out on TSMC's 7nm process technology.
Jan. 2018	Celebrates 20th Anniversary.
Sep. 2018	Announced that the 7nm HBM2-2.4G PHY+Controller with TSMC CoWoS packaging has been silicon-proven.
Nov. 2018	Opened Shenzhen office.
Dec. 2018	President, Dr. Ken Chen received "Best General Manager in Hsinchu Award."
Dec. 2018	Announced that the 16nm HBM2-2.4G PHY+Controller with TSMC CoWoS packaging is silicon-proven and the first customer product has taped out.
Mar. 2019	Announced the first 5G customer chip has taped out and entered mass production.
May 2019	Named to the top five percent of listed companies in the fifth "Corporate Governance Recognition" list for the fifth consecutive time.
Jun. 2019	Unveiled new "The Advanced ASIC Leader" tag line to highlight the company's business and technology models that provide advanced customized IC design services.
Dec. 2019	Successfully developed the 5nm process design flow, taped out the first text chip in the first quarter 2019 and achieved silicon-proven status by year's end.
Dec. 2019	Successfully developed the 6nm design flow. Targeting tape out for 2020.

Organization



Board Member

Dr. F.C. Tseng

Chairman; Vice Chairman of VIS

Dr. F.C. Tseng is the Chairman of GUC, Vice Chairman of Vanguard International Semiconductor Corporation (VIS), and Chairman of TSMC education and culture foundation. Prior to this post, Dr. Tseng served as Vice Chairman, Deputy Chief Executive Officer, President, and Senior Vice President of Operations of TSMC. Dr. Tseng spent two years as President of VIS, which was derived from the Industrial Technology Research Institute's (ITRI) Sub-micron Process Technology Development Project and was Taiwan's first eight-inch IC facility.

Dr. Tseng led 110 specialists to spin off from ITRI's Electronics Research & Service Organization (ERSO), and in 1987 he co-founded TSMC as a pioneer specializing in the "foundry only" semiconductor manufacturing business. Dr. Tseng established a solid technical base for TSMC's six-inch and eight-inch fabs.

From 1973 to 1986, Dr. Tseng served at ITRI-ERSO, where in 1976 he was one of the pioneers in setting up the IC project in Taiwan. He was responsible for installing the 7.5 mm metal-gate CMOS process into the 3-inch line, which later was converted smoothly to 4-inch under his management. In 1978, Dr. Tseng was promoted to plant manager of the IC demonstration plant, where he was responsible for the production and development of silicon-gate CMOS from 5 mm to 1.2. Under his supervision, he established the capability to develop an advanced CMOS process.

He holds a Ph.D. in Electrical Engineering from National Cheng Kung University in Taiwan. Dr. Tseng was named as one of the "Outstanding Alumni" by National Cheng Kung University in 2000, and one of the "Ten Outstanding Engineers" in 1991 and "The Excellent Engineers" in 1982 respectively by the Chinese Institute of Engineers and by Electronic Buyer's News as one of the Hot 25-Industry Executives who made a difference in 1999.

Dr. Ken Chen

President

Dr. Ken Chen joined GUC as President in September 2016. He brings to the company a broad range of global semiconductor experiences that span nearly a quarter of a century and covers assignments in three different countries.

Dr. Chen came to GUC from TSMC where he served as a Senior Director for Business Development at the company's headquarters in Hsin-Chu, Taiwan. In this role, he was responsible for the company's strategic direction in the networking and consumer electronics segments. He also served as Director for the Mainstream technology platform and for IDM programs, Networking and HDD business development.

Prior to his headquarters assignments, Dr. Chen served in TSMC Japan as the Vice President of Marketing and Sales. He assumed that role after working for five years in TSMC as an account manager and 2 years in North America as a Field Applications Engineer. He joined TSMC from Intel Corporation where he worked as a Senior Process Engineer.

Dr. Chen earned his Ph.D. in Materials Science & Engineering from Stanford University.

Mr. Wendell Huang

Vice President & CFO of TSMC

Wendell Huang is the Chief Financial Officer of TSMC. Mr. Huang was Senior Director of Finance Division at TSMC prior to this post.

Prior to joining TSMC in 1999, Mr. Huang served various positions in the commercial and investment banking fields.

Mr. Huang received his MBA degree from Cornell University and B.B.A degree from National Chengchi University.

Dr. Cliff Hou

Vice President, Research & Development of TSMC

Dr. Cliff Hou is Vice President and Head of Design and Technology Platform of TSMC. Prior to this post, he was the Senior Director of Design Technology Division and Director of Design Methodology Division at TSMC. Dr. Hou established TSMC's Technology Design Kits Development Teams and Reference Flow Development Teams. He also leads Design-for-Manufacturability (DFM) task force at TSMC.

Dr. Hou received his B. S. degree in 1983 from National Chiao-Tung University, and his Ph.D. degree in Electrical and Computer Engineering from Syracuse University in 1992.

Prior to joining TSMC in 1997, Dr. Hou was an Associate Professor at Kaohsiung Polytechnic Institute in 1992, and prior to that, he worked at ITRI/CCL for front-end design environment development and integration from 1993 to 1995 and at a local consulting company for 0.5μm and 0.35μm physical verification methodology and flow development from 1995 to 1997.

Dr. Hou has 15 U.S. patents and also serves as Technical Committee Member of VLSI Symposium.

Mr. Benson W. C. Liu

Independent Director; Former Chairman and CEO of Bristol-Myers Squibb (Taiwan) Ltd

Mr. Benson W.C. Liu, Independent Director, was the Chairman and General Manager of Bristol-Myers Squibb Taiwan (BMST) from January 1999 through March 2005. Mr. Liu joined BMST in 1978 as Accounting Manager and he progressed within the Company through Finance Manager, Controller, Finance Director, VP Finance and Administration and finally Chairman and General Manager.

Mr. Liu retired from BMST in March 2005 after 28 years of dedicated services to this leading global Pharmaceutical and Health Care Company. Prior to joining BMST, Mr. Liu was an auditor of Deloitte, Taiwan for 5 years. He holds a bachelor degree in Accounting from Soochow University, a master degree in International Business Administration from Northrop University, USA.

Mr. Liu is active in participating public services through NPO organizations like Chinese Corporate Governance Association and Chinese Professional Manager Association. In August 2011, He was appointed by the Board of Vanguard International Semiconductor Corporation as a board member of Compensation Committee during the period from September 2011 to June 2012. He was awarded Financial Manager of the Year by the Chinese Professional Manager Association in 1985, Outstanding Alumni of the Accounting Department of Soochow University in 1986 and Financial Manager of The Year of Bristol-Myers Squibb Company International Group in 1989.

Dr. Chein-Wei Jen

Independent Director; Former Dean of Institute of Electronics at National Chiao Tung University, Taiwan

Dr. Chein-Wei Jen has retired from the Department of Electronics Engineering, National Chiao Tung University, Taiwan since 2004. During his academic career he also served as the Chairman of the Department of Electronics Engineering, from 1989 to 1991 and the Director of the Institute of Electronics from 1991 to 1994 at the same university.

He has supervised over 25 PhD students and many Master students in the area of System-on-Chip (SoC) design, processor architecture, and multimedia signal processing. Most of his students are now working in the academic and IC Design industry in Taiwan. He holds seven patents and published over 50 journal papers and 100 conference papers in these areas. He has also received numerous research paper awards and service awards from technical societies.

From 2004 to 2007 he was invited to join ITRI which is a government-sponsored R&D organization in Taiwan and served as the Director of SoC Technology Center in ITRI. From 2002 to 2007 he also served as one of the Coordinators of the National SoC Program in Taiwan.

Dr. Jen received his B.S. degree from National Chiao Tung University in 1970, his M.S. degree from Stanford University in 1977, and his Ph. D. degree from National Chiao Tung University in 1983.

Dr. Wen-Yeu Wang

Independent Director; Ph. D., Stanford Law School, Professor of College of Law at National Taiwan University

Dr. Wang is professor of law and director, Center for Corporate and Financial Law, College of Law, National Taiwan University. He received law degrees from NTU, Columbia (LL.M.) and Stanford (J.S.D.), respectively. During his tenure, he visited and taught at well known law schools, including National University of Singapore and PRC's Peking University. In addition, he was a visiting professor of law at Stanford from 1995-96, teaching a seminar on financial transactions; in fall 2007 he taught "Corporate Governance in Greater China" seminar at Columbia. Principal research subjects include business associations, financial regulations, and law and economics.

Before pursuing an academic career, professor Wang had practiced commercial law at the international law firms of Lee and Li, Taipei (1985-1989), and Sullivan & Cromwell, a Wall Street firm in New York City (1989-1991), respectively. Areas of specialty include corporate law and business transactions.

From 2004 to 2006, professor Wang served as a commissioner at the Fair Trade Commission. In addition, he has served in many important public and private functions, i.e., as director or supervisor of the Taiwan Stock Exchange, Taiwan Futures Exchange, and Taiwan Cooperative Bank. He also served as independent director or reorganization supervisor for Taiwanese public companies; as arbitrators or mediators in various commercial disputes. He has also participated in the drafting or amendment of major economic and financial legislation, such as the Company Law and the Securities and Exchange Law.

Dr. Chung-Yu Wu

Independent Director; Former President of National Chiao Tung University, Taiwan

Dr. Chung-Yu Wu is Professor of Electronics Engineering Department of National Chiao Tung University. He has served different roles at National Chiao Tung University, including President of National Chiao Tung University, Dean of College of Electric Engineering and Computer Science, Dean and Vice for Research and Development, Funding Director of Division of Engineering and Applied Science, Director of Institute of Electronics and Department of Electronics Engineering, Chairman of Department of Electronics Engineering.

Dr. Wu received his B.S. degree from National Chiao Tung University in 1972, his M.S. degree from National Chiao Tung University in 1976, and his Ph. D. degree from National Chiao Tung University in 1980. He did his post-doctor research at EECS from the University of California, Berkeley in 2002.

Dr. Kenneth Kin

Independent Director; Former Senior VP, Worldwide Sales & Services of TSMC

Dr. Kenneth Kin joined IBM Corporation in 1996, and developed Asia Pacific Regional Operation Center in Singapore for its Microelectronics Department. In 2000, Dr. Kenneth Kin was promoted to the position of Vice President of Global Business and Services of IBM Microelectronics, responsible for IBM Microelectronics Americas, Europe, Asia and Japan business and service, and the average annual revenue of nearly 7 billion US dollars. He was the first Chinese executive in charge of global operations at IBM and was named one of the Senior Leadership Group of the IBM head office.

Dr. Kenneth Kin joined TSMC in 2001 as Senior Vice President of Global Business & Marketing, and was in charge of the Americas, Japan and Asia Pacific, as well as marketing organization and customer service. He established a professional business and marketing organization for TSMC, strengthen and expand the leading position of TSMC foundry, and expand to new markets in mainland China and South Korea which made TSMC revenue growth nearly doubled from 2001 to 2005 with market share more than 50%.

Since 2001, Dr. Kin has also served as an adjunct professor teaching "Technology Marketing" for eight years in the MBA of technology management, National Tsing Hua University. Areas of expertise are marketing, global operations, brand management and more.

Management Team

Mr. Daniel Chien

Senior Vice President & CFO

Daniel currently serves as Senior Vice President and CFO in GUC.

Prior to joining GUC in 2006, Mr. Chien served as CFO in ALi Corp.

Mr. Chien received his MBA degree from the University of Texas at Arlington, USA.

Mr. Chiang Fu

Senior Vice President

C. Fu currently serves as Operations Vice President in GUC.

Prior to joining GUC in 2008, Mr. Fu has over 15 years of experience in TSMC 12 inch Fab Product and Process Engineering.

Mr. Fu received his master degree in Electronics Engineering from National Tsing Hua University in 1993 and EMBA degree from National Taiwan University in 2008.

Dr. Louis Lin

Senior Vice President

Louis currently serves as Vice President in Design Service.

Louis joined GUC in 1998 and has over 15 years of experience in various ASIC design fields including design methodology development, low power design, SoC chip implementation, program management, etc.

Dr. Lin received his Ph.D. degree in Electronics Engineering from National Chiao Tung University in 1998.

Chapter 3

Corporate Governance

Corporate Governance

Global Unichip Corporation Statement of Internal Control System

Date: February 6, 2020

Based on the finding of a self-assessment, GUC states the following with regard to its internal control system during the year of 2019:

1. GUC's Board of Directors and Management are responsible for establishing, implementing, and maintaining an adequate internal control system. Our internal control is a process designed to provide reasonable assurance over the effectiveness and efficiency of our operations (including profitability, performance, and safeguarding of assets), reliability of our financial reporting, and compliance with applicable laws and regulations.
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 its stated objectives. Moreover, the effectiveness of an internal control system may be subject to changes due to extenuating circumstances beyond our control. Nevertheless, our internal control system contains self-monitoring mechanisms, and GUC takes immediate remedial actions in response to any identified deficiencies. ; It should be noted that any internal control system has its limits, no matter how well designed. An effective internal control system serves to provide reasonable assurance of the above-mentioned three objectives, yet the effectiveness may be subject to changes of environment or circumstances. To counter such limits, GUC has adopted an internal control system with self-surveillance mechanism. Thus GUC is able to rectify as soon as a deficiency is identified.
3. GUC evaluates 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 criteria adopted by the Regulations identify five key components of managerial internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.
4. GUC has evaluated the design and operating effectiveness of its internal control system according to the aforesaid Regulations.
5. Based on the findings of such evaluation, GUC believes that, on December 31, 2019, we have maintained, in all material respects, an effective internal control system (that includes the supervision and management of our subsidiaries), to provide reasonable assurance over our operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations.
6. This Statement will be an integral part of GUC's Annual Report for the year 2019 and Prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171, and 174 of the Securities and Exchange Law.
7. This Statement has been passed by the Board of Directors in their meeting held on February 6, 2020 with none of the nine attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

Global Unichip Corporation

F. C. Tseng
Chairman

Ken Chen
President

Board and Audit Committee Meeting Status

Six regular board meetings were convened in 2019. The status of attendance by board members was as following:

Title	Name	Attendance in person	By proxy	Attendance rate (%)
Chairman	Dr. F.C. Tseng Representative of TSMC	4	2	67%
Director	Wendell Huang Representative of TSMC	5	1	83%
Director	Dr. Cliff Hou Representative of TSMC	4	2	67%
Director	Dr. Ken Chen Representative of TSMC	6	0	100%
Independent Director	Benson Liu	6	0	100%
Independent Director	Dr. Chien-Wei Jen	6	0	100%
Independent Director	Dr. Wen-Yeu Wang	6	0	100%
Independent Director	Dr. Chung-Yu Wu	6	0	100%
Independent Director	Dr. Kenneth Kin	6	0	100%

Seven regular Audit Committee meetings were convened in 2019. The status of attendance by committee members was as follows:

Title	Name	Attendance in person	By proxy	Attendance rate (%)
Independent Director	Benson Liu	7	0	100%
Independent Director	Dr. Chein-Wei Jen	6	1	85.7%
Independent Director	Dr. Wen-Yeu Wang	7	0	100%
Independent Director	Dr. Chung-Yu Wu	7	0	100%
Independent Director	Dr. Kenneth Kin	7	0	100%

Four regular Compensation Committee meetings were convened in 2019. The status of attendance by committee members was as follows:

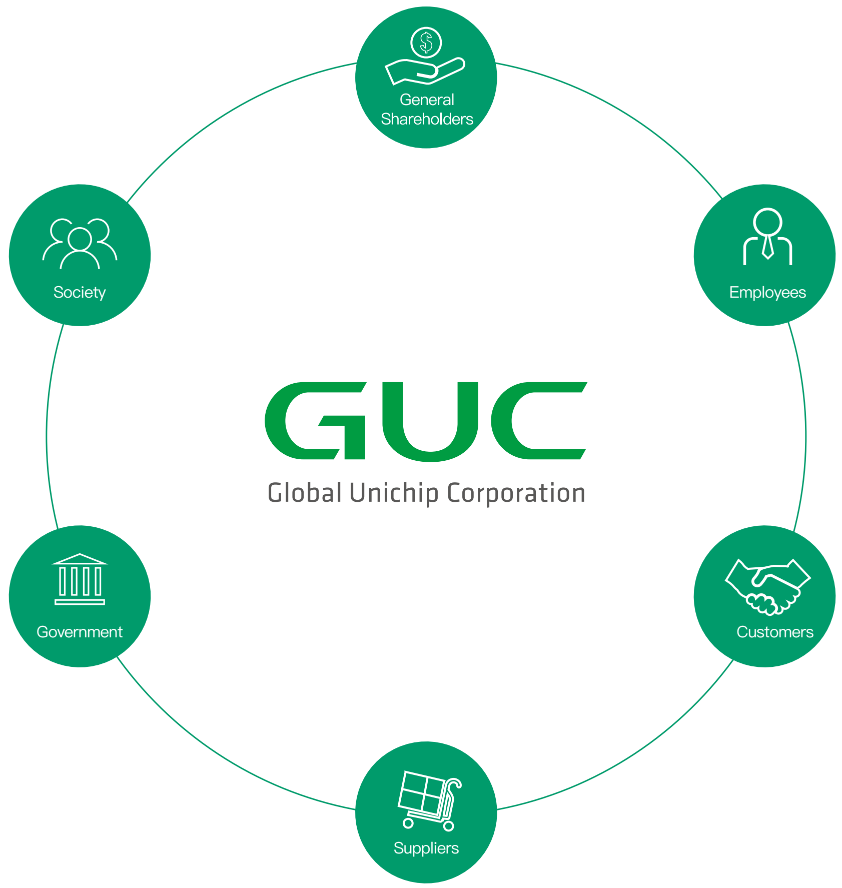
Title	Name	Attendance in person	By proxy	Attendance rate (%)
Independent Director	Benson Liu	4	0	100%
Independent Director	Dr. Chein-Wei Jen	4	0	100%
Independent Director	Dr. Wen-Yeu Wang	4	0	100%
Independent Director	Dr. Chung-Yu Wu	4	0	100%
Independent Director	Dr. Kenneth Kin	4	0	100%

Corporate Social Responsibility

As a world-class design and turnkey services company and a good corporate citizen, GUC has always sought to fulfill its corporate social responsibilities (CSR). In this period of volatility for the global economy and environment, fulfilling corporate social responsibility not only supports the fundamentals of our operations and reduces or eliminates risk; it also builds sustainable value for GUC and its stakeholders. This is the right thing to do because we believe our success is deeply entwined with our stewardship of the natural environment, efficient use of resources and meeting the expectations of our shareholders. GUC pledges itself to not only become an indispensable influence in the semiconductor industry, but also to serve as a force for sustainability that pushes society forward, to become a corporate citizen with a positive influence to society, and to build a better future for the next generation.

Moreover, GUC has established the 'Global Unichip Corporate Social Responsibility Best Practice Principles'. This commission is composed of cross-department representatives in order to implement corporate social responsibility initiatives. The Chief Financial Officer is appointed as the Chairman in full charge .The executive performance shall be submitted to the Board of Directors.

GUC values corporate governance. This is the 6th year that we awarded "the Top 5% companies" in the 6th Corporate Governance Evaluation of the Listed Companies by Taiwan Stock Exchange, and GUC was listed in the Taiwan Corporate Governance 100 Index published by Taiwan Stock Exchange for four consecutive years. GUC always plans ahead before the enactment of the law, and actively promote and implement corporate governance to gain long-term trust and support from stakeholders.



Social Commitment

In 2019, we continuously worked with the non-profit HsinChu Blind Welfare Association by purchasing massage services from them. We participated in the Accton Cultural & Educational Foundation for the Christmas Dreams project. This also inspires the industry to help children from disadvantaged families and bring them the opportunity to enjoy and experience the merry atmosphere of Christmas. GUC also continues to participate in the activities promoted by Triple E institute to reducing the digital gap in remote area. In the future, we will implement social feedback in conjunction with the Family Day activities and charity activities of our welfare committee.

Safety and Health-related Management

GUC is devoted to achieving 'zero accident' and 'sustainable environmental development' and to becoming a world-class benchmarking company of environmental protection, health and safety. We established our Health, Safety and Environment Committee to carry out the formulation and execution of the environmental safety policies. Proportion of Labor Representatives in the Safety and Health Committee in 2019 is over 1/3. Regular meetings were convened by The Health, Safety and Environment Committee and perform the following policies continuously.

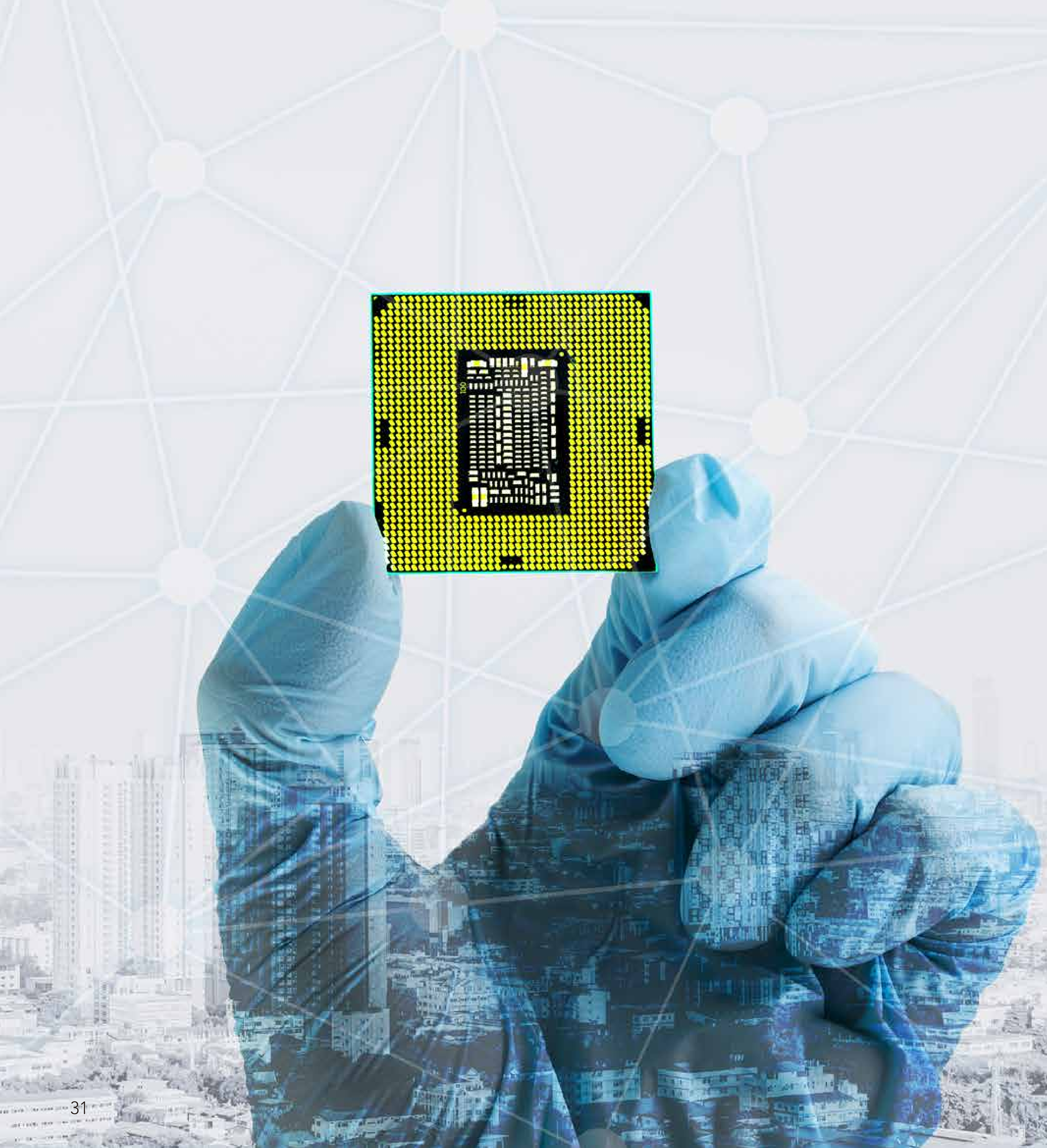
- Offering educational training programs to improve employees' awareness of safety, health and environmental protection issues.
- Mapping out various health improvement plans to ensure employees' physical and psychological wellness.
- Regular health and safety propaganda to develop and strengthen staff safety and health concepts
- Ensuring our operations and services meet or exceed applicable regulations and standards for environment protection, health and safety and safety.
- Staying abreast of global issues of environment protection, health and safety evaluate risks and take effective risk management measures.
- Strengthen the awareness and responsibility of all employees for environmental safety and health, and establish friendly environmental health and safety culture.
- Establishing a green supply chain and enhancing performance of environment protection, health and safety with suppliers through experience sharing and collaboration.
- Laying out environmental inspection procedures and regulations, such as: Management procedures for examining, measuring and testing facilities , Management plans for plant patrolling, maintenance and auto-checking., Common regulations for hazardous products and labelling of hazardous substances, Operating procedures for electrical equipment, Operating standards for warehouses, Operating standards for handling materials, Standard safeguards for physical health and safety, Operating procedures of health and safety in special areas.

Environmental protection

GUC believes its environmental protection should not only comply with domestic legal requirements, but also implement governmental plans for resource recycling, waste disposal and garbage separation. In addition, GUC reduces the usage of paper cups and disposable plastic tableware for environmental protection and the best use of resources. GUC has been committed to prevent pollution, ensure efficient use of resources, prevent accidents, improve employee safety and health and protect property. The aim is to create a work environment that upholds the well-beings of our employees and communities.

GUC was recognized by the "Most Outstanding Landscape Award" and 'the Best Environmental Protection Award' by Hsinchu Science Park Administration, and was certified as "SONY Green Partner" and compliant with IECQ EV080000 Restriction of Hazardous Substances (RoHS). Our commitments and implementations are as follows:

1. Execute the standards of "Green Energy-saving Design" and provide energy saving products that comply with environmental protection regulations and customers' requirements.
2. Use package materials that comply with environmental protection regulations for waste reduction and resource recycling.
3. Increase employees' fundamental responsibility and awareness of environmental protection, source recycling and energy saving through educational training and propaganda.
4. Continue to execute energy-saving management and resource recycling.
5. Comply with governmental environmental protection regulations and fully assist the authorities in carrying out environmental protection affairs.



Chapter 4

Operation Report

Operation Report

1. Business

1-1. Major Business

1-1.1. Main business activities of GUC:

(A) Engage in research & development, production, testing and sales of:

- Embedded memory, logic, and analog components for various application ICs;
- Cell libraries for various application ICs; and
- EDA tools for various application ICs.
- Customization, design, tech support, and licensing of intellectual property (IP).

(B) Provide technological support and consulting services related to the aforementioned products.

1-1.2. Revenue mix

Unit: NT$ Thousand, except %

Sales breakdown	2018		2019	
	Amount	%	Amount	%
ASIC & Wafers	9,167,596	68.11%	7,188,728	67.12%
NRE	4,078,719	30.30%	3,205,782	29.93%
Others	213,489	1.59%	315,558	2.95%
Total	13,459,804	100.00%	10,710,068	100.00%

1-1.3. Main products and services:

(A) ASIC & wafers: Provide complete design, wafer manufacturing, packaging and testing services.

(B) NRE (Non-Recurring Engineering): Provide circuit design cell library and various IPs required in the process of product design; provide circuit layouts needed for mask making; subcontract mask making, wafer manufacturing, dicing and packaging to vendors; conduct final testing to get prototype samples for customers.

(C) MPW (Multiple-Project Wafer): MPW integrates multiple design projects of different customers on one single mask and by one wafer engineer run. It is an effective and fast time-to-market chip verification service with cost-sharing in masking and wafer engineering run. Design engineers, before the phase of mass production, are able to timely verify their prototype designs with advanced process technologies and much lower costs.

(D) IP (IP, Intellectual Property): These are silicon-verified reusable IC designs with specific functions. With the rapid advancement of semiconductor processing technologies, the design industry is trending toward multi-functional chips and SoC (System on a Chip). Reusable IP help customers avoid redundant designs and resources.

1-1.4. New product development plan

GUC is continuing the development of advanced IP including high-speed interface (16G//28G/32G SerDes, PCIe Gen3/4/5), HBM2/2E Controller/PHY, die-to-die interface, LVDS, DDR3/4 and LPDD3/4/4X Memory Controller/PHY in 16nm, 12nm, 7nm and 5nm processing technologies. The company is also migrating key components, such as Voltage Regulators, Power Management Solutions, ADC/DAC, and Clock Generators) to advanced processing technologies. GUC's R&D team is also developing in-house memory IP (TCAM, SRAM) and customized standard cell libraries that enrich our IP/Library portfolio of competitive IP and subsystem solutions. The company unveiled a 6nm design flow in the second half of 2019 and announced that the first 6nm in-house IP test chip taped out in March of 2020.

1-2. Industry Brief

1-2.1. Current status of the industry and future development

As IC design cost continues to rise and the trend toward incorporating multiple functionalities on a single chip continues to grow, the numbers of chip design projects are expected to experience a downward trend each year. Despite the decreasing number of ASIC and ASSP design projects, the rate of decline is slowing, thanks to the market growth in artificial intelligence/machine learning (AI/ML), data center, 5G networking, Internet of Things, advanced driver-assistance systems (ADAS) and virtual reality/augmented reality (VR/AR) applications.

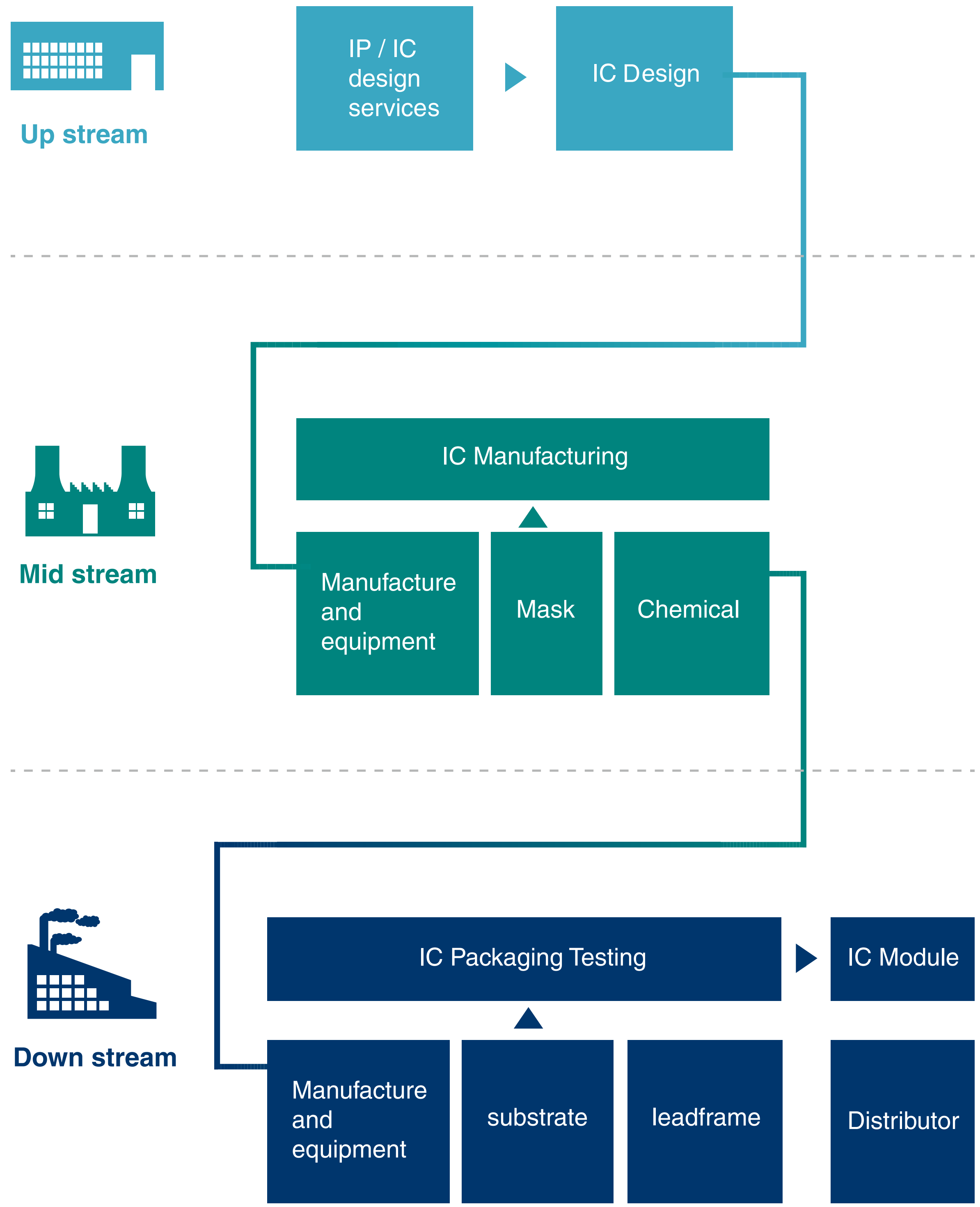
Consolidation is currently sweeping across the global semiconductor industry, with the total value of mergers and acquisitions exceedingly more than US$100 billion. We are also faced with challenges coming from Mainland China's full support for its semiconductor industry, their poaching of top Taiwanese semiconductor talent, and M&A activity among IC design companies as they seek to strengthen their product lines, minimizing costs, and expanding their economic scale. This changing landscape is the driven by user demands for advanced semiconductor technologies that will help them maintain their market share. Although customers may have fewer vendor choices in the future, there is still demand for product diversity. Standard products can no longer create unique features and characteristics so a growing number of the world's leading companies are seeking to customize their IC designs. For GUC, this means more future opportunities.

To keep pace with this demand and the rapidly changing semiconductor industry, GUC's "Advanced ASIC Services" include a robust IP portfolio and design service that assist customers at every step in the semiconductor supply chain, from product concepts, spec definitions, development, verification, to mass production. Advanced ASIC Services cover three core elements: IP solutions, chip implementation, and ASIC manufacturing. Precisely targeted IP and attentive customer service reduces design time and costs, while customizing ICs. GUC has formed a close chip implementation partnership for advanced process technology with TSMC to help customers move to high yield mass production and achieve strong market competitiveness. GUC also offers ASIC manufacturing that coordinates foundry, testing, and packaging services.

1-2.2. The supply chain of Taiwan semiconductor industry

Taiwan's semiconductor industry supply chain is divided into design, manufacturing, packaging and testing service.

The up, mid, and down stream of Taiwan semiconductor industry:



1-2.3. Product development trend and competition

Leading smartphone manufacturers are designing and manufacturing proprietary application processors (AP) to create their unique brand personality and while ASIC design service companies continue to focus on mature data center, IoT, drone, and robotics applications, emerging AI/ML, 5G networking, ADAS, and AR/VR markets are on the rise and are showing great long-term prospects. Although in the early stages of development, they are considered he driving forces for the future technology growth.

China's semiconductor market is expanding at a rapid rate, benefiting from significant domestic demand and the government's proactive support of local IC design companies. This year, China will invest significant resources into its semiconductor industry. It is anticipated that China will become the fastest growing IC design and semiconductor market in the world over the next 10 years. To accommodate the expected increase in ASIC demand, GUC is providing industry-leading design service and advanced package design capabilities for TSMC's 16nm, 12nm, 7nm, 6nm, and 5nm advanced process technologies. With proven design expertise and a track record of superior manufacturing results, GUC will enable its customers to deliver differentiated and competitive high-performance, low-power ASIC products.

1-3. Technological Research and Development

1-3.1. R&D expenditures

Unit: NT$ Thousand

Year Item	2019	2020
R&D expenditures	2,219,515	-

Note: Numbers for Q120 is not available by printing date.

1-3.2. Latest technologies and new products

2019
1. GUC 5nm, 6nm, 7nm design flows are in place. 2. GUC 7nm HBM2-2.4G PHY is silicon proven. 3. GUC 7nm HBM2E-3.2G PHY is silicon proven. 4. GUC 5nm HBM2E-3.2G PHY is silicon proven. 5. The GUC 5nm HBM2E-3.2G PHY & Controller with TSMC CoWoS packaging total solution is silicon proven. 6. GUC 7nm 16G SerDes is silicon proven. 7. GUC 12nm 28G SerDes is silicon proven. 8. GUC 12nm 7.2G high-speed ADC/DAC, which is critical for 5G wireless communication applications, is silicon proven,

1-4. Long Term and Short Term Business Development Plan

1-4.1. Short-term

(1) Develop total solutions by bundling GUC in-house IP with advanced process technologies and packaging design through test-chip (MPW) verification to significantly lower customers' entry barriers and mitigate their risks.

(2) Consolidate the current customer base using 28nm/22nm and 16nm/12nm technologies; proactively work with new customers on 7nm, 6nm, and 5nm ASIC design using advanced process technologies.

(3) Enhance domain knowledge by working closely with leading customers on specialized targeted applications.

(4) Collaborate with upstream and downstream vendors (partners) to meet specific and identified application needs.

(5) Provide competitive and complete application-based platform solutions incorporating IP portfolios, system design integration know-how, and SoC manufacturability.

1-4.2. Long-term

(1) Strengthen leading-edge 7nm, 6nm, and 5nm design service capability to deepen technical differentiation and raise competitive barriers to entry.

(2) Increase worldwide market share by engaging with market-leading customers in selected applications that best fit and promote the company's brand.

(3) Seize business opportunities with those IDMs (Integrated Device Manufacturers) transitioning to fab-lite business models.

(4) Forge a closer relationship with our exclusive foundry partner to develop leading-edge "total solution" design service platforms that require complex system integration know-how.

(5) Cultivate solid partnerships with global system companies to collaborate on core technology development projects.

(6) Foster long-term strategic collaboration relationships with third-party IP suppliers.

(7) Enhance front-end SoC design capabilities that will lead to the development of lead time reducing platforms for system design verification to expedite customer time-to-market.

(8) Expand market share in emerging AI/ML, 5G Networking, ADAS, AR/VR and Robotics applications

2. Overview of Market and Sales Distribution

2-1. Market analysis

GUC is the leading design service company in Taiwan, with approximately 50% total market share. According to Gartner's worldwide ASIC revenue statistics, GUC is regarded as the world-class global ASIC IC company.

2-1.1. Market shares, market demand and growth

According to IEK forecasts, Taiwan's IC industry generated 2019 revenue of nearly NT$2614.2 billion, a 0.1% growth over 2018. The IC design industry accounted for NT$671.1 billion, a 4.6% increase over 2018. According to the World Semiconductor Trade System Association (WSTS), the 2019 global semiconductor market is expected to decline by 13.3%, to US$ 406.6 billion.

According to DIGITIMES and an in-depth report from the China Semiconductor Industry Association, 2018 China IC design industry sales reached RMB$251.9 billion, with an annual growth rate of 21.4%. In 2019, China IC design sales are estimated at RMB$297.7 billion with a growth rate of 18.2%, despite a potential decline in consumer electronics markets and the impact of external factors such as slowing global economic growth, and Sino-US trade tensions.

Looking to 2020, 5G infrastructure, AI, high performance computing (HPC) and a variety of other applications will drive growth in semiconductor demand. Applications related to 5G will become a major focus. Unmanned driving, drones, smart factories, smart medical care, smart agriculture, smart cities and other "smart" applications will develop rapidly thanks to 5G high efficiency, low latency and large-scale connectivity characteristics. As 7nm technology enters mass production, flagship smartphones, network communications and image processing products will begin to mature and boost the sales volume of global IC design companies. What sets GUC apart is its close relationship with upstream foundries, and its active involvement in the development of advanced processes and key silicon IP. These initiatives ensure that GUC meets market demands better than their competition.

China has a demonstrated edge in science and technology development, which will sustain development of China's IC design industry. Here, as in the rest of the world, 5G will drive the overall demand for semiconductor components. In 2020, most parts of the world will enter the 5G commercial era, and the increase in semiconductor demand is expected to peak around 2021. The implementation of commercial IoT , coupled with the promotion of industrial giants and telecommunications operators and policies, will lead to potential opportunities in niche markets. Although overall vehicle sales have fallen, automotive electrification and intelligent networking will gradually increase driving continued demand for semiconductor devices.

2015~2019 Taiwan IC Industry Revenues

Unit: NT$ 0.1billion

	2015	YoY	2016	YoY	2017	YoY	2018	YoY	2019 (e)	YoY
Industry Revenue	22,640	2.8%	24,493	8.2%	24,623	0.5%	26,199	6.4%	26,214	0.1%
IC Design	5,927	2.8%	6,531	10.2%	6,171	-5.5%	6,413	3.9%	6,711	4.6%
IC Manufacturing	12,300	4.9%	13,324	8.3%	13,682	2.7%	14,856	8.6%	14,547	-2.1%
Foundry	10,093	10.4%	11,487	13.8%	12,061	5.0%	12,851	6.6%	13,060	1.6%
DRAM	2,207	-14.8%	1,837	-16.8%	1,621	-11.8%	2,005	23.7%	1,487	-25.8%
IC Packaging	3,099	-1.9%	3,238	4.5%	3,330	2.8%	3,445	3.5%	3,443	-0.1%
IC Testing	1,314	-4.7%	1,400	6.5%	1,440	2.9%	1,485	3.1%	1,513	1.9%
IC Product Revenue	8,134	-2.6%	8,368	2.9%	7,792	-6.9%	8,418	8.0%	8,198	-2.6%
Global Semi Growth Rate	3,352	-0.2%	3,389	1.1%	4,122	21.6%	4,688	13.7%	4,066	-13.3%

Note: (e) = estimate
Source: TSIA; IEK(2019/08)

2017~2019 China IC Industry Revenues

Unit: RMB$ 0.1billion

	2017	2018(E)	2019(F)
IC Design Revenue	2,074	2,519	3,085
IC Design Revenue growth rate	26.1%	21.4%	22.5%

Source: DIGITIMES (2019/12)
Note: (E: estimate), (F: forecast)

2-1.2. Sales by region:

Revenues by geographic region are allocated to individual countries based on the location to which the products are initially billed instead of the location of end customers of our customers to which revenues are attributable.

The following table summarized information pertaining to our revenues from customers based on their headquarters' location:

Region	2019
Asia	55%
North America	35%
Europe	10%
Total	100%

2-1.3. Potential growth

Mainstream application customers (e.g. consumer electronics, storage, IoT, automotive electronics, drone, …, etc.), integrate increasingly diverse functions into a single SoC to drive cost saving and sales expansion, creating an environment for stable growth over the long run.

As process technologies advance, the chip design costs sharply increase. In an effort to focus on core businesses and cut costs, some IDMs have been outsourcing chip design to design service providers. Meanwhile, system companies lean toward designing their own ASIC chip with competitive PPA (Power, Performance, Area) as a way to differentiate themselves. These two trends create potential business opportunity for the design service companies with advanced platform solution. GUC embraces these trends with its 5nm, 6nm, and 7nm solutions that are already seeing growing demand.

From a global market perspective, China, the United States, and Korea began 5G mobile services in 2019. Though 5G only accounts for roughly a 10% of market share, it will proliferate across the supply chain, from the base station to cell phone makers. Compared with 3G/4G, 5G wireless communication achieves compelling 10X performance that will drive significant base station deployment and meets the needs of a growing number of applications such as AI/Machine Learning, AR/VR, 8K video streaming, internet of vehicles that require high bandwidth and low latency. As a consequence, server CPU, AI accelerator, network switch, and storage ICs will benefit from the booming 5G market.

ASICs dedicated to artificial intelligence applications are a case in point. AI ASICs are custom chips dedicated to performing a certain type of operations (application scenarios) requiring significant power efficiency and cost effectiveness. The cost of ASIC chip development means many thousands of chips are needed to amortize those expenses across the useful lifetime. Furthermore, the ASIC chip will need to be updated on a regular basis to keep abreast of new design techniques and advanced process technologies. Although in 2019 AI market is in its nascent stage, many analysts forecast a positive outlook for AI ASIC business opportunities and demand for ASIC design services over the next 5 years thanks to demand from data-centers, AI training/inference accelerators, and end-point/edge devices.

These same market dynamics, coupled with advanced process and advanced packaging technologies will drive the success of HPC ASIC design. To meet the growing ASIC demand in 2020 from the system companies, and to maintain its position as the leading advanced ASIC design service, GUC has developed world-class system-design platforms that span IP sub-systems, design methodology, system integration, advanced package design, manufacturing management, and supply-chain management to help our customers achieve high performance, low latency and excellent computing power results. It is expected that the increasing number of complex applications will significantly boost demand for high performance computing ASICs.

3. Competitiveness, strength, weaknesses and counter strategies

3-1. Competitive advantages

A. Rich IP development and integration experience

GUC has successfully developed a competitive IP portfolio that it licenses to IC design houses and system companies worldwide, and is integrated into numerous products currently in mass production.

B. Mature, complete design and verification processes

GUC's well-developed and comprehensive processes serve to shorten the time needed for IC verification and reducing IC design risks; they can also help customers complete product design within the shortest time frame.

C. Advanced manufacturing processes and design technologies

GUC works closely with TSMC, on the development of advanced process technologies and their design requirements. GUC also strives to excel in chip/packaging design methodology innovation and IP quality assurance, expediting customer time-to-market. In addition to mature technologies, GUC has successfully achieved production tape-outs for 16nm, 12nm and 7nm projects, as well as collaborated with strategic partners to provide 6nm and 5nm design eco-system solutions. Our deep hands-on expertise in chip design and manufacturing ensures silicon success.

D. Technology-oriented R&D team

GUC is dedicated to developing in-house technologies. Over the years, GUC has formed a world-class R&D team who have successfully turned customers' designs into competitive products.

E. Silicon IP partnerships

GUC provides a comprehensive, best-in-class IP ecosystem platform by developing selected in-house IP, and collaborating with the top semiconductor IP vendors, such as AnalogBits, Aragio, ARM, Arteris, Cadence, CAST, Ceva, Credo, C&M, Dolphin Integration, eMemory, Inphi, Imagination, M31, NSCore, PLDA, Silicongate, Synopsys, TCI, and TSMC.

F. Diversified service models

GUC provides one-stop shopping service to customers with complete SoC solutions, and supports customers from the design phase to the mass production phase. GUC has built up all the important service links throughout the IC manufacturing processes. Customers are free to choose different services and delivery methods based on their technology capacity and needs.

G. Providing SIP trading services through the SIP Mall

GUC offers a trading platform for our IP providers and users. Customers therefore have accesses to information and services of the types of IP they need, as well as the verification information and quality assurance of these IPs through a single contact window.

3-2. Strengths

A. Division of labor in the semiconductor industry

Taiwan's IC industry has a unique infrastructure of vertical disintegration, characterized by a cluster of IC designs, advanced IC foundries, and back-end packaging and testing firms. The infrastructure creates an extremely favorable environment for the development of design services. For example, newly developed SIP can be quickly verified by the two world-class IC foundries to minimize failures and risks. With the close cooperation between IC foundries and service foundries, Taiwanese design service firms are able to offer process-verified SIP to foreign customers who are highly likely to become a regular client of the two IC foundries in Taiwan, helping Taiwan to become the international SIP trading center.

B. Abundant downstream system vendors

There are a huge number of Taiwanese system manufacturers engaged in information and communications applications and consumer electronics. Whether these system manufacturers are OEM vendors or own brand-name developers, large numbers of variety and quantity are available. Their systems are in line with technology trends requiring multiple features integrated into one single chip. The cooperation between system vendors and IC related operators plays a critical role in enhancing Taiwan's system-on-chip (SoC) industry.

C. The IDM Fab-lite trend

In order to focus on the core businesses and save large-scale capacity investment in advanced process nodes, IDMs throughout the world are moving toward the Fab-lite trend; they are starting to outsource various projects to design services providers.

3-3. Weaknesses and countermeasures

A. With respect to certain product applications, and the lack of key customized IP

Because we are now engaging with customers from data centers and high speed switch applications, key IPs, for example, TCAM, and multi-port memory modules are quite important. Some of the competitors have their own solutions.

Countermeasures GUC's memory R&D team that specializes in developing and customizing memory IP, such as DDR3/4, LPDDR3/4/4X PHY & Controller, HBM2/2E PHY & Controller, TCAM; multi-port SRAM. The company also has strategic partnerships with top-tier domestic and foreign companies to provide comprehensive IP solutions.

B. Need more relevant professional data for diversified customer applications

Because customer applications are varied, such as automotive, datacenter, storage, 5G, solar, drone etc., we need more resources to gain a better understanding of how things work and how to achieve a higher level of service quality.

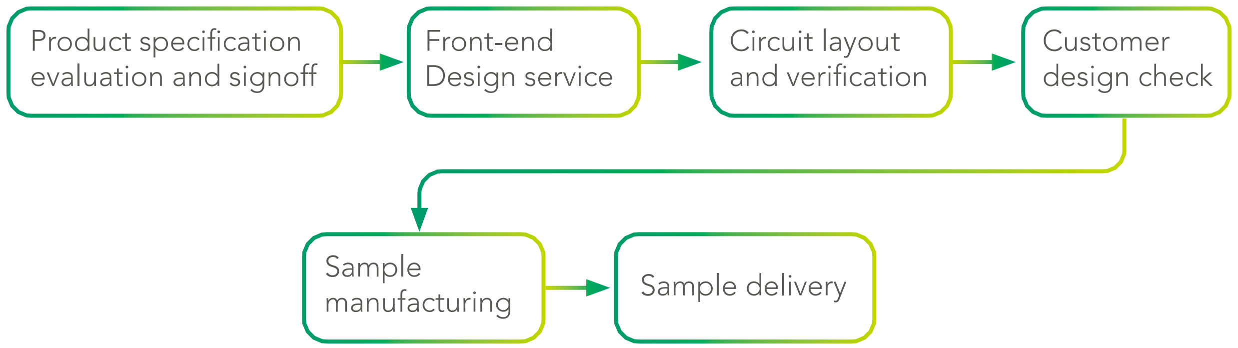
3-4. Countermeasures

Before entering new markets and exploring different applications, we will have to evaluate and study a number of factors that will allow the Company to offer the best service quality. In addition to inviting professionals from different domains, we are also working closely with TSMC in order to provide more complete and more professional services for customers from different domains.

4. Product Application and Production Flow

The company's production flow includes two major steps: front-end design service and mass production.

Step 1: The process of front end design:



Step 2: Once the sample has been verified by customer, mass production process starts:

5. Raw Material Supply

GUC products are mainly based on wafer supplied mainly by TSMC, the world's leading silicon foundry as well as GUC's largest shareholder and long-term strategic partner. It goes without saying that upstream supply for GUC is solid and stable.

Name of suppliers taking 10% or more total purchase share, Years 2018~2019

Unit: NT$ Thousand

No.	2018				2019			
	Supplier name	Amount	Percentage	Connection with company	Supplier name	Amount	Percentage	Connection with company
1	TSMC	5,069,048	81%	TSMC , prior to July 2011, TSMC was a parent company. Since July 2011, TSMC has no controlling interest in GUC and accounts for its investment in GUC using the equity method.	TSMC	2,921,516	70%	TSMC , prior to July 2011, TSMC was a parent company. Since July 2011, TSMC has no controlling interest in GUC and accounts for its investment in GUC using the equity method.
2	TSMC, NA	1,141,840	18%	TSMC's ownership percentage to TSMC, NA is 100%.	TSMC, NA	1,193,214	29%	TSMC's ownership percentage to TSMC, NA is 100%.

Explanation: GUC buys silicon wafers and mainly from IC foundries.

6. Major Customers Contributing More Than 10% of Gross Sales, Years 2018~2019

Unit: NT$ Thousand

	2018				2019			
No.	Customer name	Sales amount	% of annual total sales	Connection with company	Customer name	Sales amount	% of annual total sales	Connection with company
1.	A	(Note)			A	1,176,194	11%	NA
2	B	2,524,693	19%	NA	B	(Note)		
3	C	1,442,243	11%	NA	C	(Note)		

Note: <10% of gross sales in that year.

7. Production Output in 2018 and 2019

Units: Chip/Piece and NT$ Thousand

	2018		2019	
Major Products	Quantity	Amount	Quantity	Amount
ASIC & Wafers	91,570,223	4,976,496	122,595,422	4,687,052
NRE	(Note)	2,628,078	(Note)	1,668,178
Others	(Note)	4,218	(Note)	12,972
Total	91,570,223	7,608,792	122,595,422	6,368,202

Note: Not applicable

8. Sales Amount in 2018 and 2019

Units: Chip/piece and NT$ Thousand

Year	2018				2019			
Sales Volume & Value/Major Products	Domestic Sales		Export Sales		Domestic Sales		Export Sales	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
ASIC & Wafers	12,589,695	2,393,260	70,908,013	6,774,336	15,822,995	1,205,436	99,822,394	5,983,292
NRE	(Note)	394,398	(Note)	3,684,321	(Note)	328,906	(Note)	2,876,876
Others	(Note)	5,018	(Note)	208,471	(Note)	8,712	(Note)	306,846
Total	12,589,695	2,792,676	70,908,013	10,667,128	15,822,995	1,543,054	99,822,394	9,167,014

Note: Not applicable

9. Future R&D plans and estimated investments

To meet the growing ASIC demand for high performance computing (e.g. 5G/Networking, AI/Machine Learning, Server), GUC will continue to develop leading-edge system design solution and invest in 5nm, 6nm, and 7nm R&D, with emphasis on high-speed interface and memory IP development, such as SerDes, PCIe, LPDDR/DDR Controller & PHY, HBM Controller & PHY, Die-to-Die interface, TCAM, and High speed ADC technologies.

An estimated R&D cost for the next 2 years

Item	Test Chip Tape Out Schedule or Development Status	System Validation Schedule
12nm 16G/12b ADC	2020/Q1	2020/Q3
12nm GDDR6 PHY	2020/Q2	2020/Q4
12nm PCIe5 PHY	2019/Q3	2020/Q1
7nm 32G SerDes	2019/Q3	2020/Q2
7nm Pipelined TCAM	2020/Q2	2021/Q1
7nm HBM3 Controller & PHY	2020/Q4	2021/Q4
6nm Design Flow	Done	2020/Q1
7nm & 6nm Die-to-Die Interface	2020/Q1	2020/Q4
5nm Design Flow	Done	2019/Q4
5nm Die-to-Die Interface	2020/Q3	2021/Q2
5nm HBM2E-3.2G Controller & PHY	Done	2020/Q2
5nm PCIe-5 PHY	2020/Q4	2021/Q3
5nm Generic TCAM	2020/Q4	2021/Q3
5nm Pipelined TCAM	2020/Q4	2021/Q3

10. GUC Worldwide Employees

Period		2018	2019	As of 03/16/2020
Function	Managers	7	5	5
	Professionals	734	754	763
Total employees		741	759	768
Average age		38.8	38.5	38.9
Average years of seniority		4.9	5.45	5.56
Education level	Ph. D	3.2%	2.4%	2.3%
	Master	65.3%	65.7%	64.6%
	Bachelor	31.0%	31.5%	32.7%
	High School	0.5%	0.4%	0.4%

Note: Consolidated basis

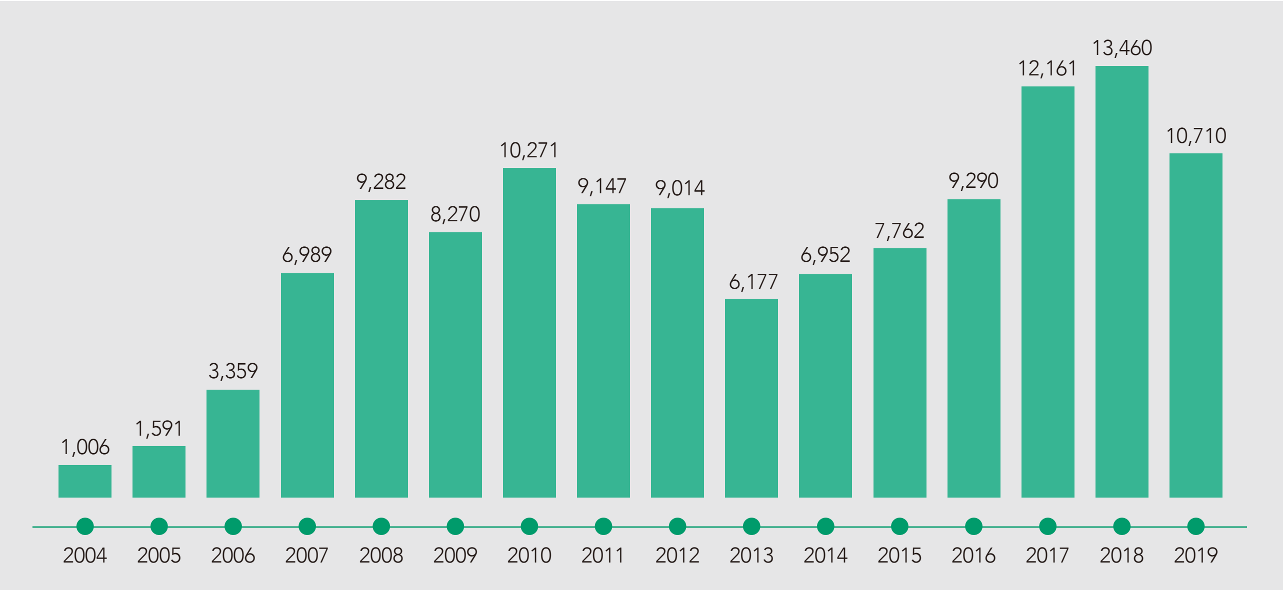
Chapter 5

Consolidated Financial Highlights

Consolidated Financial Highlights

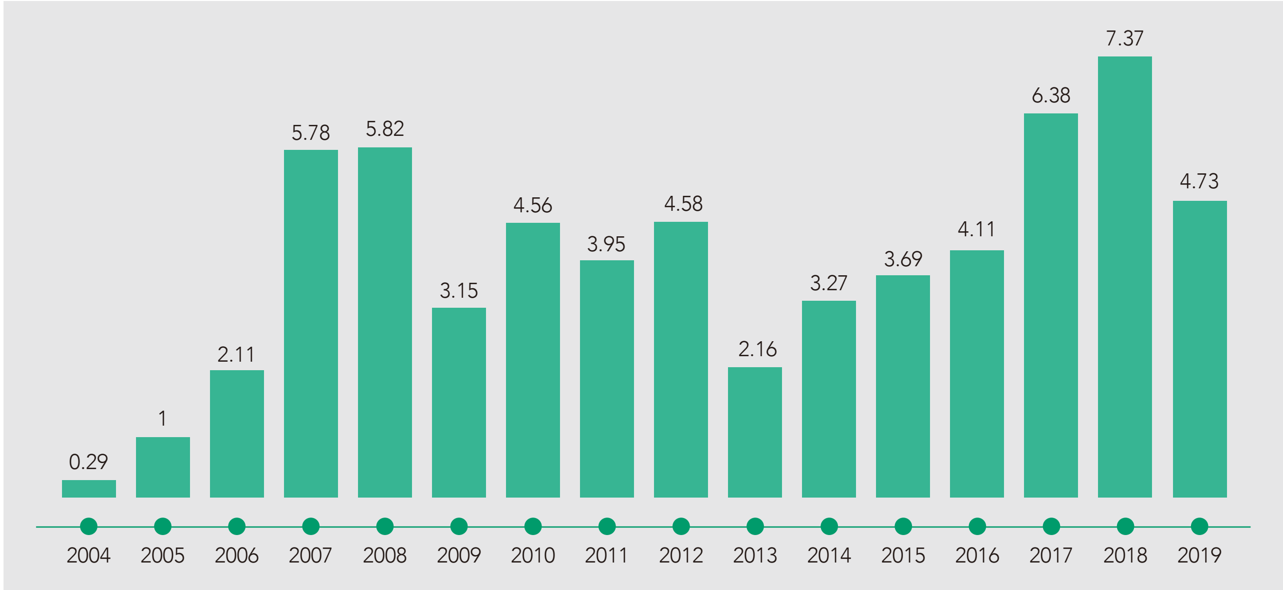
Revenue

Unit : NT$ Million



Note: R.O.C. GAAP (2011 and before); TIFRS (2012 and after).

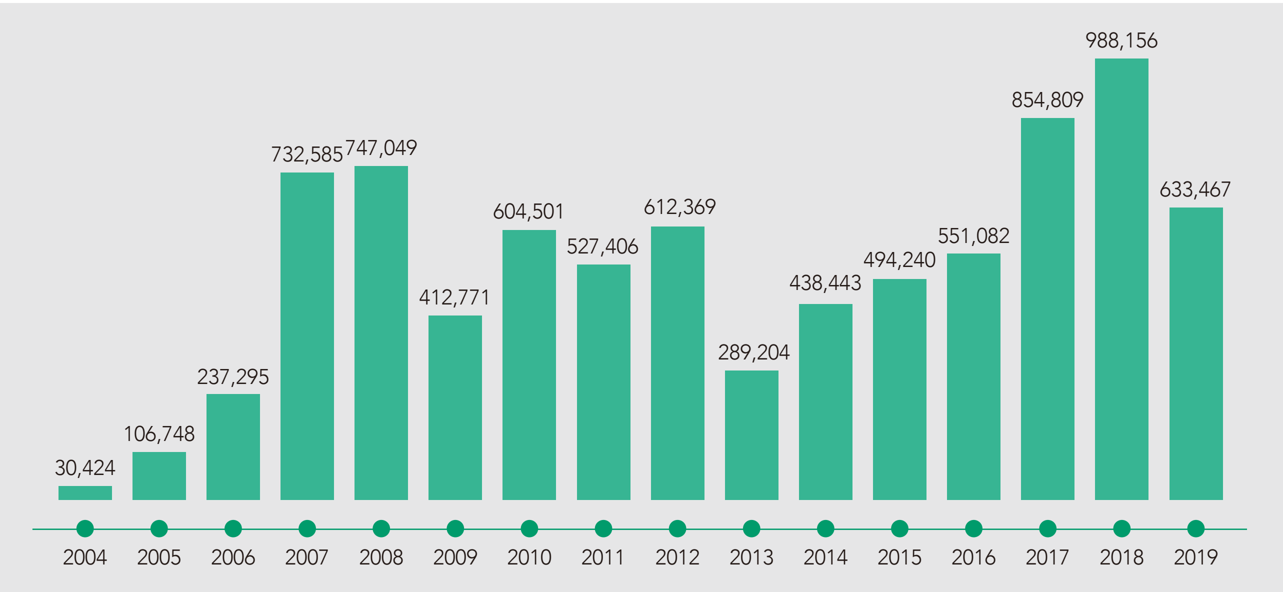
Earning Per Share



Note: R.O.C. GAAP (2011 and before); TIFRS (2012 and after).

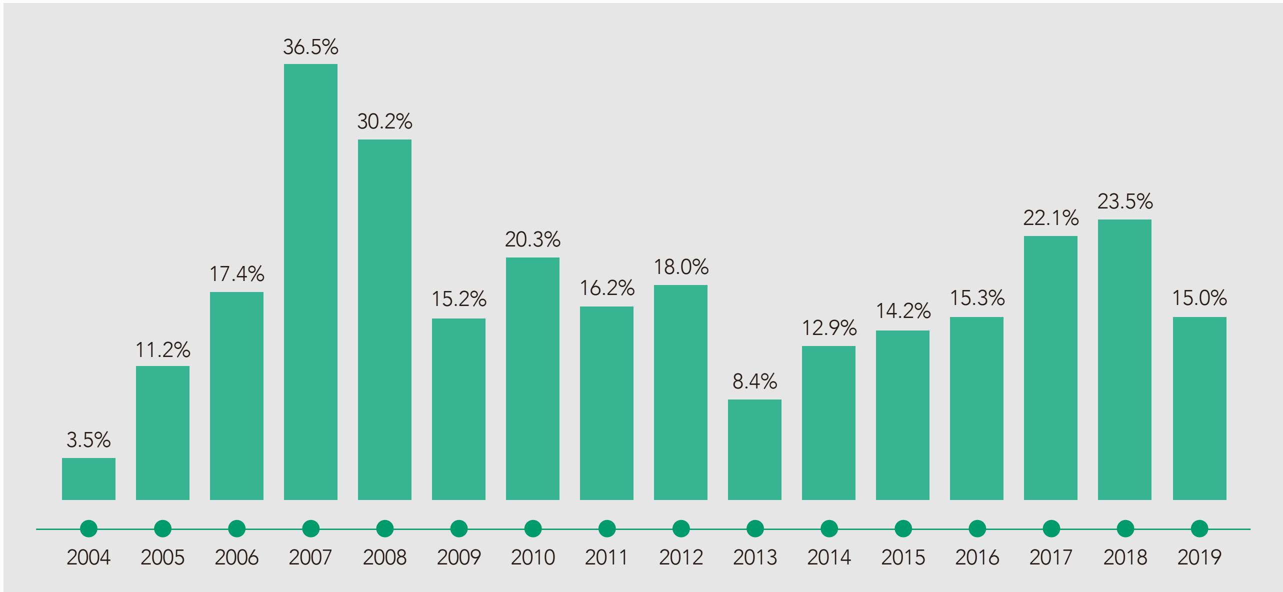
Net Income

Unit : NT$ Thousand



Note: R.O.C. GAAP (2011 and before); TIFRS (2012 and after).

Return On Equity



Note: R.O.C. GAAP (2011 and before); TIFRS (2012 and after).

Chapter 6

Consolidated Financial Statements

Global Unichip Corp. and Subsidiaries

Consolidated Financial Statements for the Years Ended December 31, 2019 and 2018 and Independent Auditors' Report

REPRESENTATION LETTER

The companies required to be included in the consolidated financial statements of affiliates in accordance with the "Criteria Governing Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises" for the year ended December 31, 2019 are the same as the companies required to be included in the consolidated financial statements of parent and subsidiary companies as provided in International Financials Reporting Standard 10 "Consolidated Financial Statements." Relevant information that should be disclosed in the consolidated financial statements of affiliates has all been disclosed in the consolidated financial statements of parent and subsidiary companies. Consequently, Global Unichip Corp. and Subsidiaries do not prepare a separate set of consolidated financial statements.

Very truly yours,

GLOBAL UNICHIP CORP.

By

DR. F. C. TSENG
Chairman

February 6, 2020

Deloitte.

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INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders
Global Unichip Corp.

Opinion

We have audited the accompanying consolidated financial statements of Global Unichip Corp. and its subsidiaries (the "Company"), which comprise the consolidated balance sheets as of December 31, 2019 and 2018, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2019 and 2018, 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 the 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 audit 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 section Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, 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, 2019. 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.

Valuation of inventory

Due to the current rapidly changes in technology and the highly competitive business environment, the price of products fluctuating quickly, evaluating the changes in the net realizable value of inventory could have a material impact on the financial statements. As of December 31, 2019 the carrying amount of inventory was NT$1,778,484 thousand and accounted for 21% of the total assets in the consolidated balance sheet. Please refer to Notes 4, 5 and 7 to the consolidated financial statements for the details of the information and accounting policy about inventory. As the Company's primary business model is composed of rendering services and the sales of goods and the Company requires that inventories be stated at the lower of cost or net realizable value in accordance with IAS 2, when determining net realizable value of inventory for obsolescent and unmarketable items, the Company should consider the inventory accounting policy and the production schedule at the same time. As uncertainty exists in management's judgment when the determining the loss on inventory, the valuation of inventory has been identified as a key audit matter.

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

1. Understood the design of the key controls over the valuation of inventory.

2. Verified the reasonableness of the net realizable value of inventory by sampling from the year-end schedule of the raw materials, work in process, and finished goods, respectively, and matching the recent sales information.

3. Performed a retrospective review to analyze the historical reasonableness of judgments with reference to actual amounts of inventory loss.

Other Matter

We have also audited the parent company only financial statements of Global Unichip Corp. as of and for the years ended December 31, 2019 and 2018 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 the IFRS, IAS, IFRIC, and 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 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 members of the Audit Committee) are responsible for overseeing the Company'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 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 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 Company 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 on the financial information of components constituting the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

We also provide those charged with governance with statements 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 2019 consolidated financial statements 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 Yih-Shin Kao and Yu Feng Huang.

Deloitte & Touche
Taipei, Taiwan
The Republic of China

February 6, 2020

<ins>*Notice to Readers*</ins>

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 accepted and 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.

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2019 Amount	%	December 31, 2018 Amount	%
CURRENT ASSETS				
Cash and cash equivalents	$ 2,541,628	30	$ 3,906,191	48
Contract assets (Note 15)	324,965	4	56,976	1
Accounts receivable, net (Notes 6 and 15)	1,377,203	17	903,168	11
Receivables from related parties (Note 25)	41,108	-	7,038	-
Inventories (Note 7)	1,778,484	21	1,274,954	16
Other financial assets	342	-	845	-
Other current assets (Notes 11 and 25)	552,198	7	479,487	6
Total current assets	6,615,928	79	6,628,659	82
NON-CURRENT ASSETS				
Property, plant and equipment (Note 8)	982,487	12	1,088,524	13
Right-of-use assets (Note 9)	248,327	3	-	-
Intangible assets (Note 10)	412,047	5	288,195	4
Deferred income tax assets (Note 19)	38,810	1	60,741	1
Refundable deposits (Note 25)	20,916	-	20,921	-
Pledged time deposits (Note 26)	22,200	-	22,200	-
Total non-current assets	1,724,787	21	1,480,581	18
TOTAL	$ 8,340,715	100	$ 8,109,240	100

LIABILITIES AND EQUITY	December 31, 2019 Amount	%	December 31, 2018 Amount	%
CURRENT LIABILITIES				
Contract liabilities (Note 15)	$ 1,109,042	13	$ 869,174	11
Accounts payable	783,908	9	732,365	9
Payables to related parties (Note 25)	750,637	9	495,380	6
Accrued employees' compensation and remuneration to directors (Note 21)	80,691	1	167,433	2
Payables on machinery and equipment	58,524	1	364,475	4
Current tax liabilities (Note 19)	76,627	1	130,395	2
Lease liabilities - current (Notes 9, 22 and 25)	50,955	-	-	-
Accrued expenses and other current liabilities (Notes 12 and 25)	727,853	9	875,634	11
Total current liabilities	3,638,237	43	3,634,856	45
NON-CURRENT LIABILITIES				
Deferred income tax liabilities (Note 19)	41,826	1	23,862	-
Lease liabilities - non-current (Notes 9, 22 and 25)	199,622	3	-	-
Other long-term payables (Note 12)	112,877	1	53,239	1
Net defined benefit liabilities (Note 13)	32,104	-	28,233	-
Guarantee deposits (Note 22)	3,075	-	3,146	-
Total non-current liabilities	389,504	5	108,480	1
Total liabilities	4,027,741	48	3,743,336	46
EQUITY (Note 14)				
Share capital	1,340,119	16	1,340,119	17
Capital surplus	32,578	1	32,543	-
Retained earnings				
Appropriated as legal reserve	762,708	9	663,892	8
Appropriated as special reserve	8,636	-	10,940	-
Unappropriated earnings	2,189,678	26	2,327,046	29
Others	(20,745)	-	(8,636)	-
Total equity	4,312,974	52	4,365,904	54
TOTAL	$ 8,340,715	100	$ 8,109,240	100

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

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2019 Amount	%	2018 Amount	%
NET REVENUE (Notes 15 and 25)	$ 10,710,068	100	$ 13,459,804	100
COST OF REVENUE (Notes 21 and 25)	7,180,057	67	9,442,762	70
GROSS PROFIT	3,530,011	33	4,017,042	30
OPERATING EXPENSES				
Sales and marketing (Notes 21 and 25)	283,990	2	309,076	2
General and administrative (Notes 21 and 25)	309,356	3	337,899	3
Research and development (Notes 21 and 25)	2,219,515	21	2,273,694	17
Expected credit impairment loss (Note 6)	19,921	-	-	-
Total operating expenses	2,832,782	26	2,920,669	22
INCOME FROM OPERATIONS	697,229	7	1,096,373	8
NON-OPERATING INCOME AND EXPENSES				
Other income (Notes 9, 16 and 25)	94,241	-	37,046	-
Other gains and losses (Note 17)	(5,031)	-	2,065	-
Finance costs (Notes 18 and 25)	(3,337)	-	-	-
Total non-operating income and expenses	85,873	-	39,111	-
INCOME BEFORE INCOME TAX	783,102	7	1,135,484	8
INCOME TAX EXPENSE (Note 19)	149,635	1	147,328	1
NET INCOME	633,467	6	988,156	7
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss				
Remeasurement of defined benefit plans (Note 13)	(4,263)	-	(1,782)	-
Items that may be reclassified subsequently to profit or loss				
Exchange differences on translation of foreign operations (Note 14)	(12,109)	-	2,304	-
Other comprehensive income (loss) for the year, net of income tax	(16,372)	-	522	-
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 617,095	6	$ 988,678	7
EARNINGS PER SHARE (Note 20)				
Basic earnings per share	$ 4.73		$ 7.37	
Diluted earnings per share	$ 4.71		$ 7.33	

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

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

	Share Capital - Common Stock			Retained Earnings				Others	
	Share (In Thousands)	Amount	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings	Total	Foreign Currency Translation Reserve	Total Equity
BALANCE, JANUARY 1, 2018	134,011	$ 1,340,119	$ 32,513	$ 578,411	$ 1,514	$ 2,105,639	$ 2,685,564	$ (10,940)	$ 4,047,256
Appropriation and distribution of prior year's earnings									
Legal reserve	-	-	-	85,481	-	(85,481)	-	-	-
Special reserve	-	-	-	-	9,426	(9,426)	-	-	-
Cash dividends to shareholders - NT$5.00 per share	-	-	-	-	-	(670,060)	(670,060)	-	(670,060)
Total	-	-	-	85,481	9,426	(764,967)	(670,060)	-	(670,060)
Dividends from claims extinguished by prescription	-	-	30	-	-	-	-	-	30
Net income in 2018	-	-	-	-	-	988,156	988,156	-	988,156
Other comprehensive income (loss) in 2018, net of income tax	-	-	-	-	-	(1,782)	(1,782)	2,304	522
Total comprehensive income in 2018	-	-	-	-	-	986,374	986,374	2,304	988,678
BALANCE, DECEMBER 31, 2018	134,011	1,340,119	32,543	663,892	10,940	2,327,046	3,001,878	(8,636)	4,365,904
Appropriation and distribution of prior year's earnings									
Legal reserve	-	-	-	98,816	-	(98,816)	-	-	-
Reversal of special reserve	-	-	-	-	(2,304)	2,304	-	-	-
Cash dividends to shareholders - NT$5.00 per share	-	-	-	-	-	(670,060)	(670,060)	-	(670,060)
Total	-	-	-	98,816	(2,304)	(766,572)	(670,060)	-	(670,060)
Dividends from claims extinguished by prescription	-	-	35	-	-	-	-	-	35
Net income in 2019	-	-	-	-	-	633,467	633,467	-	633,467
Other comprehensive loss in 2019, net of income tax	-	-	-	-	-	(4,263)	(4,263)	(12,109)	(16,372)
Total comprehensive income (loss) in 2019	-	-	-	-	-	629,204	629,204	(12,109)	617,095
BALANCE, DECEMBER 31, 2019	134,011	$ 1,340,119	$ 32,578	$ 762,708	$ 8,636	$ 2,189,678	$ 2,961,022	$ (20,745)	$ 4,312,974

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

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 783,102	$ 1,135,484
Adjustments for:		
Depreciation	345,217	186,767
Amortization	252,857	226,428
Expected credit impairment loss	19,921	-
Gain on financial assets at fair value through profit or loss	(944)	(1,278)
Finance costs	3,337	-
Interest income	(25,397)	(26,557)
Loss on disposal of property, plant and equipment, net	3	4
Loss (gain) on foreign exchange, net	(10,860)	13,581
Gain on lease modification	(26)	-
Changes in operating assets and liabilities:		
Contract assets	(267,989)	(43,584)
Accounts receivable (including related parties)	(543,150)	(8,578)
Inventories	(503,530)	(122,440)
Other financial assets	196	(166)
Other current assets	(51,502)	(21,193)
Contract liabilities	239,868	(761,107)
Accounts payable (including related parties)	292,996	(590,389)
Accrued employees' compensation and remuneration to directors	(86,742)	21,726
Accrued expenses and other current liabilities	(182,745)	322,266
Net defined benefit liabilities	(392)	(490)
Cash generated from operations	264,220	330,474
Income tax paid	(156,267)	(103,416)
Net cash generated from operating activities	107,953	227,058
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of:		
Financial assets at fair value through profit or loss	(2,085,000)	(2,310,000)
Property, plant and equipment	(490,304)	(528,911)
Intangible assets	(271,317)	(240,117)
Proceeds from disposal of:		
Financial assets at fair value through profit or loss	2,085,944	2,311,278
Property, plant and equipment	-	3,305
Refundable deposits paid	(4,797)	(7,349)
Refundable deposits refunded	4,375	1,522
Interest received	25,704	27,076
Net cash used in investing activities	(735,395)	(743,196)

(Continued)

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	2019	2018
CASH FLOWS FROM FINANCING ACTIVITIES		
Guarantee deposits received	$ 40	$ 83
Guarantee deposits refunded	(33)	(7)
Repayment of the principal portion of lease liabilities	(53,241)	-
Cash dividends paid	(670,060)	(670,060)
Interest paid	(3,337)	-
Dividends from claims extinguished by prescription reclassified to capital surplus	35	30
Net cash used in financing activities	(726,596)	(669,954)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(10,525)	2,081
NET DECREASE IN CASH AND CASH EQUIVALENTS	(1,364,563)	(1,184,011)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	3,906,191	5,090,202
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 2,541,628	$ 3,906,191

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

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

1. GENERAL

Global Unichip Corp. (GUC), a Republic of China (R.O.C.) corporation, was incorporated on January 22, 1998. GUC is engaged mainly in researching, developing, producing, testing and selling of embedded memory and logic components for various application ICs, cell libraries for various application ICs, and EDA tools for various application ICs. On November 3, 2006, GUC's shares were listed on the Taiwan Stock Exchange (TWSE). The address of its registered office and principal place of business is No. 10 Li-Hsin 6th Rd., Hsinchu Science Park, Taiwan. GUC together with its consolidated subsidiaries are hereinafter referred to collectively as the "Company".

2. APPROVAL OF CONSOLIDATED FINANCIAL STATEMENTS

The consolidated financial statements were approved and authorized by the Audit Committee and the Board of Directors for issue on February 6, 2020.

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), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) (collectively, the "IFRSs") endorsed and issued into effect by the Financial Supervisory Commission (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 16 "Leases"

      IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessee and lessor. It supersedes IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", and a number of related interpretations, refer to Note 4 for information relating to the relevant accounting policies.

      Definition of a lease

      The Company elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into (or changed) on or after January 1, 2019. Contracts identified as containing a lease under IAS 17 and IFRIC 4 are not reassessed and are accounted for in accordance with the transitional provisions under IFRS 16.

The Company as lessee

The Company recognizes right-of-use assets and lease liabilities for all leases on the consolidated balance sheets except for those whose payments under low-value asset and short-term leases are recognized as expenses on a straight-line basis. On the consolidated statements of comprehensive income, the Company presents 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 and cash payments for the interest portion are classified within financing activities. Prior to the application of IFRS 16, payments under operating lease contracts were recognized as expenses on a straight-line basis. Cash flows for operating leases were classified within operating activities on the consolidated statements of cash flows.

The Company elects to apply IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized on January 1, 2019. Comparative information is not restated.

Lease liabilities were recognized on January 1, 2019 for leases previously classified as operating leases under IAS 17. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019. Right-of-use assets were measured at their carrying amount as if IFRS 16 had been applied since the commencement date, but discounted using the aforementioned incremental borrowing rate. The Company applies IAS 36 to all right-of-use assets.

The Company also applies the following practical expedients:

a) The Company applies a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.

b) The Company accounts for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.

c) The Company excludes initial direct costs from the measurement of right-of-use assets on January 1, 2019.

d) The Company uses hindsight, such as in determining lease terms, to measure lease liabilities.

The weighted average lessee's incremental borrowing rate applied to lease liabilities recognized on January 1, 2019 was 1.293%. The difference between the (i) lease liabilities recognized and (ii) operating lease commitments disclosed under IAS 17 on December 31, 2018 is explained as follows:

The future minimum lease payments of non-cancellable operating lease commitments on December 31, 2018	$ 122,461
Less: Recognition exemption for short-term leases	(5,573)
Undiscounted amounts on January 1, 2019	$ 116,888
Discounted amounts using the incremental borrowing rate on January 1, 2019	$ 114,855
Add: Adjustments as a result of a different treatment of extension options	108,476
Lease liabilities recognized on January 1, 2019	$ 223,331

The Company as lessor

The Company subleased its leasehold parking lot to a third party from 2016. Such sublease was classified as an operating lease under IAS 17. The Company determines the sublease is classified as an operating lease on the basis of the contractual terms and conditions of the head lease and sublease on January 1, 2019.

The impact on assets, liabilities and equity as of January 1, 2019 from the initial application of IFRS 16 is set out as follows:

	As Originally Stated on January 1, 2019	**Adjustments Arising from Initial Application**	**Restated on January 1, 2019**
Right-of-use assets	$ -	$ 223,331	$ 223,331
Total effect on assets	$ -	$ 223,331	$ 223,331
Lease liabilities - current	$ -	$ 51,176	$ 51,176
Lease liabilities - non-current	-	172,155	172,155
Total effect on liabilities	$ -	$ 223,331	$ 223,331

b. The IFRSs issued by International Accounting Standards Board (IASB) and endorsed by the FSC from the starting day of 2020

New IFRSs	**Effective Date Announced by IASB**
Amendments to IFRS 3 "Definition of a Business"	January 1, 2020 (Note 1)
Amendments to IFRS 9, IAS 39 and IFRS 7 "Interest Rate Benchmark Reform"	January 1, 2020 (Note 2)
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020 (Note 3)

Note 1: The Company 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 2: The Company shall apply these amendments retrospectively for annual reporting periods beginning on or after January 1, 2020.

Note 3: The Company 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 Company assessed no material the possible impact that the application of above standards and interpretations will have on the Company's financial position and financial performance.

c. The IFRSs issued by IASB but not yet endorsed and issued into effect by the FSC

New IFRSs	Effective Date Announced by IASB (Note 1)
Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets between an Investor and its Associate or Joint Venture”	To be determined by IASB
IFRS 17 “Insurance Contracts”	January 1, 2021
Amendments to IAS 1 “Classification of Liabilities as Current or Non-current”	January 1, 2022

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

As of the date the consolidated financial statements were authorized for issue, the Company is continuously assessing the possible impact that the application of above 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 POLICIES

For the convenience of readers, the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the R.O.C. 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 consolidated financial statements shall prevail.

Significant accounting policies are summarized as follows:

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.

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 net defined benefit liabilities which are measured at the present value of the defined benefit obligation less the fair value of plan assets, as explained in the accounting policies below.

Historical cost is generally based on the fair value of the consideration given in exchange for assets.

Basis of Consolidation

Principles for preparing consolidated financial statements

The consolidated financial statements incorporate the financial statements of GUC and entities controlled by GUC (its subsidiaries). Control is achieved where the Company has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

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

All intercompany transactions, balances, income and expenses are eliminated in full upon consolidation.

The subsidiaries in the consolidated financial statements

The detail information of the subsidiaries at the end of reporting period was as follows:

Name of Investor	Name of Investee	Main Businesses and Products	Establishment and Operating Location	Percentage of Ownership December 31 2019	2018	Remark
GUC	Global Unichip Corp.-NA (GUC-NA)	Products consulting, design and technical support service	U.S.A.	100%	100%	Note 1
	Global Unichip Japan Co., Ltd. (GUC-Japan)	Products consulting, design and technical support service	Japan	100%	100%	Note 1
	Global Unichip Corp. Europe B.V. (GUC-Europe)	Products consulting, design and technical support service	Netherlands	100%	100%	Note 1
	Global Unichip (BVI) Corp. (GUC-BVI)	Investing activities	British Virgin Islands	-	100%	Notes 1 & 2
	Global Unichip Corp. Korea (GUC-Korea)	Products consulting, design and technical support service	Korea	100%	100%	Note 1
	Global Unichip (Nanjing) Ltd. (GUC-Nanjing)	Products consulting, design and technical support service	Nanjing, China	100%	100%	Note 1
	Global Unichip (Shanghai) Company, Limited (GUC-Shanghai)	Products consulting, design and technical support service	Shanghai, China	100%	100%	Notes 1 & 2

Note 1: The subsidiaries are not significant subsidiaries, their financial statements have not been reviewed except for GUC-NA.

Note 2: In order to restructure organization, GUC acquired all equity interest of GUC-Shanghai from GUC-BVI in August 2019. GUC BVI has been liquidated in November 2019.

Foreign Currencies

The financial statements of each individual consolidated entity were expressed in the currency, which reflected its primary economic environment (functional currency). The functional currency of GUC and presentation currency of the consolidated financial statements are both New Taiwan Dollars (NT$). In preparing the consolidated financial statement, the operating results and financial positions of each consolidated entity are translated into NT$.

In preparing the financial statements of each individual consolidated entity, 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. Such exchange differences 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 on the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences on the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which case, the exchange differences are also recognized directly in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Company’s foreign operations are translated into NT$ using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity.

Classification of Current and Non-current Assets and Liabilities

Current assets include:

a. Assets held primarily for the purpose of trading;

b. Assets expected to be realized within twelve months after the reporting period; and

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

Current liabilities include:

a. Liabilities held primarily for the purpose of trading;

b. Liabilities due to be settled within twelve months after the reporting period; and

c. Liabilities for which the Company does not have an unconditional right to defer settlement for at least twelve 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.

Cash Equivalents

Cash equivalents, for the purpose of meeting short-term cash commitments, consist of highly liquid time deposits and investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Financial Instruments

Financial assets and liabilities shall be recognized when the Company becomes a party to the contractual provisions of the instruments.

Financial assets and liabilities are initially recognized at fair values. 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.

Financial Assets

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

a. Measurement category

   Financial assets are classified into the following categories: Financial assets at fair value through profit or loss (FVTPL) and financial assets at amortized cost.

   1) Financial assets at FVTPL

      Financial assets at FVTPL includes the financial assets are mandatorily classified as at FVTPL, which includes investments in equity instruments which are not designated as at fair value through other comprehensive income (FVOCI) and debt instruments that do not meet the amortized cost criteria or the FVOCI criteria.

      Financial assets at FVTPL are subsequently measured at fair value, and any dividends, interest earned and remeasurement gains or losses on such financial assets are recognized in other gains or losses. Fair value is determined in the manner described in Note 24: Financial Instruments.

   2) Financial assets at amortized cost

      Financial assets that meet the following 2 conditions are subsequently measured at amortized cost:

      a) The financial asset is held within a business model whose objective is collecting contractual cash flows; and

      b) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

      Subsequent to initial recognition, financial assets at amortized cost (including cash and cash equivalents, notes and accounts receivable (including related parties) and other receivables), are measured at amortized cost, which equals gross carrying amount determined by the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

b. Impairment of financial assets and contract assets

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

   The Company always recognizes lifetime Expected Credit Losses (ECLs) for trade 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 the financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

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

   For poor credit rating customers have accounts receivable balances past due over 90 days, the Company recognizes loss allowance at full amount.

   The impairment loss of all financial assets is recognized in profit or loss by a reduction in their carrying amounts through a loss allowance account.

c. Derecognition of financial assets

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

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.

Financial Liabilities and Equity Instruments

a. Classification as debt or equity

Debt and equity instruments issued by the Company are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

b. Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

c. Financial liabilities

Financial liabilities are subsequently measured at amortized cost using effective interest method.

Financial liabilities other than those held for trading purposes and designated as at FVTPL are subsequently measured at amortized cost at the end of each reporting period.

d. Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

Inventories

Inventories consist of raw materials, supplies, finished goods and work-in-process. Inventories are stated at the lower of cost or net realizable value. Inventory write-downs are made on an item-by-item basis, 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 necessary selling costs. Inventories are recorded at weighted-average cost on the balance sheet date.

Property, Plant and Equipment

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment. Costs include any incremental costs that are directly attributable to the construction or acquisition of the item of property, plant and equipment.

Depreciation is recognized so as to write off the cost of the assets less their residual values over their useful lives, and it is computed using the straight-line method over the following estimated useful lives:

Buildings	50 years
Machinery and equipment	4 to 7 years
Research and development equipment	3 to 5 years
Transportation equipment	5 years
Office equipment	3 to 5 years
Miscellaneous equipment	2 to 10 years

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

Leases

2019

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

a. The Company as lessor

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

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

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases. Initial direct costs incurred in obtaining operating leases are added to the carrying amounts of the underlying assets and recognized as expenses on a straight-line basis over the lease terms.

b. The Company as lessee

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

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

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

Lease liabilities are initially measured at the present value of the lease payments, which comprise fixed payments, in-substance fixed payments and variable lease payments which depend on an index or a rate. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Company uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Company remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the consolidated balance sheets.

2018

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

Rental income from operating lease is recognized on a straight-line basis over the term of the relevant lease. Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

Intangible Assets

Intangible assets are limited in a certain useful life. The initial book value is recorded on the purchasing cost itself. After that the subsequent book value is measured by cost less accumulated amortization and accumulated impairment losses. Amortization is recognized using the straight-line method over the following estimated useful lives:

Software	2 to 5 years
Technology license fees	The term of the technology authorization contract
Patents	Economic lives of the patents

The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Expenditure on research activities is recognized as an expense when incurred. An internally-generated intangible asset arising from development activities is capitalized and then amortized on a straight-line basis over its useful life if the recognition criteria for an intangible asset have been met; otherwise, the development expenditure is recognized as an expense when incurred.

Impairment of Tangible and Intangible Assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets 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. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs to sell or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

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. An impairment loss is recognized immediately in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset or a cash-generating unit is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

Revenue Recognition

The Company identifies the contract with the customers, allocates the transaction price to the performance obligations, and recognizes revenue when performance obligations are satisfied. Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances.

Revenue from sale of goods

Recognized when a customer obtains control of promised goods, at which time the goods are delivered to the customer's specific location and performance obligation is satisfied.

Rendering of Non-Recurring Engineering (NRE) services

Recognized the revenue when the NRE service is completed, which meet the qualifications of customer's contract. If each performance obligation can be measured reasonably by completion stages, the contract is restricted for another use, and the customer would compensate the company to recover the costs incurred plus a reasonable profit margin whenever the contract is terminated by the customer, revenues of the contract service will be recognized over time.

Retirement Benefits

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

Defined benefit costs under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost and net interest on the net defined benefit liability are recognized as employee benefits expense in the period they occur. Remeasurement is recognized in other comprehensive income in the period in which they occur, and it is reflected in retained earnings immediately and will not be reclassified to profit or loss.

Net defined benefit liability represents the actuarial deficit in the Company's defined benefit plan.

Taxation

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

Current tax

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

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

Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements 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 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 in subsidiaries, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments 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. The deferred tax assets which originally not recognized is also reviewed at the end of each reporting period and increased to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the period in 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.

Current and deferred tax for the period

Current and deferred tax 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 tax are also recognized in other comprehensive income or directly in equity, respectively.

Government Grants

Government grants are recognized when the Company complies with the conditions attached to them and that the grants will be received.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY

In the application of the Company's accounting policies, which are described in Note 4, the directors are 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 to be 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 periods.

CRITICAL ACCOUNTING JUDGMENTS

Revenue Recognition

The Company evaluates whether its performance obligation is satisfied over time or at a point in time in accordance with respective contract with a customer and applicable regulation when the conditions described in Note 4 are satisfied.

The Company also records a provision for estimated future allowances in the same period the related revenue is recorded. Provision for estimated sales allowances is generally made and adjusted based on management judgement, historical experience and any known factors that would significantly affect the allowance, and our management periodically reviews the adequacy of the allowance.

KEY SOURCES OF ESTIMATION AND UNCERTAINTY

Impairment of Financial Assets

The provision for impairment of trade receivables is based on assumptions about the risk of default and expected loss rates. The Company uses judgment in making these assumptions and in selecting the inputs to the impairment calculation, based on the Company's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. Please refer to Note 6 for the details of the key assumptions and inputs used. Where the actual future cash flows are less than expected, a material impairment loss may arise.

Realization of Deferred Income Tax Assets

Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which those deferred tax assets can be utilized. Assessment of the realization of the deferred tax assets requires the Company's subjective judgment and estimation, including the future revenue growth and profitability, tax holidays, the amount of tax credits that can be utilized and feasible tax planning strategies. Any changes in the global economic environment, the industry trends and relevant laws and regulations could result in significant adjustments to deferred tax assets.

Valuation of Inventory

Inventories are stated at the lower of cost or net realizable value, and the Company has to determine and estimate to the net realizable value of inventory at the end of each reporting period.

Due to the rapid technological changes, the Company estimates the net realizable value of inventory for obsolescence and unmarketable items at the end of reporting period and then writes down the cost of inventories to net realizable value. The net realizable value of the inventory is mainly determined based on assumptions of future demand within a specific time horizon.

Lessees' Incremental Borrowing Rates - 2019

In determining a lessee's incremental borrowing rate used in discounting lease payments, a risk-free rate for the same currency and relevant duration is selected as a reference rate, and the lessee's credit spread adjustments and lease specific adjustments (such as asset type, secured position, etc.) are also taken into account.

6. ACCOUNTS RECEIVABLE, NET

	December 31	
	2019	2018
At amortized cost of accounts receivable		
Gross carrying amount	$ 1,397,124	$ 903,168
Less: Allowance for credit impairment loss	(19,921)	-
	$ 1,377,203	$ 903,168

In principle, the payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month the invoice is issued.

The Company measures the loss allowance for trade receivables at an amount equal to lifetime expected credit losses. The expected credit losses on trade receivables are estimated using a provision matrix by reference to the past account aging records of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the debtors and an assessment of all the gross domestic product growth rates, unemployment rates and industrial indicators 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 losses experience does not show significantly different loss patterns for different customer segments, the provision for losses based on past due status of receivables is not further distinguished between the Company's different customer base; and poor credit rating customers have accounts receivable balances past due over 90 days, should be recognized full amount of loss allowance.

The Company writes off a trade receivable when there is information indicating that the debtor is in 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, these are recognized in profit or loss.

Aging analysis of accounts receivable

	December 31 2019	December 31 2018
Neither past due nor impaired	$ 1,260,616	$ 779,713
Past due but not impaired		
Past due within 1-30 days	112,515	106,735
Past due within 31-60 days	4,072	6,676
Past due within 91-120 days	-	10,044
	$ 1,377,203	$ 903,168

The movement of the loss allowance of accounts receivable was as follows:

	Year Ended December 31, 2019
Balance at January 1	$ -
Add: Net remeasurement of credit impairment loss allowance	19,921
Balance at December 31	$ 19,921

Starting from 2018, the Company applies IFRS 9 to evaluate expected credit losses, the Company's loss allowance for expected credit losses was zero on December 31, 2018.

7. INVENTORIES

	December 31 2019	December 31 2018
Finished goods	$ 85,663	$ 106,745
Work in process	1,244,852	873,531
Raw materials	447,969	294,678
	$ 1,778,484	$ 1,274,954

Write-down of inventories to net realizable value was included in the cost of revenue, which was as follows.

	Years Ended December 31 2019	Years Ended December 31 2018
Write-down of inventories	$ 76,020	$ 70,789

8. PROPERTY, PLANT AND EQUIPMENT

	Buildings	Machinery and Equipment	Research and Development Equipment	Transportation Equipment	Office Equipment	Miscellaneous Equipment	Total
Cost							
Balance at January 1, 2019	$ 242,923	$ 25,907	$ 1,368,394	$ 1,375	$ 29,560	$ 403,403	$ 2,071,562
Additions	-	153	151,495	-	456	32,241	184,345
Disposals	-	(1,319)	(13,539)	-	(46)	(4,087)	(18,991)
Effect of exchange rate changes	-	-	(231)	-	(242)	(1,251)	(1,724)
Balance at December 31, 2019	$ 242,923	$ 24,741	$ 1,506,119	$ 1,375	$ 29,728	$ 430,306	$ 2,235,192
Accumulated depreciation							
Balance at January 1, 2019	$ 68,564	$ 6,470	$ 616,956	$ 158	$ 21,425	$ 269,465	$ 983,038
Depreciation	4,766	3,409	244,484	266	2,117	34,605	289,647
Disposals	-	(1,319)	(13,539)	-	(43)	(4,087)	(18,988)
Effect of exchange rate changes	-	-	(130)	-	(161)	(701)	(992)
Balance at December 31, 2019	$ 73,330	$ 8,560	$ 847,771	$ 424	$ 23,338	$ 299,282	$ 1,252,705
Carrying amount at December 31, 2019	$ 169,593	$ 16,181	$ 658,348	$ 951	$ 6,390	$ 131,024	$ 982,487
Cost							
Balance at January 1, 2018	$ 242,923	$ 23,430	$ 704,709	$ 9,390	$ 24,207	$ 293,665	$ 1,298,324
Additions	-	2,477	685,341	1,327	5,333	110,898	805,376
Disposals	-	-	(21,842)	(9,342)	-	(1,274)	(32,458)
Effect of exchange rate changes	-	-	186	-	20	114	320
Balance at December 31, 2018	$ 242,923	$ 25,907	$ 1,368,394	$ 1,375	$ 29,560	$ 403,403	$ 2,071,562
Accumulated depreciation							
Balance at January 1, 2018	$ 63,797	$ 3,311	$ 486,832	$ 5,383	$ 19,928	$ 245,823	$ 825,074
Depreciation	4,767	3,159	151,924	808	1,478	24,631	186,767
Disposals	-	-	(21,842)	(6,033)	-	(1,274)	(29,149)
Effect of exchange rate changes	-	-	42	-	19	285	346
Balance at December 31, 2018	$ 68,564	$ 6,470	$ 616,956	$ 158	$ 21,425	$ 269,465	$ 983,038
Carrying amount at December 31, 2018	$ 174,359	$ 19,437	$ 751,438	$ 1,217	$ 8,135	$ 133,938	$ 1,088,524

9. LEASE ARRANGEMENTS

a. Right-of-use assets - 2019

	Land	Buildings	Transportation Equipment	Total
Cost				
Balance at January 1, 2019	$ -	$ -	$ -	$ -
Effect of retrospective application of IFRS 16	58,995	158,683	5,653	223,331
Balance at January 1, 2019 (restated)	58,995	158,683	5,653	223,331
Additions	-	84,405	467	84,872
Lease modification	-	-	(1,163)	(1,163)
Effect of exchange rate changes	-	(3,929)	-	(3,929)
Balance at December 31, 2019	$ 58,995	$ 239,159	$ 4,957	$ 303,111

(Continued)

	Land	Buildings	Transportation Equipment	Total
Accumulated depreciation				
Balance at January 1, 2019	$ -	$ -	$ -	$ -
Effect of retrospective application of IFRS 16	-	-	-	-
Balance at January 1, 2019 (restated)	-	-	-	-
Depreciation	1,612	52,804	1,374	55,570
Lease modification	-	-	(170)	(170)
Effect of exchange rate changes	-	(616)	-	(616)
Balance at December 31, 2019	$ 1,612	$ 51,968	$ 1,204	$ 54,784
Carrying amounts at December 31, 2019	$ 57,383	$ 187,191	$ 3,753	$ 248,327

(Concluded)

	Year Ended December 31, 2019
Income from the subleasing of right-of-use assets (presented in other income)	$ 299

b. Lease liabilities - 2019

Item	Lease Term	Discount Rate	December 31, 2019
Land	2019.01-2055.07	1.62%	$ 57,803
Buildings	2019.01-2030.02	0.825%-4.75%	189,006
Transportation equipment	2019.01-2023.08	0.825%	3,768
Total			250,577
Less: Lease liabilities-Current			(50,955)
Lease liabilities-Non Current			$ 199,622

c. Material lease-in activities and terms

The Company leases land and buildings for the use of plants and offices with lease terms of 1 to 37 years. The lease contract for land located in the ROC. specifies that lease payments will be adjusted on the basis of changes in announced land value prices and other factors at any time. The Company does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms. In addition, the Company is prohibited from subleasing or transferring all or any portion of the underlying assets without the lessor's consent.

d. Subleases

The other sublease transaction is set out below.

Sublease of right-of-use assets - 2019

The Company subleased its leasehold parking lot under operating leases with lease term of 3 years and with an option to extend for an additional 1 year.

The maturity analysis of lease payments receivable under operating subleases was as follows:

	December 31, 2019
Year 1	$ 299
Year 2	299
Year 3	299
	$ 897

e. Other lease information

2019

	Year Ended December 31, 2019
Expenses relating to short-term leases	$ 11,059
Expenses relating to low-value asset leases	$ 55
Total cash outflow for leases	$ (68,132)

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

2018

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

	December 31, 2018
Not later than 1 year	$ 56,996
Later than 1 year and not later than 5 years	65,465
	$ 122,461

The lease payments recognized in profit or loss was as follows:

	Year Ended December 31, 2018
Minimum lease payments	$ 55,516

10. INTANGIBLE ASSETS

	Software	Patents	Total
Cost			
Balance at January 1, 2019	$ 822,789	$ 519	$ 823,308
Additions	376,713	-	376,713
Disposals	(268,763)	-	(268,763)
Effect of exchange rate changes	(9)	-	(9)
Balance at December 31, 2019	$ 930,730	$ 519	$ 931,249
Accumulated amortization			
Balance at January 1, 2019	$ 534,689	$ 424	$ 535,113
Amortization	252,829	28	252,857
Disposals	(268,763)	-	(268,763)
Effect of exchange rate changes	(5)	-	(5)
Balance at December 31, 2019	$ 518,750	$ 452	$ 519,202
Carrying amount at December 31, 2019	$ 411,980	$ 67	$ 412,047

	Software	Technology License Fees	Patents	Total
Cost				
Balance at January 1, 2018	$ 687,166	$ 6,000	$ 519	$ 693,685
Additions	191,099	-	-	191,099
Disposals	(55,465)	(6,000)	-	(61,465)
Effect of exchange rate changes	(11)	-	-	(11)
Balance at December 31, 2018	$ 822,789	$ -	$ 519	$ 823,308
Accumulated amortization				
Balance at January 1, 2018	$ 363,757	$ 6,000	$ 395	$ 370,152
Amortization	226,399	-	29	226,428
Disposals	(55,465)	(6,000)	-	(61,465)
Effect of exchange rate changes	(2)	-	-	(2)
Balance at December 31, 2018	$ 534,689	$ -	$ 424	$ 535,113
Carrying amount at December 31, 2018	$ 288,100	$ -	$ 95	$ 288,195

11. OTHER CURRENT ASSETS

	December 31	
	2019	2018
Prepayment for purchases	$ 205,732	$ 194,173
Prepaid license fees	172,536	117,641
Tax receivable	100,343	99,618
Prepaid expenses	36,398	39,637
Temporary payments	27,244	25,859
Prepaid income tax	9,945	2,559
	$ 552,198	$ 479,487

12. OTHER LIABILITIES

	December 31	
	2019	2018
Current		
Payable for salaries and bonuses	$ 239,236	$ 251,468
License fees payable	160,579	125,615
Payable for royalties	59,556	31,609
Refund liabilities	621	106,123
Others	267,861	360,819
	$ 727,853	$ 875,634
Non-current		
License fees payable	$ 112,877	$ 53,239

Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. The Company recognizes the estimation of refund liabilities based on historical experience and the consideration of varying contractual terms.

The license fees payable are primarily attributable to several agreements that GUC entered into for certain technology license and software.

13. RETIREMENT BENEFIT PLANS

a. Defined contribution plans

The pension mechanism under the Labor Pension Act is deemed a defined contribution retirement plan. Pursuant to the Act, GUC makes monthly contributions equal to 6% of each employee's monthly salary to employees' pension accounts. Furthermore, GUC-NA, GUC-Japan, GUC-Korea, GUC-Shanghai and GUC-Nanjing make monthly contributions at certain percentages of the salary of their employees. Accordingly, the Company recognized expenses of NT$60,024 thousand and NT$55,076 thousand in the consolidated statements of comprehensive income for the years ended December 31, 2019 and 2018, respectively.

b. Defined benefit plans

GUC has a defined benefit plan under the Labor Standards Act, which provides benefits based on an employee's length of service and average monthly salary of the last six months prior to retirement. GUC contributes an amount equal to 2% of salaries paid each month to a pension fund (the Fund), which is administered by the Labor Pension Fund Supervisory Committee (the Committee) and deposited in the Committee's name in the Bank of Taiwan. Before the end of each year, the Company assesses the balance in the Fund. If the amount of the balance in the 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 Fund is managed by the Bureau of Labor Funds, Ministry of Labor ("the Bureau"); as such, GUC has no right to influence the investment policy and strategy.

The amounts arising from the defined benefit obligation of GUC under GUC's financial position were as follows:

	December 31	
	2019	2018
Present value of defined benefit obligation	$ 72,709	$ 65,279
Fair value of plan assets	(40,605)	(37,046)
Net defined benefit liabilities	$ 32,104	$ 28,233

Movements in net defined benefit liabilities were as follows:

	Present Value of the Defined Benefit Obligation	Fair Value of the Plan Assets	Net Defined Benefit Liabilities
Balance at January 1, 2018	$ 60,860	$ (33,919)	$ 26,941
Service cost			
Current service cost	986	-	986
Net interest expense (income)	761	(436)	325
Recognized in profit or loss	1,747	(436)	1,311
Remeasurement			
Return on plan assets	-	(890)	(890)
Actuarial gain - changes in demographic assumptions	(294)	-	(294)
Actuarial loss - changes in financial assumptions	2,284	-	2,284
Actuarial loss - experience adjustments	682	-	682
Recognized in other comprehensive (income) loss	2,672	(890)	1,782
Contributions from the employer	-	(1,801)	(1,801)
Balance at December 31, 2018	65,279	(37,046)	28,233
Service cost			
Current service cost	1,245	-	1,245
Net interest expense (income)	652	(379)	273
Recognized in profit or loss	1,897	(379)	1,518

(Continued)

	Present Value of the Defined Benefit Obligation	Fair Value of the Plan Assets	Net Defined Benefit Liabilities
Remeasurement			
Return on plan assets	$ -	$ (1,270)	$ (1,270)
Actuarial loss - changes in demographic assumptions	1,271	-	1,271
Actuarial loss - changes in financial assumptions	2,374	-	2,374
Actuarial loss - experience adjustments	1,888	-	1,888
Recognized in other comprehensive (income) loss	5,533	(1,270)	4,263
Contributions from the employer	-	(1,910)	(1,910)
Balance at December 31, 2019	$ 72,709	$ (40,605)	$ 32,104

(Concluded)

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

	Year Ended December 31	
	2019	2018
General and administrative expenses	$ 1,518	$ 1,311

Through the defined benefit plans under the Labor Standards Law, GUC 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 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	
	2019	2018
Discount rate	0.75%	1.00%
Expected rate of salary increase	3.00%	3.00%
Turnover rate	2.44%	2.99%

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:

	December 31	
	2019	2018
Discount rate		
0.25% increase	$ (2,432)	$ (2,276)
0.25% decrease	$ 2,539	$ 2,379
Expected rate of salary increase		
0.25% increase	$ 2,472	$ 2,323
0.25% decrease	$ (2,381)	$ (2,235)
Turnover rate		
10% increase	$ (705)	$ (863)
10% decrease	$ 720	$ 883

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	
	2019	2018
The expected contributions to the plan for the next year	$ 2,053	$ 1,907
The average duration of the defined benefit obligation	13 years	14 years

The maturity analysis of undiscounted pension benefit is as follows:

	December 31	
	2019	2018
Later than 1 year and not later than 5 years	$ 6,141	$ 4,310
Later than 5 years	74,150	69,728
	$ 80,291	$ 74,038

14. EQUITY

a. Share capital

	December 31	
	2019	2018
Authorized	$ 1,500,000	$ 1,500,000
Issued	$ 1,340,119	$ 1,340,119

As of December 31, 2019 and 2018 the authorized shares are 150,000 thousand shares, with par value of $10 per share is entitled to the right to vote and to receive dividends; GUC's issued and paid shares were 134,011 thousand shares.

b. Capital surplus

	December 31	
	2019	2018
From merger	$ 16,621	$ 16,621
Additional paid-in capital	13,232	13,232
Donations	2,660	2,660
Dividends from claims extinguished by prescription	65	30
	$ 32,578	$ 32,543

Under the Company Law, the capital surplus generated from the excess of the issuance price over the par value of capital stock (including the stock issued for new capital and mergers) and donations may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be appropriated as cash dividends or stock dividends, which are limited to a certain percentage of GUC's paid-in capital under capital surplus. In addition, the capital surplus from dividends from claims extinguished by prescription may be used to offset a deficit.

c. Retained earnings and dividend policy

According to GUC's Articles of Incorporation when allocating the net profits for each fiscal year, GUC shall offset its losses in previous years before set aside the following items accordingly:

1) Legal reserve at 10% of the remaining profit;

2) Special reserve in accordance with the resolution in the shareholders' meeting;

3) Any balance remaining shall be allocated to shareholders according to the resolution in the shareholders' meeting.

The Articles of Incorporation provide the policy about employee' compensation and remuneration to directors, please refer to Note 21.

GUC's profit distribution, the proportion of cash dividends shall not be lower than 60% of the total dividends, depending on future expansion plans and cash needs.

The appropriation for legal reserve shall be made until the reserve equals GUC's paid-in capital. The reserve may be used to offset a deficit, or be distributed as dividends and bonuses to the extent that the portion exceeds 25% of the paid-in capital if GUC incurs no loss.

A special reserve equivalent to the net debit balance of other components of shareholders' equity such as exchange differences on the translation of foreign operations, shall be made from unappropriated earnings. Any special reserve appropriated may be reversed to the extent that the net debit balance reverses.

The appropriations of earnings for 2018 and 2017 had been approved in GUC's shareholders' meetings held on May 16, 2019 and May 17, 2018, respectively. The appropriations and dividends per share were as follows:

	Appropriation of Earnings		Dividends Per Share (NT$)	
	For Fiscal Year 2018	For Fiscal Year 2017	For Fiscal Year 2018	For Fiscal Year 2017
Legal reserve	$ 98,816	$ 85,481		
Special reserve (reversal of special reserve)	(2,304)	9,426		
Cash dividends to shareholders	670,060	670,060	$ 5.00	$ 5.00
	$ 766,572	$ 764,967		

The appropriation of earnings for 2019 had been proposed by GUC's board of directors on February 6, 2020. The appropriation and dividends per share were as follows:

	Appropriation of Earnings	Dividends Per Share (NT$)
Legal reserve	$ 62,920	
Special reserve	12,109	
Cash dividends to shareholders	670,060	$5.00
	$ 745,089	

The appropriations of earnings for 2019 are to be resolved in GUC shareholders' meeting which is expected to be held on May 14, 2020.

d. Others

Changes in foreign currency translation reserve were as follows:

	Years Ended December 31	
	2019	2018
Balance, beginning of year	$ (8,636)	$ (10,940)
Exchange differences on translation of foreign operations	(12,109)	2,304
Balance, end of year	$ (20,745)	$ (8,636)

The exchange differences on translation of foreign operation's net assets from its functional currency to GUC's presentation currency are recognized directly in other comprehensive income and also accumulated in the foreign currency translation reserve.

15. NET REVENUE

The analysis of the Company's net revenue was as follows:

	Years Ended December 31	
	2019	2018
Revenue from customer contracts		
Net revenue from sale of goods	$ 7,188,728	$ 9,167,596
Net revenue from NRE service	3,521,340	4,292,208
	$ 10,710,068	$ 13,459,804

Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. The Company recognizes the estimation of refund liabilities based on historical experience and the consideration of varying contractual terms, which is classified under accrued expenses and other current liabilities.

a. Contract balances

	December 31, 2019	December 31, 2018	January 1, 2018
Account receivables	$ 1,377,203	$ 903,168	$ 894,317
Contract assets - current	$ 324,965	$ 56,976	$ 13,392
Contract liabilities - current	$ 1,109,042	$ 869,174	$ 1,630,281

The changes in the contract asset and the contract liability balances primarily result from the timing difference between the satisfaction of performance obligation and the customer's payment.

For the year ended December 31, 2019 and 2018, the Company recognized NT$756,052 thousand and NT$1,451,151 thousand in revenue from the beginning balance of contract liability, respectively.

b. Disaggregation of revenue from contracts with customers

	Years Ended December 31	
Production	2019	2018
ASIC and wafer product	$ 7,188,728	$ 9,167,596
NRE	3,205,782	4,078,719
Others	315,558	213,489
	$ 10,710,068	$ 13,459,804

	Years Ended December 31	
Region	2019	2018
United States	$ 3,752,928	$ 2,811,100
China	1,622,604	2,300,679
Taiwan	1,543,054	2,792,676
Korea	1,430,262	1,129,735
Japan	1,313,786	3,609,609
Europe	1,047,434	816,005
	$ 10,710,068	$ 13,459,804

The Company categorized the net revenue mainly based on the country in which the customer's headquartered.

Application Type	Years Ended December 31 2019	2018
Computer	$ 4,608,339	$ 5,619,289
Consumer	3,640,696	5,953,549
Communication	1,175,885	811,023
Others	1,285,148	1,075,943
	$ 10,710,068	$ 13,459,804

- Customer Type	Years Ended December 31 2019	2018
System House	$ 6,688,962	$ 9,706,104
Fabless	4,021,106	3,753,700
	$ 10,710,068	$ 13,459,804

	Year Ended December 31, 2019		Year Ended December 31, 2018	
Resolution	Net Revenue from NRE Service	Net Revenue from Sale of Goods	Net Revenue from NRE Service	Net Revenue from Sale of Goods
7-nanometer	$ 267,824	$ 174,980	$ 741,655	$ 1,751,012
16-nanometer	1,354,368	233,805	1,527,987	74,632
28-nanometer	1,028,873	2,739,927	1,239,050	2,128,432
40-nanometer	116,640	1,253,001	270,101	1,080,987
65-nanometer and above	438,077	2,787,015	299,926	4,132,533
Others	315,558	-	213,489	-
	$ 3,521,340	$ 7,188,728	$ 4,292,208	$ 9,167,596

16. OTHER INCOME

	Years Ended December 31 2019	2018
Government grants	$ 60,992	$ 2,864
Interest income		
Bank deposits	25,397	26,557
Income (expenses) of rental assets		
Rental income	299	397
Depreciation of rental assets	-	(2)
Other income	7,553	7,230
	$ 94,241	$ 37,046

17. OTHER GAINS AND LOSSES

	Years Ended December 31 2019	2018
Gain on financial assets at fair value through profit or loss	$ 944	$ 1,278
Gain on lease modification	26	-
Loss on disposal of property, plant and equipment, net	(3)	(4)
Gain (loss) on foreign exchange, net	(5,985)	791
Others	(13)	-
	$ (5,031)	$ 2,065

18. FINANCE COSTS

	Years Ended December 31 2019	2018
Interest on lease liabilities	$ 3,337	$ -

19. INCOME TAX

a. Income tax expense recognized in profit or loss

Income tax expense consisted of the following:

	Years Ended December 31 2019	2018
Current income tax expense		
Current tax expense recognized in the current period	$ 111,507	$ 163,147
Income tax adjustments on prior years	(1,950)	(7,518)
	109,557	155,629
Deferred income tax expense (benefit)		
Effect of tax rate changes	(633)	4,336
Temporary differences	38,682	(12,569)
Operating loss carryforwards	2,029	(68)
	40,078	(8,301)
Income tax expense recognized in profit or loss	$ 149,635	$ 147,328

A reconciliation of income before income tax and income tax expense recognized in profit or loss was as follows:

	Years Ended December 31	
	2019	2018
Income before tax	$ 783,102	$ 1,135,484
Income tax expense at the statutory rate	$ 177,605	$ 239,881
Tax effect of adjusting items:		
Nondeductible items in determining taxable income	30,649	12,826
Tax-exempt income	(37,466)	(94,443)
Investment tax credits used	(29,560)	(16,314)
Additional income tax on unappropriated earnings	10,990	8,560
Income tax adjustments on prior years	(1,950)	(7,518)
Effect of tax rate changes	(633)	4,336
Income tax expense recognized in profit or loss	$ 149,635	$ 147,328

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 the 2018 unappropriated earnings will be reduced from 10% to 5%. Tax rates used by other group entities operating in other jurisdictions are based on the tax laws in those jurisdictions.

In July 2019, the President of the ROC announced the amendments to the Statute for Industrial Innovation, which stipulate that the amounts of unappropriated earnings in 2018 and thereafter that are reinvested in the construction or purchase of certain assets or technologies are allowed as deduction when computing the income tax on unappropriated earnings. GUC has already deducted the amount of capital expenditure from the unappropriated earnings in 2018 that was reinvested when calculating the tax on unappropriated earnings for the year ended December 2019.

b. Deferred income tax balance

The analysis of deferred income tax assets and liabilities in the consolidated balance sheets was as follows:

	December 31	
	2019	2018
Deferred income tax assets		
Temporary differences		
Write-down of inventory	$ 29,768	$ 14,706
Allowance for credit impairment loss exceeded	1,106	-
Provisions	124	13,435
Share of loss of subsidiaries accounted for using equity method	-	21,851
Others	7,812	8,728
Operating loss carryforwards	-	2,021
	$ 38,810	$ 60,741

(Continued)

	December 31	
	2019	2018
Deferred income tax liabilities		
Temporary differences		
Share of profit of subsidiaries accounted for using equity method	$ (41,127)	$ (22,141)
Others	(699)	(1,721)
	$ (41,826)	$ (23,862)

(Concluded)

Movements of deferred income tax assets and deferred tax liabilities were as follows:

Year ended December 31, 2019

	Balance, Beginning of Year	Recognized in Profit or Loss	Effect of Exchange Rate Changes	Balance, End of Year
Deferred income tax assets				
Temporary differences				
Write-down of inventory	$ 14,706	$ 15,062	$ -	$ 29,768
Allowance for credit impairment loss exceeded	-	1,106	-	1,106
Provisions	13,435	(13,311)	-	124
Share of loss of subsidiaries accounted for using equity method	21,851	(21,851)	-	-
Others	8,728	(916)	-	7,812
Operating loss carryforwards	2,021	(2,029)	8	-
	$ 60,741	$ (21,939)	$ 8	$ 38,810

Year ended December 31, 2018

	Balance, Beginning of Year	Recognized in Profit or Loss	Effect of Exchange Rate Changes	Balance, End of Year
Deferred income tax assets				
Temporary differences				
Share of loss of subsidiaries accounted for using equity method	$ 21,122	$ 729	$ -	$ 21,851
Write-down of inventory	2,322	12,384	-	14,706
Provisions	82	13,353	-	13,435
Others	11,111	(2,402)	19	8,728
Operating loss carryforwards	1,988	68	(35)	2,021
	$ 36,625	$ 24,132	$ (16)	$ 60,741

Year ended December 31, 2019

	Balance, Beginning of Year	Recognized in Profit or Loss	Effect of Exchange Rate Changes	Balance, End of Year
Deferred income tax liabilities				
Temporary differences				
Share of profit of subsidiaries accounted for using equity method	$ (22,141)	$ (18,986)	$ -	$ (41,127)
Others	(1,721)	847	175	(699)
	$ (23,862)	$ (18,139)	$ 175	$ (41,826)

Year ended December 31, 2018

	Balance, Beginning of Year	Recognized in Profit or Loss	Effect of Exchange Rate Changes	Balance, End of Year
Deferred income tax liabilities				
Temporary differences				
Share of profit of subsidiaries accounted for using equity method	$ (8,031)	$ (14,110)	$ -	$ (22,141)
Others	-	(1,721)	-	(1,721)
	$ (8,031)	$ (15,831)	$ -	$ (23,862)

c. Deductible temporary differences for which no deferred tax assets have been recognized in the consolidated balance sheets

As of December 31, 2019 and 2018, the aggregate deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT$26,550 thousand and NT$9,517 thousand, respectively.

d. Information about tax exemption

As of December 31, 2019, the profits generated from the following projects of GUC are exempt from income tax for a five-year period:

	Tax-exemption Period
Construction and expansion of 2009	2016 to 2020

e. Income tax examination

The tax authorities have examined income tax returns of GUC through 2017.

20. EARNINGS PER SHARE

	Years Ended December 31 2019	2018
Basic EPS	$4.73	$7.37
Diluted EPS	$4.71	$7.33

EPS is computed as follows:

	Amounts (Numerator)	Number of Shares (Denominator) (In Thousands)	EPS (NT$)
Year ended December 31, 2019			
Basic EPS			
Net income available to common shareholders	$ 633,467	134,011	$4.73
Effect of dilutive potential common stock	-	377	
Diluted EPS			
Net income available to common shareholders (including effect of dilutive potential common stock)	$ 633,467	134,388	$4.71
Year ended December 31, 2018			
Basic EPS			
Net income available to common shareholders	$ 988,156	134,011	$7.37
Effect of dilutive potential common stock	-	776	
Diluted EPS			
Net income available to common shareholders (including effect of dilutive potential common stock)	$ 988,156	134,787	$7.33

If the Company settles employees' compensation by issuing share or by cash, the Company assumes the entire amount of the compensation will be settled in shares which should be included in the weighted average number of shares outstanding in calculation of diluted EPS, if the shares have a dilutive effect. Such dilutive effect of the potential shares needs to be included in the calculation of diluted EPS until employees' compensation to be settled in the form of common stocks are approved in the following year.

21. ADDITIONAL INFORMATION OF EXPENSES BY NATURE

Net income included the following items:

	Years Ended December 31	
	2019	2018
a. Depreciation expenses		
Depreciation of property, plant and equipment		
Recognized in cost of revenue	$ 5,259	$ 4,856
Recognized in operating expenses	284,388	181,909
Recognized in other income - depreciation of rental assets	-	2
	289,647	186,767
Depreciation of right-of-use assets		
Recognized in cost of revenue	3,901	-
Recognized in operating expenses	51,669	-
	55,570	-
	$ 345,217	$ 186,767
b. Amortization of intangible assets		
Recognized in cost of revenue	$ 193	$ 2,183
Recognized in operating expenses	252,664	224,245
	$ 252,857	$ 226,428
c. Research and development costs expensed as occurred	$ 2,219,515	$ 2,273,694
d. Employee benefits expenses		
Post-employment benefits (Note 13)		
Defined contribution plans	$ 60,024	$ 55,076
Defined benefit plans	1,518	1,311
	61,542	56,387
Other employee benefits	1,890,115	2,002,861
	$ 1,951,657	$ 2,059,248
Employee benefits expense summarized by function		
Recognized in cost of revenue	$ 166,265	$ 193,515
Recognized in operating expenses	1,785,392	1,865,733
	$ 1,951,657	$ 2,059,248

e. Employee's compensation and remuneration to directors

GUC shall allocate employees' compensation and remuneration to directors no less than 2% and no more than 2% of net income before tax which is not deducted from employees' compensation and remuneration to directors, respectively. Directors who also serve as executive officers of GUC are not entitled to receive the remuneration to directors. GUC shall first offset its losses in previous years then allocate employees' compensation and remuneration to directors. GUC may issue stock or cash compensation to employees of an affiliated company upon meeting the conditions set by the Board of Directors.

For 2019 and 2018, GUC accrued employees' compensation and remuneration to directors had been approved in the Board of Directors meeting held on February 6, 2020 and January 31, 2019, respectively, and were based on certain percentage of net income before tax without deduction of the employees' compensation and remuneration to directors. The accrued amounts were as follows:

	Years Ended December 31	
	2019	2018
Employees' compensation	$ 75,228	$ 153,240
Remuneration to directors	5,463	14,193

The aforementioned amount is the same as the amount which had been charged against expenses of 2019 and 2018, respectively.

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

GUC's employees' compensation and remuneration to directors in the amounts of NT$133,501 thousand and NT$12,206 thousand in cash for 2017 was approved by the Board of Directors in their meetings held on February 1, 2018. The aforementioned approved amounts did not have any difference with the amounts recognized in the consolidated financial statements for the year ended December 31, 2017.

The information about appropriations of GUC's employees' compensation and remuneration to directors is available on the Market Observation Post System website.

22. CASH FLOW INFORMATION

Reconciliation of liabilities arising from financing activities:

	Balance as of January 1, 2019	Cash Flows	Non-cash Changes: Lease Additions	Non-cash Changes: Lease Decrease	Non-cash Changes: Foreign Exchange Movement	Balance as of December 31, 2019
Guarantee deposits	$ 3,146	$ 7	$ -	$ -	$ (78)	$ 3,075
Lease liabilities	223,331	(53,241)	84,872	(1,019)	(3,366)	250,577

	Balance as of January 1, 2018	Cash Flows	Non-cash Changes: Foreign Exchange Movement	Balance as of December 31, 2018
Guarantee deposits	$ 2,976	$ 76	$ 94	$ 3,146

23. CAPITAL MANAGEMENT

The Company manages its capital to ensure that entities in the Company are able to operate sustainability while maximizing the return to stakeholders through the optimization of the debt and equity balance. The Company engages in the semiconductor design services, which is closely tied with customer demand. Business is influenced by the cyclical nature of the semiconductor industry but not significantly. In consideration of the industry dynamics, the Company manages its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, capital asset purchases, research and development activities, dividend payments, debt service requirements and other business requirements associated with its existing operations over the next 12 months. Through capital management, the Company is capable of coping with changes in the industry, striving for improvement, and ultimately creating shareholder value.

24. FINANCIAL INSTRUMENTS

a. Categories of financial instruments

	December 31	
	2019	2018
Financial assets		
Amortized cost		
Cash and cash equivalents	$ 2,541,628	$ 3,906,191
Accounts receivable, net (including related parties)	1,418,311	910,206
Other financial assets	342	845
Refundable deposits	1,652	2,475
Pledged time deposits	22,200	22,200
	$ 3,984,133	$ 4,841,917
Financial liabilities		
Amortized cost		
Accounts payable (including related parties)	$ 1,534,545	$ 1,227,745
Payables on machinery and equipment	58,524	364,475
Accrued expenses and other current liabilities	318,196	380,206
Other long-term payables	273,456	178,854
Guarantee deposits	2,998	3,072
	$ 2,187,719	$ 2,154,352

b. Financial risk management objectives and policies

The Company's objectives of financial risk management are to manage its exposure to market risk, credit risk and liquidity risk related to the operating activities. To reduce the related financial risks, the Company engages in identifying, assessing and avoiding the market uncertainties 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 the Audit Committee and Board of Directors in accordance with procedures required by relevant regulations and internal controls. During the implementation of such plans, the treasury function must comply with certain treasury procedures that provide guiding principles for overall financial risk management and segregation of duties.

c. Market risk

Foreign currency risk

The Company's operating activities are mainly denominated in foreign currency and exposed to foreign exchange risk. To protect the volatility of future cash flows arising from changes in foreign exchange rates, the Company maintains a balance of net foreign currency assets and liabilities in hedge.

The Company's sensitivity analysis to foreign currency risk mainly focuses on the foreign currency monetary items at the end of the reporting period. Assuming a 10% strengthening of New Taiwan Dollars against the relevant currencies, the net income before tax for the years ended December 31, 2019 and 2018 would have decreased by NT$100,111 thousand and NT$94,389 thousand, respectively.

d. Credit risk management

Credit risk refers to the risk that a counter party will default on its contractual obligations resulting in financial loss to the Company. The Company is exposed to credit risk from operating activities, primarily trade receivables, and from investing activities of deposits with banks. Credit risk is managed separately for business related and financial related exposures. As of the balance sheet date, the Company's maximum credit risk exposure is mainly from the carrying amount of financial assets recognized in the consolidated balance sheet.

Business related credit risk

The Company has considerable trade receivables outstanding with its customers worldwide. A substantial majority of the Company's outstanding trade receivables are not covered by collateral or credit insurance. While the Company has procedures to monitor and limit exposure to credit risk on trade receivables, there can be no assurance such procedures will effectively limit its credit risk and avoid losses.

As of December 31, 2019 and 2018, the Company's ten largest customers accounted for 69% and 55% of accounts receivable, respectively. The Company believes the concentration of credit risk is insignificant for the remaining accounts receivable.

Financial credit risk

The Company monitors and reviews the transaction limit applied to counter parties and adjusts the concentration limit according to market conditions and the credit standing of the counter parties regularly. The Company mitigates its exposure by selecting financial institution with well credit.

e. Liquidity risk management

The objective of liquidity risk management is to ensure the Company has sufficient liquidity to fund its business requirements. The Company manages its liquidity risk by maintaining adequate cash and banking facilities.

As of December 31, 2019 and 2018, the unused financing facilities of the Company amounted to NT$1,600,000 thousand and NT$1,300,000 thousand, respectively.

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual undiscounted payments.

Non-derivative Financial Liabilities	**Less Than 1 Year**	**2-3 Years**	**4+ Years**	**Total**
December 31, 2019				
Accounts payable (including related parties)	$ 1,534,545	$ -	$ -	$ 1,534,545
Payables on machinery and equipment	58,524	-	-	58,524
Accrued expenses and other current liabilities	318,196	-	-	318,196
Lease liabilities	54,321	100,328	121,364	276,013
Other long-term payables	160,579	112,877	-	273,456
Guarantee deposits	-	-	2,998	2,998
	$ 2,126,165	$ 213,205	$ 124,362	$ 2,463,732

Additional information about the maturity analysis for lease liabilities:

	Less than 4 Year	**4-10 Years**	**10-15 Years**	**15-20 Years**	**20+ Years**
Lease liabilities	$ 154,649	$ 66,118	$ 11,229	$ 10,692	$ 33,325

Non-derivative Financial Liabilities	**Less Than 1 Year**	**2-3 Years**	**4+ Years**	**Total**
December 31, 2018				
Accounts payable (including related parties)	$ 1,227,745	$ -	$ -	$ 1,227,745
Payables on machinery and equipment	364,475	-	-	364,475
Accrued expenses and other current liabilities	380,206	-	-	380,206
Other long-term payables	125,615	53,239	-	178,854
Guarantee deposits	-	-	3,072	3,072
	$ 2,098,041	$ 53,239	$ 3,072	$ 2,154,352

f. Fair value of financial instruments

The carrying amounts of the Company's financial assets and financial liabilities measured at amortized cost at the end of financial reporting period recognized in the consolidated financial statements approximate their fair values. Further, the Company did not have any financial assets and financial liabilities measured at fair values at the end of the reporting period.

25. RELATED PARTY TRANSACTIONS

Intercompany balances and transactions between GUC and its subsidiaries, which are related parties of GUC, have been eliminated upon consolidation; therefore those items are not disclosed in this note. The following is a summary of transactions between the Company and other related parties:

a. Related party name and categories

Related Party Name	**Related Party Categories**
Taiwan Semiconductor Manufacturing Co., Ltd. (TSMC)	An investor accounted for using equity method
TSMC North America (TSMC-NA)	A subsidiary of TSMC
Vanguard International Semiconductor Corporation (VIS)	An associate of TSMC
TSMC Europe B.V. (TSMC-EU)	A subsidiary of TSMC
VisEra Technologies Co., Ltd. (VisEra)	A subsidiary of TSMC

b. Operating transactions

Items	**Related Party Name and Categories**	**Years Ended December 31 2019**	**2018**
Net revenue from sale	Investors with significant influence over the company	$ 120,699	$ 87,392
	Other related parties	-	29
		$ 120,699	$ 87,421
Purchases	Investors with significant influence over the company		
	TSMC	$ 2,921,516	$ 5,069,048
	TSMC-NA	1,193,214	1,141,840
		4,114,730	6,210,888
	Other related parties	46,568	43,905
		$ 4,161,298	$ 6,254,793
Manufacturing overhead	Investors with significant influence over the company		
	TSMC	$ 736,573	$ 1,009,087
	TSMC-NA	317,231	358,025
		1,053,804	1,367,112
	Other related parties	567	-
		$ 1,054,371	$ 1,367,112

(Continued)

Consolidated Financial Statements

Items	Related Party Name and Categories	Years Ended December 31 2019	2018
Operating expenses	Investors with significant influence over the company	$ 15,791	$ 8,299
Other Income	Investors with significant influence over the company	$ -	$ 27

(Concluded)

The following balances were outstanding at the end of reporting period:

Items	Related Party Name and Categories	December 31 2019	2018
Receivables from related parties	Investors with significant influence over the company		
	TSMC	$ 41,108	$ 7,038
Other current assets	Investors with significant influence over the company		
	TSMC	$ -	$ 1,434
Refundable deposits	Investors with significant influence over the company		
	VisEra	$ 2,832	$ 2,832
	Other	441	452
		$ 3,273	$ 3,284
Payables to related parties	Investors with significant influence over the company		
	TSMC	$ 457,222	$ 374,702
	TSMC-NA	283,396	106,125
		740,618	480,827
	Other related parties	10,019	14,553
		$ 750,637	$ 495,380
Accrued expenses and other current liabilities	Investors with significant influence over the company	$ 842	$ 752

The terms of sales to related parties were not significantly different from those of sales to third parties. For other related party transactions, the terms of transactions were determined in accordance with mutual agreement because there were no comparable terms for third-party transactions. The payment term granted to related parties is due 30 days from the invoice date or 30 days from the end of the month when the invoice is issued, while the payment term granted to third parties is due 30 days from the invoice date or 75 days from the end of the month when the invoice is issued.

c. Lease arrangements

Line Item	Related Party Name and Categories	December 31, 2019
Lease liabilities - current	Investors with significant influence over the company	
	VisEra	$ 16,074
	TSMC-NA	7,493
		$ 23,567
Lease liabilities - non-current	Investors with significant influence over the company	
	VisEra	$ 82,831
	TSMC-NA	1,759
		$ 84,590

Items	Related Party Name and Categories	Year Ended December 31, 2019
Interest expense	Investors with significant influence over the company	
	VisEra	$ 1,079
	TSMC-NA	275
		$ 1,354

Items	Related Party Name and Categories	Year Ended December 31, 2018
Lease expense	Investors with significant influence over the company	$ 16,992
	VisEra	9,023
	TSMC-NA	
		$ 26,015

The Company leased server room and office from related parties. The lease terms and prices were determined in accordance with mutual agreements. The rental expense was paid monthly.

d. Compensation of key management personnel:

The remuneration to directors and other key management personnel were as follows:

	Years Ended December 31 2019	2018
Short-term employee benefits	$ 60,803	$ 100,644
Post-employment benefits	436	540
	$ 61,239	$ 101,184

The remuneration to directors and other key management personnel were determined by the Compensation Committee of GUC in accordance with the individual performance and the market trends.

26. PLEDGED OR MORTGAGED ASSETS

As of December 31, 2019 and 2018 GUC provided pledged time deposits of NT$20,000 thousand as collateral for customs clearance and also provided pledged time deposits of NT$2,200 thousand as collateral for lease a parcel of land from the Science Park Administration (SPA).

27. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

GUC has entered into license agreements with several companies that own intellectual property rights. According to the agreements, GUC shall pay specific amounts of money to obtain licenses of their intellectual property rights or shall pay royalties at specific percentages of sales amount of identified products. Under the agreements GUC shall pay at least US$9,400 thousand to the counter parties in the period since December 2017.

GUC has entered into a license agreement, and according to the agreement, GUC shall pay specific amounts of money to obtain license of their intellectual property rights. Under the agreement GUC shall pay at least US$2,000 thousand to the counter party in the period from December 2019 to March 2022.

GUC also has entered into license agreements, and according to the agreement, GUC shall pay at least US$5,000 thousand and US$5,500 thousand to the counter party in the period from May 2019 to April 2022 and October 2021, respectively.

28. EXCHANGE RATE INFORMATION OF FOREIGN-CURRENCY FINANCIAL ASSETS AND LIABILITIES

The following information was aggregated by the foreign currencies other than functional currencies of the Company entities. The significant foreign-currency financial assets and liabilities were as follows:

(Unit: Foreign Currency in Thousands)

	Foreign Currencies (In Thousands)	Exchange Rate (Note)	Carrying Amount
December 31, 2019			
Monetary items of financial assets			
USD	$ 94,947	29.98	$ 2,846,524
Monetary items of financial liabilities			
USD	60,445	29.98	1,812,142
JPY	68,933	0.2760	19,026
RMB	2,781	4.2975	11,953
			(Continued)

	Foreign Currencies (In Thousands)	Exchange Rate (Note)	Carrying Amount
December 31, 2018			
Monetary items of financial assets			
USD	$ 74,869	30.715	$ 2,299,597
EUR	117	35.2	4,103
Monetary items of financial liabilities			
USD	43,490	30.715	1,335,788
JPY	61,326	0.2782	17,061
EUR	152	35.2	5,367
			(Concluded)

Note: Exchange rate represents the number of N.T. dollars for which one foreign currency could be exchanged.

The significant (realized and unrealized) foreign exchange gains (losses) were as follows:

	Years Ended December 31			
	2019		2018	
Foreign Currencies	Exchange Rate	Net Foreign Exchange Gain (Loss)	Exchange Rate	Net Foreign Exchange Gain (Loss)
JPY	0.2837 (JPY:NTD)	$ 1,093	0.2730 (JPY:NTD)	$ 781
RMB	4.4934 (RMB:NTD)	251	4.5666 (RMB:NTD)	228
KRW	0.02674 (KRW:NTD)	5	0.02761 (KRW:NTD)	3
EUR	34.6128 (EUR:NTD)	1	35.6055 (EUR:NTD)	137
USD	30.9117 (USD:NTD)	(8,247)	30.1492 (USD:NTD)	(4,397)
USD	1,153.9261 (USD:KRW)	(52)	1,089.2091 (USD:KRW)	(33)
USD	6.8826 (USD:RMB)	964	6.6070 (USD:RMB)	4,072
		$ (5,985)		$ 791

29. OPERATING SEGMENT INFORMATION

The Company operates in individual industry on the basis of how the Company's chief operating decision maker regularly reviews information in order to allocate resources and assess performance. The basis for the measurement of the operating segment profit (loss), assets and liabilities is the same as that for the preparation of financial statements. Please refer to the consolidated financial statements for the related operating segment information and Note 15 for information about disaggregation of revenue.

a. Geographic information

	Non-current Assets	
	December 31	
	2019	2018
Taiwan	$ 1,548,177	$ 1,349,035
Europe	28,691	855
China	25,583	14,088
Japan	25,363	2,147
United States	14,744	9,818
Korea	303	776
	$ 1,642,861	$ 1,376,719

Non-current assets include property, plant and equipment, right-of-use assets and intangible assets, but exclude financial instrument and deferred income tax assets.

b. Major customers representing at least 10% of net revenue

	Years Ended December 31			
	2019		2018	
	Amount	%	Amount	%
Customer A	$ 1,176,194	11	(Note)	-
Customer B	(Note)	-	$ 2,524,693	19
Customer C	(Note)	-	1,442,243	11

Note: The customer did not exceed 10% of net revenue in the current year, the disclosure is not required.

30. ADDITIONAL DISCLOSURES

a. Significant transactions and b. Related information of reinvestment

1) Financings provided: None;

2) Endorsements/guarantees provided: None;

3) Marketable securities held (excluding investments in subsidiaries, associates and jointly controlled entities): Please see 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: Please see Table 2 attached;

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 of at least NT$100 million or 20% of the paid-in capital: Please see Table 3 attached;

8) Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital: None;

9) Information about the derivative instruments transaction: None;

10) Others: Intercompany relationships and significant intercompany transactions: Please see Table 4 attached;

11) Names, locations, and related information of investees over which the Company exercises significant influence (excluding information on investment in Mainland China): Please see Table 5 attached;

c. Information on investment in Mainland China

1) The name of the investee in Mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, net income (losses) of the investee, investment income (losses), ending balance, amount received as dividends from the investee, and the limitation on investee: Please see Table 6 attached.

2) Significant direct or indirect transactions with the investee, its prices and terms of payment, unrealized gain or loss, and other related information which is helpful to understand the impact of investment in Mainland China on financial reports: Please see Table 4 attached.

TABLE 1

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

MARKETABLE SECURITIES HELD
DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2019				Note
				Shares	Carrying Amount	Percentage of Ownership (%)	Fair Value	
GUC	Preferred stock							
	eTopus Technology Inc.	-	Financial assets at fair value through profit or loss - non-current	1,515,151	$ -	3.0	$ -	

TABLE 2

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

MARKETABLE SECURITIES ACQUIRED AND DISPOSED OF AT COSTS OR PRICES OF AT LEAST NT$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Type and Name of Marketable Securities	Financial Statement Account	Counter party	Relationship	Beginning Balance		Acquisition		Disposal				Ending Balance	
					Shares	Amount	Shares	Amount	Shares	Amount	Carrying Amount	Gains on Disposal	Shares	Amount
GUC	Taishin 1699 Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	$ -	33,231,969	$ 450,000	33,231,969	$ 450,369	$ 450,000	$ 369	-	$ -
	Jih Sun Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	-	30,983,154	460,000	30,983,154	460,250	460,000	250	-	-
	UPAMC James Bond Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	-	21,849,378	365,000	21,849,378	365,097	365,000	97	-	-
	Fuh Hwa Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	-	38,066,792	550,000	38,066,792	550,077	550,000	77	-	-

TABLE 3

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

TOTAL PURCHASE FROM OR SALE TO RELATED PARTIES OF AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars)

Company Name	Related Party	Nature of Relationship	Transaction Details				Abnormal Transaction		Accounts Payable or Receivable		Note
			Purchases/ Sales	Amount	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance	% to Total	
GUC	TSMC	TSMC is an investor accounted for using equity method	Purchases	$ 2,921,516	70	30 days after monthly closing	Note 25	Note 25	$ (437,078)	(28)	
			Sales	120,699	1	30 days after monthly closing	Note 25	Note 25	41,108	3	
	TSMC-NA	TSMC-NA is a subsidiary of TSMC	Purchases	1,193,214	29	30 days after invoice date and 30 days after monthly closing	Note 25	Note 25	(283,396)	(18)	

TABLE 4

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars)

No.	Company Name	Counter Party	Nature of Relationship (Note 1)	Intercompany Transactions			
				Financial Statement Account	Amount	Terms (Note 2)	Percentage to Consolidated Net Revenue or Total Assets
0	GUC	GUC-NA	1	Manufacturing overhead	$ 69,929	-	1%
				Operating expenses	215,124	-	2%
				Accrued expenses and other current liabilities	18,971	-	-
		GUC-Japan	1	Manufacturing overhead	158,361	-	1%
				Operating expenses	75,841	-	1%
				Accrued expenses and other current liabilities	19,026	-	-
		GUC-Europe	1	Manufacturing overhead	5,284	-	-
				Operating expenses	28,227	-	-
				Accrued expenses and other current liabilities	2,648	-	-
		GUC-Korea	1	Manufacturing overhead	3,412	-	-
				Operating expenses	3,752	-	-
				Accrued expenses and other current liabilities	524	-	-
		GUC-BVI	1	Investments accounted for using the equity method (Note 3)	35,784	-	-
		GUC-Shanghai	1	Manufacturing overhead	53,065	-	-
				Operating expenses	28,365	-	-
				Accrued expenses and other current liabilities	6,194	-	-
		GUC-Nanjing	1	Manufacturing overhead	400,188	-	4%
				Operating expenses	21,062	-	-
				Accounts payable	29,168	-	-
				Accrued expenses and other current liabilities	5,759	-	-

Note 1: No. 1 represents the transactions from parent company to subsidiary.

Note 2: The intercompany transactions, prices and terms are determined in accordance with mutual agreements and no other similar transactions could be compared with.

Note 3: In order to restructure organization, GUC acquired all equity interest of GUC-Shanghai from GUC-BVI in August 2019. GUC BVI has been liquidated in November 2019.

TABLE 5

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

NAMES, LOCATIONS, AND RELATED INFORMATION OF INVESTEES OVER WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE (EXCLUDING INFORMATION ON INVESTMENT IN MAINLAND CHINA)
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount: December 31, 2019 (Foreign Currencies in Thousands)	Original Investment Amount: December 31, 2018 (Foreign Currencies in Thousands)	Balance as of December 31, 2019: Shares	Balance as of December 31, 2019: Percentage of Ownership (%)	Balance as of December 31, 2019: Carrying Amount	Net Income (Losses) of the Investee	Investment Income (Losses)	Note
GUC	GUC-NA	U.S.A.	Products consulting, design and technical support service	$ 40,268 (US$ 1,264)	$ 40,268 (US$ 1,264)	800,000	100	$ 128,110	$ 12,514	$ 12,514	
	GUC-Japan	Japan	Products consulting, design and technical support service	15,393 (YEN 55,000)	15,393 (YEN 55,000)	1,100	100	50,925	9,431	9,431	
	GUC-BVI	British Virgin Islands	Investing activities	-	152,603 (US$ 5,050)	-	-	-	1,694	1,694	Note
	GUC-Europe	Netherlands	Products consulting, design and technical support service	8,109 (EUR 200)	8,109 (EUR 200)	-	100	10,156	1,568	1,568	
	GUC- Korea	Korea	Products consulting, design and technical support service	5,974 (KRW222,545)	5,974 (KRW222,545)	44,000	100	6,704	355	355	

Note: In order to restructure organization, GUC acquired all equity interest of GUC-Shanghai from GUC-BVI in August 2019. GUC BVI has been liquidated in November 2019.

TABLE 6

GLOBAL UNICHIP CORP. AND SUBSIDIARIES

INFORMATION ON INVESTMENT IN MAINLAND CHINA
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investee Company	Main Businesses and Products	Total Amount of Paid-in Capital (US$ in Thousands)	Method of Investment	Accumulated Outflow of Investment from Taiwan as of January 1, 2019 (US$ in Thousands)	Investment Flows: Outflow	Investment Flows: Inflow	Accumulated Outflow of Investment from Taiwan as of December 31, 2019 (US$ in Thousands)	Net Income (Losses) of the Investee	Percentage of Ownership	Investment Income (Losses) (Note 2)	Carrying Amount as of December 31, 2019	Accumulated Inward Remittance of Earnings as of December 31, 2019
GUC-Nanjing	Products consulting, design and technical support service	$ 90,138 (US$ 3,000)	(Note 1)	$ 90,138 (US$ 3,000)	$ -	$ -	$ 90,138 (US$ 3,000)	$ 64,591	100%	$ 64,591	$ 150,997	$ -
GUC-Shanghai (Note 3)	Products consulting, design and technical support service	31,165 (US$ 1,000)	(Note 1)	31,165 (US$ 1,000)	-	-	31,165 (US$ 1,000)	4,200	100%	4,200	35,735	-

Accumulated Investment in Mainland China as of December 31, 2019 (US$ in Thousands)	Investment Amounts Authorized by Investment Commission, MOEA (US$ in Thousands)	Upper Limit on Investment (US$ in Thousands)
$ 121,303 (US$ 4,000)	$ 121,303 (US$ 4,000)	$ 2,587,784 (Note 4)

Note 1: The Company invested the investee directly.

Note 2: Investment income (losses) was determined based on unaudited financial statements.

Note 3: In order to restructure organization, GUC acquired all equity interest of GUC-Shanghai from GUC-BVI in August 2019. GUC-BVI has been liquidated in November 2019.

Note 4: Subject to 60% of net asset value of GUC according to the revised “Guidelines Governing the Approval of Investment or Technical Cooperation in Mainland China” issued by the Investment Commission.

Chapter 7

Standalone Financial Statements

Global Unichip Corp.

Parent Company Only Financial Statements for the Years Ended December 31, 2019 and 2018 and Independent Auditors' Report

Deloitte.

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INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders
Global Unichip Corp.

Opinion

We have audited the accompanying parent company only financial statements of Global Unichip Corp. (the "Company"), which comprise the parent company only balance sheets as of December 31, 2019 and 2018, and the parent company only statements of comprehensive income, statements of changes in equity and statements of cash flows for the years then ended, and the notes to the parent company only financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying parent company only financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, 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 audit 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 section Auditors' Responsibilities for the Audit of the Parent Company Only Financial Statements section of our report. We are independent of the Company in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, 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 parent company only financial statements for the year ended December 31, 2019. These matters were addressed in the context of our audit of the parent company only financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of inventory

Due to the current rapidly changes in technology and the highly competitive business environment, the price of products fluctuating quickly, evaluating the changes in the net realizable value of inventory could have a material impact on the parent company only financial statements. As of December 31, 2019 the carrying amount of inventory was NT$1,778,484 thousand and accounted for 21% of the total assets in the parent company only balance sheet. Please refer to Notes 4, 5 and 7 to the parent company only financial statements for the details of the information and accounting policy about inventory. As the Company's primary business model is composed of rendering services and the sales of goods and the Company requires that inventories be stated at the lower of cost or net realizable value in accordance with IAS 2, when determining net realizable value of inventory for obsolescent and unmarketable items, the Company should consider the inventory accounting policy and the production schedule at the same time. As uncertainty exists in management's judgment when the determining the loss on inventory, the valuation of inventory has been identified as a key audit matter.

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

1. Understood the design of the key controls over the valuation of inventory.

2. Verified the reasonableness of the net realizable value of inventory by sampling from the year-end schedule of the raw materials, work in process, and finished goods, respectively, and matching the recent sales information.

3. Performed a retrospective review to analyze the historical reasonableness of judgments with reference to actual amounts of inventory loss.

Responsibilities of Management and Those Charged with Governance for the Parent Company Only Financial Statements

Management is responsible for the preparation and fair presentation of the parent company only financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and for such internal control as management determines is necessary to enable the preparation of parent company only financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company only financial statements, management is responsible for assessing the 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 members of the Audit Committee) are responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Parent Company Only Financial Statements

Our objectives are to obtain reasonable assurance about whether the parent company only financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an 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 parent company only 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 parent company only financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

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 parent company only financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our 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 parent company only financial statements, including the disclosures, and whether the parent company only financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient and appropriate audit evidence on the financial information of components constituting the Company to express an opinion on the parent company only 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 statements 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 2019 parent company only financial statements 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 Yih-Shin Kao and Yu Feng Huang.

Deloitte & Touche
Taipei, Taiwan
The Republic of China

February 6, 2020

<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 accepted and 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.

GLOBAL UNICHIP CORP.

PARENT COMPANY ONLY BALANCE SHEETS
(In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2019 Amount	%	December 31, 2018 Amount	%
CURRENT ASSETS				
Cash and cash equivalents	$ 2,298,887	28	$ 3,697,975	46
Contract assets (Note 16)	324,965	4	56,976	1
Accounts receivable, net (Notes 6 and 16)	1,377,203	17	903,168	11
Receivables from related parties (Note 26)	41,108	-	7,038	-
Inventories (Note 7)	1,778,484	21	1,274,954	16
Other financial assets	330	-	845	-
Other current assets (Notes 12 and 26)	464,689	6	440,555	5
Total current assets	6,285,666	76	6,381,511	79
NON-CURRENT ASSETS				
Investments accounted for using equity method (Note 8)	382,627	5	305,295	4
Property, plant and equipment (Note 9)	961,415	12	1,061,015	13
Right-of-use-assets (Note 10)	174,807	2	-	-
Intangible assets (Note 11)	411,954	5	288,020	3
Deferred income tax assets (Note 20)	38,744	-	58,580	1
Refundable deposits (Note 26)	7,599	-	8,250	-
Pledged time deposits (Note 27)	22,200	-	22,200	-
Total non-current assets	1,999,346	24	1,743,360	21
TOTAL	$ 8,285,012	100	$ 8,124,871	100

LIABILITIES AND EQUITY	December 31, 2019 Amount	%	December 31, 2018 Amount	%
CURRENT LIABILITIES				
Contract liabilities (Note 16)	$ 1,109,042	13	$ 869,174	11
Accounts payable	783,908	10	732,365	9
Payables to related parties (Note 26)	759,661	9	505,538	6
Accrued employees' compensation and remuneration to directors (Note 22)	80,691	1	167,433	2
Payables on machinery and equipment	58,524	1	364,475	4
Current tax liabilities (Note 20)	73,064	1	127,326	2
Lease-liabilities-current (Notes 10, 23 and 26)	29,413	-	-	-
Accrued expenses and other current liabilities (Notes 13 and 26)	742,407	9	885,971	11
Total current liabilities	3,636,710	44	3,652,282	45
NON-CURRENT LIABILITIES				
Deferred income tax liabilities (Note 20)	41,127	1	22,141	-
Lease-liabilities-non-current (Notes 10, 23 and 26)	146,222	2	-	-
Other long-term payables (Note 13)	112,877	1	53,239	1
Net defined benefit liabilities (Note 14)	32,104	-	28,233	-
Guarantee deposits (Note 23)	2,998	-	3,072	-
Total non-current liabilities	335,328	4	106,685	1
Total liabilities	3,972,038	48	3,758,967	46
EQUITY (Note 15)				
Share capital	1,340,119	16	1,340,119	17
Capital surplus	32,578	-	32,543	-
Retained earnings				
Appropriated as legal reserve	762,708	9	663,892	8
Appropriated as special reserve	8,636	-	10,940	-
Unappropriated earnings	2,189,678	27	2,327,046	29
Others	(20,745)	-	(8,636)	-
Total equity	4,312,974	52	4,365,904	54
TOTAL	$ 8,285,012	100	$ 8,124,871	100

The accompanying notes are an integral part of the parent company only financial statements.

GLOBAL UNICHIP CORP.

PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2019 Amount	%	2018 Amount	%
NET REVENUE (Notes 16 and 26)	$ 10,710,068	100	$ 13,459,804	100
COST OF REVENUE (Notes 22 and 26)	7,545,721	70	9,801,830	73
GROSS PROFIT	3,164,347	30	3,657,974	27
OPERATING EXPENSES				
Sales and marketing (Notes 22 and 26)	298,212	3	325,324	2
General and administrative (Notes 22 and 26)	297,233	3	330,573	2
Research and development (Notes 22 and 26)	1,903,320	18	1,948,447	15
Expected credit impairment loss (Note 6)	19,921	-	-	-
Total operating expenses	2,518,686	24	2,604,344	19
INCOME FROM OPERATIONS	645,661	6	1,053,630	8
NON-OPERATING INCOME AND EXPENSES				
Other income (Notes 10, 17 and 26)	31,830	-	34,449	-
Other gains and losses (Note 18)	(6,552)	-	(1,974)	-
Finance costs (Notes 19 and 26)	(2,202)	-	-	-
Share of profit of subsidiaries	92,180	1	35,921	-
Total non-operating income and expenses	115,256	1	68,396	-
INCOME BEFORE INCOME TAX	760,917	7	1,122,026	8
INCOME TAX EXPENSE (Note 20)	127,450	1	133,870	1
NET INCOME	633,467	6	988,156	7
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss				
Remeasurement of defined benefit plans (Note 14)	(4,263)	-	(1,782)	-
Items that may be reclassified subsequently to profit or loss				
Exchange differences on translation of foreign operations (Note 15)	(12,109)	-	2,304	-
Other comprehensive income (loss) for the year, net of income tax	(16,372)	-	522	-
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 617,095	6	$ 988,678	7
EARNINGS PER SHARE (Note 21)				
Basic earnings per share	$ 4.73		$ 7.37	
Diluted earnings per share	$ 4.71		$ 7.33	

The accompanying notes are an integral part of the parent company only financial statements.

GLOBAL UNICHIP CORP.

PARENT COMPANY ONLY STATEMENTS OF CHANGES IN EQUITY
(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

	Share Capital - Common Stock			Retained Earnings				Others	
	Share (In Thousands)	Amount	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings	Total	Foreign Currency Translation Reserve	Total Equity
BALANCE, JANUARY 1, 2018	134,011	$ 1,340,119	$ 32,513	$ 578,411	$ 1,514	$ 2,105,639	$ 2,685,564	$ (10,940)	$ 4,047,256
Appropriation and distribution of prior year's earnings									
Legal reserve	-	-	-	85,481	-	(85,481)	-	-	-
Special reserve	-	-	-	-	9,426	(9,426)	-	-	-
Cash dividends to shareholders - NT$5.00 per share	-	-	-	-	-	(670,060)	(670,060)	-	(670,060)
Total	-	-	-	85,481	9,426	(764,967)	(670,060)	-	(670,060)
Dividends from claims extinguished by prescription	-	-	30	-	-	-	-	-	30
Net income in 2018	-	-	-	-	-	988,156	988,156	-	988,156
Other comprehensive income (loss) in 2018, net of income tax	-	-	-	-	-	(1,782)	(1,782)	2,304	522
Total comprehensive income in 2018	-	-	-	-	-	986,374	986,374	2,304	988,678
BALANCE, DECEMBER 31, 2018	134,011	1,340,119	32,543	663,892	10,940	2,327,046	3,001,878	(8,636)	4,365,904
Appropriation and distribution of prior year's earnings									
Legal reserve	-	-	-	98,816	-	(98,816)	-	-	-
Reversal of special reserve	-	-	-	-	(2,304)	2,304	-	-	-
Cash dividends to shareholders - NT$5.00 per share	-	-	-	-	-	(670,060)	(670,060)	-	(670,060)
Total	-	-	-	98,816	(2,304)	(766,572)	(670,060)	-	(670,060)
Dividends from claims extinguished by prescription	-	-	35	-	-	-	-	-	35
Net income in 2019	-	-	-	-	-	633,467	633,467	-	633,467
Other comprehensive loss in 2019, net of income tax	-	-	-	-	-	(4,263)	(4,263)	(12,109)	(16,372)
Total comprehensive income (loss) in 2019	-	-	-	-	-	629,204	629,204	(12,109)	617,095
BALANCE, DECEMBER 31, 2019	134,011	$ 1,340,119	$ 32,578	$ 762,708	$ 8,636	$ 2,189,678	$ 2,961,022	$ (20,745)	$ 4,312,974

The accompanying notes are an integral part of the parent company only financial statements.

GLOBAL UNICHIP CORP.

PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 760,917	$ 1,122,026
Adjustments for:		
Depreciation	314,014	177,579
Amortization	252,779	226,368
Expected credit impairment loss	19,921	-
Gain on financial assets at fair value through profit or loss	(944)	(1,278)
Finance costs	2,202	-
Interest income	(24,786)	(26,473)
Share of profit of subsidiaries	(92,180)	(35,921)
Loss on disposal of property, plant and equipment, net	-	4
Loss on disposal of investments accounted for using equity method	625	-
Loss (gain) on foreign exchange, net	(10,860)	13,581
Gain on lease modification	(26)	-
Changes in operating assets and liabilities:		
Contract assets	(267,989)	(43,584)
Accounts receivable (including related parties)	(543,150)	(8,578)
Inventories	(503,530)	(122,440)
Other financial assets	212	(166)
Other current assets	(40,746)	(8,832)
Contract liabilities	239,868	(761,107)
Accounts payable (including related parties)	322,970	(580,231)
Accrued employees' compensation and remuneration to directors	(86,742)	21,726
Accrued expenses and other current liabilities	(178,528)	307,898
Net defined benefit liabilities	(392)	(490)
Cash generated from operations	163,635	280,082
Income tax paid	(128,458)	(89,293)
Net cash generated from operating activities	35,177	190,789
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of:		
Financial assets at fair value through profit or loss	(2,085,000)	(2,310,000)
Investments accounted for using equity method	(35,784)	(44,721)
Property, plant and equipment	(485,710)	(512,744)
Intangible assets	(271,317)	(239,873)
Proceeds from disposal of:		
Financial assets at fair value through profit or loss	2,085,944	2,311,278
Investments accounted for using equity method	37,898	-
Property, plant and equipment	-	3,305
Refundable deposits paid	(2,377)	(6,993)
Refundable deposits refunded	3,028	1,095
Interest received	25,089	26,992
Net cash used in investing activities	(728,229)	(771,661)

(Continued)

GLOBAL UNICHIP CORP.

PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	2019	2018
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayment of the principal portion of lease liabilities	$ (33,809)	$ -
Cash dividends paid	(670,060)	(670,060)
Interest paid	(2,202)	-
Dividends from claims extinguished by prescription reclassified to capital surplus	35	30
Net cash used in financing activities	(706,036)	(670,030)
NET DECREASE IN CASH AND CASH EQUIVALENTS	(1,399,088)	(1,250,902)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	3,697,975	4,948,877
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 2,298,887	$ 3,697,975

The accompanying notes are an integral part of the parent company only financial statements. (Concluded)

GLOBAL UNICHIP CORP.

NOTES TO PARENT COMPANY ONLY FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

1. GENERAL

Global Unichip Corp. (the “Company”), a Republic of China (R.O.C.) corporation, was incorporated on January 22, 1998. The Company is engaged mainly in researching, developing, producing, testing and selling of embedded memory and logic components for various application ICs, cell libraries for various application ICs, and EDA tools for various application ICs. On November 3, 2006, the Company’s shares were listed on the Taiwan Stock Exchange (TWSE). The address of its registered office and principal place of business is No. 10 Li-Hsin 6th Rd., Hsinchu Science Park, Taiwan.

2. APPROVAL OF FINANCIAL STATEMENTS

The parent company only financial statements were approved and authorized by the Audit Committee and the Board of Directors for issue on February 6, 2020.

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), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) (collectively, the “IFRSs”) endorsed and issued into effect by the Financial Supervisory Commission (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 16 “Leases”

      IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessee and lessor. It supersedes IAS 17 “Leases”, IFRIC 4 “Determining whether an Arrangement contains a Lease”, and a number of related interpretations, refer to Note 4 for information relating to the relevant accounting policies.

      Definition of a lease

      The Company elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into (or changed) on or after January 1, 2019. Contracts identified as containing a lease under IAS 17 and IFRIC 4 are not reassessed and are accounted for in accordance with the transitional provisions under IFRS 16.

      The Company as lessee

      The Company recognizes right-of-use assets and lease liabilities for all leases on the parent company only balance sheets except for those whose payments under low-value asset and short-term leases are recognized as expenses on a straight-line basis. On the parent company only statements of comprehensive income, the Company presents 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 parent company only statements of cash flows, cash payments for the principal portion of lease liabilities and cash payments for the interest portion are classified within financing activities. Prior to the application of IFRS 16, payments under operating lease contracts were recognized as expenses on a straight-line basis. Cash flows for operating leases were classified within operating activities on the statements of cash flows.

The Company elects to apply IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized on January 1, 2019. Comparative information is not restated.

Lease liabilities were recognized on January 1, 2019 for leases previously classified as operating leases under IAS 17. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019. Right-of-use assets were measured at their carrying amount as if IFRS 16 had been applied since the commencement date, but discounted using the aforementioned incremental borrowing rate. The Company applies IAS 36 to all right-of-use assets.

The Company also applies the following practical expedients:

a) The Company applies a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.

b) The Company accounts for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.

c) The Company excludes initial direct costs from the measurement of right-of-use assets on January 1, 2019.

d) The Company uses hindsight, such as in determining lease terms, to measure lease liabilities.

The weighted average lessee's incremental borrowing rate applied to lease liabilities recognized on January 1, 2019 was 1.158%. The difference between the (i) lease liabilities recognized and (ii) operating lease commitments disclosed under IAS 17 on December 31, 2018 is explained as follows:

The future minimum lease payments of non-cancellable operating lease commitments on December 31, 2018	$ 95,541
Less: Recognition exemption for short-term leases	-
Undiscounted amounts on January 1, 2019	$ 95,541
Discounted amounts using the incremental borrowing rate on January 1, 2019	$ 93,870
Add: Adjustments as a result of a different treatment of extension options	108,476
Lease liabilities recognized on January 1, 2019	$ 202,346

The Company as lessor

The Company subleased its leasehold parking lot to a third party from 2016. Such sublease was classified as an operating lease under IAS 17. The Company determines the sublease is classified as an operating lease on the basis of the contractual terms and conditions of the head lease and sublease on January 1, 2019.

The impact on assets, liabilities and equity as of January 1, 2019 from the initial application of IFRS 16 is set out as follows:

	As Originally Stated on January 1, 2019	Adjustments Arising from Initial Application	Restated on January 1, 2019
Right-of-use assets	$ -	$ 202,346	$ 202,346
Total effect on assets	$ -	$ 202,346	$ 202,346
Lease liabilities - current	$ -	$ 33,788	$ 33,788
Lease liabilities - non-current	-	168,558	168,558
Total effect on liabilities	$ -	$ 202,346	$ 202,346

b. The IFRSs issued by International Accounting Standards Board (IASB) and endorsed by the FSC from the starting day of 2020

New IFRSs	Effective Date Announced by IASB
Amendments to IFRS 3 "Definition of a Business"	January 1, 2020 (Note 1)
Amendments to IFRS 9, IAS 39 and IFRS 7 "Interest Rate Benchmark Reform"	January 1, 2020 (Note 2)
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020 (Note 3)

Note 1: The Company 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 2: The Company shall apply these amendments retrospectively for annual reporting periods beginning on or after January 1, 2020.

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

As of the date the parent company only financial statements were authorized for issue, the Company assessed no material the possible impact that the application of above standards and interpretations will have on the Company's financial position and financial performance.

c. The IFRSs issued by IASB but not yet endorsed and issued into effect by the FSC

New IFRSs	Effective Date Announced by IASB (Note 1)
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture"	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2021
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	January 1, 2022

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

As of the date the parent company only financial statements were authorized for issue, the Company is continuously assessing the possible impact that the application of above 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 POLICIES

For the convenience of readers, the accompanying parent company only financial statements have been translated into English from the original Chinese version prepared and used in the R.O.C. 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 parent company only financial statements shall prevail.

Significant accounting policies are summarized as follows:

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.

Basis of Preparation

The parent company only financial statements have been prepared on the historical cost basis except for financial instruments which are measured at fair value and net defined benefit liabilities which are measured at the present value of the defined benefit obligation less the fair value of plan assets, as explained in the accounting policies below.

Historical cost is generally based on the fair value of the consideration given in exchange for assets.

When preparing these parent company only financial statements, the Company used the equity method to account for its investments in subsidiaries. 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 owners of the Company in its consolidated financial statements, adjustments arising from the differences in accounting treatments between the parent company only basis and the consolidated basis were made to investments accounted for using equity method, the share of profit or loss of subsidiaries and the related equity items, as appropriate, in these parent company only financial statements.

Foreign Currencies

In preparing the parent company only financial statements, 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. Such exchange differences 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 on the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences on the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which case, the exchange differences are also recognized directly in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

For the purposes of presenting parent company only financial statements, the assets and liabilities of the Company's foreign operations are translated into NT$ using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity.

Classification of Current and Non-current Assets and Liabilities

Current assets include:

a. Assets held primarily for the purpose of trading;

b. Assets expected to be realized within twelve months after the reporting period; and

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

Current liabilities include:

a. Liabilities held primarily for the purpose of trading;

b. Liabilities due to be settled within twelve months after the reporting period; and

c. Liabilities for which the Company does not have an unconditional right to defer settlement for at least twelve 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.

Cash Equivalents

Cash equivalents, for the purpose of meeting short-term cash commitments, consist of highly liquid time deposits and investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Financial Instruments

Financial assets and liabilities shall be recognized when the Company becomes a party to the contractual provisions of the instruments.

Financial assets and liabilities are initially recognized at fair values. 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.

Financial Assets

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

a. Measurement category

   Financial assets are classified into the following categories: Financial assets at fair value through profit or loss (FVTPL) and financial assets at amortized cost.

1) Financial assets at FVTPL

Financial assets at FVTPL includes the financial assets are mandatorily classified as at FVTPL, which includes investments in equity instruments which are not designated as at fair value through other comprehensive income (FVOCI) and debt instruments that do not meet the amortized cost criteria or the FVOCI criteria.

Financial assets at FVTPL are subsequently measured at fair value, and any dividends, interest earned and remeasurement gains or losses on such financial assets are recognized in other gains or losses. Fair value is determined in the manner described in Note 25: Financial Instruments.

2) Financial assets at amortized cost

Financial assets that meet the following 2 conditions are subsequently measured at amortized cost:

a) The financial asset is held within a business model whose objective is collecting contractual cash flows; and

b) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition, financial assets at amortized cost (including cash and cash equivalents, notes and accounts receivable (including related parties) and other receivables), are measured at amortized cost, which equals gross carrying amount determined by the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

b. Impairment of financial assets and contract assets

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

The Company always recognizes lifetime Expected Credit Losses (ECLs) for trade 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 the financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

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

For poor credit rating customers have accounts receivable balances past due over 90 days, the Company recognizes loss allowance at full amount.

The impairment loss of all financial assets is recognized in profit or loss by a reduction in their carrying amounts through a loss allowance account.

c. Derecognition of financial assets

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

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.

Financial Liabilities and Equity Instruments

a. Classification as debt or equity

Debt and equity instruments issued by the Company are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

b. Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

c. Financial liabilities

Financial liabilities are subsequently measured at amortized cost using effective interest method.

Financial liabilities other than those held for trading purposes and designated as at FVTPL are subsequently measured at amortized cost at the end of each reporting period.

d. Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

Inventories

Inventories consist of raw materials, supplies, finished goods and work-in-process. Inventories are stated at the lower of cost or net realizable value. Inventory write-downs are made on an item-by-item basis, 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 necessary selling costs. Inventories are recorded at weighted-average cost on the balance sheet date.

Investments Accounted for Using Equity Method

The Company uses the equity method to account for its investments in subsidiaries. A subsidiary is the entity that is controlled by the Company.

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

Profits or losses resulting from downstream transactions with subsidiaries are eliminated in full in the parent company only financial statements. Profits and losses resulting from upstream transactions with subsidiaries and transactions between subsidiaries are recognized in the parent company only financial statements only to the extent of interests in the subsidiaries that are not related to the Company.

Property, Plant and Equipment

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment. Costs include any incremental costs that are directly attributable to the construction or acquisition of the item of property, plant and equipment.

Depreciation is recognized so as to write off the cost of the assets less their residual values over their useful lives, and it is computed using the straight-line method over the following estimated useful lives:

Buildings	50 years
Machinery and equipment	4 to 7 years
Research and development equipment	3 to 5 years
Transportation equipment	5 years
Office equipment	3 to 5 years
Miscellaneous equipment	2 to 10 years

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

Leases

2019

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

a. The Company as lessor

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

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

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases. Initial direct costs incurred in obtaining operating leases are added to the carrying amounts of the underlying assets and recognized as expenses on a straight-line basis over the lease terms.

b. The Company as lessee

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

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

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

Lease liabilities are initially measured at the present value of the lease payments, which comprise fixed payments, in-substance fixed payments and variable lease payments which depend on an index or a rate. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Company uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Company remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the parent company only balance sheets.

2018

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

Rental income from operating lease is recognized on a straight-line basis over the term of the relevant lease. Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

Intangible Assets

Intangible assets are limited in a certain useful life. The initial book value is recorded on the purchasing cost itself. After that the subsequent book value is measured by cost less accumulated amortization and accumulated impairment losses. Amortization is recognized using the straight-line method over the following estimated useful lives:

Software	2 to 5 years
Technology license fees	The term of the technology authorization contract
Patents	Economic lives of the patents

The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Expenditure on research activities is recognized as an expense when incurred. An internally-generated intangible asset arising from development activities is capitalized and then amortized on a straight-line basis over its useful life if the recognition criteria for an intangible asset have been met; otherwise, the development expenditure is recognized as an expense when incurred.

Impairment of Tangible and Intangible Assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets 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. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs to sell or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

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. An impairment loss is recognized immediately in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset or a cash-generating unit is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

Revenue Recognition

The Company identifies the contract with the customers, allocates the transaction price to the performance obligations, and recognizes revenue when performance obligations are satisfied. Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances.

Revenue from sale of goods

Recognized when a customer obtains control of promised goods, at which time the goods are delivered to the customer's specific location and performance obligation is satisfied.

Rendering of Non-Recurring Engineering (NRE) services

Recognized the revenue when the NRE service is completed, which meet the qualifications of customer's contract. If each performance obligation can be measured reasonably by completion stages, the contract is restricted for another use, and the customer would compensate the company to recover the costs incurred plus a reasonable profit margin whenever the contract is terminated by the customer, revenues of the contract service will be recognized over time.

Retirement Benefits

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

Defined benefit costs under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost and net interest on the net defined benefit liability are recognized as employee benefits expense in the period they occur. Remeasurement is recognized in other comprehensive income in the period in which they occur, and it is reflected in retained earnings immediately and will not be reclassified to profit or loss.

Net defined benefit liability represents the actuarial deficit in the Company's defined benefit plan.

Taxation

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

Current tax

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

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

Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the parent company only financial statements 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 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 in subsidiaries, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments 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. The deferred tax assets which originally not recognized is also reviewed at the end of each reporting period and increased to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the period in 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.

Current and deferred tax for the period

Current and deferred tax 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 tax are also recognized in other comprehensive income or directly in equity, respectively.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY

In the application of the Company's accounting policies, which are described in Note 4, the directors are 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 to be 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 periods.

CRITICAL ACCOUNTING JUDGMENTS

Revenue Recognition

The Company evaluates whether its performance obligation is satisfied over time or at a point in time in accordance with respective contract with a customer and applicable regulation when the conditions described in Note 4 are satisfied.

The Company also records a provision for estimated future allowances in the same period the related revenue is recorded. Provision for estimated sales allowances is generally made and adjusted based on management judgement, historical experience and any known factors that would significantly affect the allowance, and our management periodically reviews the adequacy of the allowance.

KEY SOURCES OF ESTIMATION AND UNCERTAINTY

Impairment of Financial Assets

The provision for impairment of trade receivables is based on assumptions about the risk of default and expected loss rates. The Company uses judgment in making these assumptions and in selecting the inputs to the impairment calculation, based on the Company's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. Please refer to Note 6 for the details of the key assumptions and inputs used. Where the actual future cash flows are less than expected, a material impairment loss may arise.

Realization of Deferred Income Tax Assets

Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which those deferred tax assets can be utilized. Assessment of the realization of the deferred tax assets requires the Company's subjective judgment and estimation, including the future revenue growth and profitability, tax holidays, the amount of tax credits that can be utilized and feasible tax planning strategies. Any changes in the global economic environment, the industry trends and relevant laws and regulations could result in significant adjustments to deferred tax assets.

Valuation of Inventory

Inventories are stated at the lower of cost or net realizable value, and the Company has to determine and estimate to the net realizable value of inventory at the end of each reporting period.

Due to the rapid technological changes, the Company estimates the net realizable value of inventory for obsolescence and unmarketable items at the end of reporting period and then writes down the cost of inventories to net realizable value. The net realizable value of the inventory is mainly determined based on assumptions of future demand within a specific time horizon.

Lessees' Incremental Borrowing Rates - 2019

In determining a lessee's incremental borrowing rate used in discounting lease payments, a risk-free rate for the same currency and relevant duration is selected as a reference rate, and the lessee's credit spread adjustments and lease specific adjustments (such as asset type, secured position, etc.) are also taken into account.

6. ACCOUNTS RECEIVABLE, NET

	December 31 2019	December 31 2018
At amortized cost of accounts receivable		
Gross carrying amount	$ 1,397,124	$ 903,168
Less: Allowance for credit impairment loss	(19,921)	-
	$ 1,377,203	$ 903,168

In principle, the payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month the invoice is issued.

The Company measures the loss allowance for trade receivables at an amount equal to lifetime expected credit losses. The expected credit losses on trade receivables are estimated using a provision matrix by reference to the past account aging records of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the debtors and an assessment of all the gross domestic product growth rates, unemployment rates and industrial indicators 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 losses experience does not show significantly different loss patterns for different customer segments, the provision for losses based on past due status of receivables is not further distinguished between the Company's different customer base; and poor credit rating customers have accounts receivable balances past due over 90 days, should be recognized full amount of loss allowance.

The Company writes off a trade receivable when there is information indicating that the debtor is in 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, these are recognized in profit or loss.

Aging analysis of accounts receivable

	December 31 2019	December 31 2018
Neither past due nor impaired	$ 1,260,616	$ 779,713
Past due but not impaired		
Past due within 1-30 days	112,515	106,735
Past due within 31-60 days	4,072	6,676
Past due within 91-120 days	-	10,044
	$ 1,377,203	$ 903,168

The movement of the loss allowance of accounts receivable was as follows:

	Year Ended December 31, 2019
Balance at January 1	$ -
Add: Net remeasurement of credit impairment loss allowance	19,921
Balance at December 31,	$ 19,921

Starting from 2018, the Company applies IFRS 9 to evaluate expected credit losses, the Company's loss allowance for expected credit losses was zero on December 31, 2018.

7. INVENTORIES

	December 31	
	2019	2018
Finished goods	$ 85,663	$ 106,745
Work in process	1,244,852	873,531
Raw materials	447,969	294,678
	$ 1,778,484	$ 1,274,954

Write-down of inventories to net realizable value was included in the cost of revenue, which was as follows:

	Years Ended December 31	
	2019	2018
Write-down of inventories	$ 76,020	$ 70,789

8. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

The carrying amount and percentage of ownership of subsidiaries included in the parent company only balance sheets were as follows:

Name of Investee	Main Businesses and Products	Establishment and Operating Location	Carrying Amount December 31 2019	Carrying Amount December 31 2018	Percentage of Ownership) December 31 2019	Percentage of Ownership) December 31 2018
Global Unichip (Nanjing) Ltd. (GUC-Nanjing)	Products consulting, design and technical support service	Nanjing, China	$ 150,997	$ 92,471	100%	100%
Global Unichip Corp.-NA (GUC-NA)	Products consulting, design and technical support service	U.S.A.	128,110	118,849	100%	100%
Global Unichip Japan Co., Ltd. (GUC-Japan)	Products consulting, design and technical support service	Japan	50,925	42,096	100%	100%
Global Unichip (Shanghai) Company, Limited (GUC-Shanghai)	Products consulting, design and technical support service	Shanghai, China	35,735	-	100%	-
Global Unichip Corp. Europe B.V. (GUC-Europe)	Products consulting, design and technical support service	Netherlands	10,156	9,049	100%	100%
Global Unichip Corp. Korea (GUC-Korea)	Products consulting, design and technical support service	Korea	6,704	6,740	100%	100%
Global Unichip (BVI) Corp. (GUC-BVI)	Investing activities	British Virgin Islands	-	36,090	-	100%
			$ 382,627	$ 305,295		

In order to restructure organization, the Company acquired all equity interest of GUC-Shanghai from GUC-BVI in August 2019. GUC-BVI has been liquidated in November 2019.

9. PROPERTY, PLANT AND EQUIPMENT

	Buildings	Machinery and Equipment	Research and Development Equipment	Transportation Equipment	Office Equipment	Miscellaneous Equipment	Total
Cost							
Balance at January 1, 2019	$ 242,923	$ 25,907	$ 1,359,166	$ 1,375	$ 22,664	$ 365,574	$ 2,017,609
Additions	-	153	150,876	-	-	28,722	179,751
Disposals	-	(1,319)	(13,539)	-	-	(1,796)	(16,654)
Balance at December 31, 2019	$ 242,923	$ 24,741	$ 1,496,503	$ 1,375	$ 22,664	$ 392,500	$ 2,180,706
Accumulated depreciation							
Balance at January 1, 2019	$ 68,564	$ 6,470	$ 613,686	$ 158	$ 17,562	$ 250,154	$ 956,594
Depreciation	4,766	3,409	242,759	266	1,162	26,989	279,351
Disposals	-	(1,319)	(13,539)	-	-	(1,796)	(16,654)
Balance at December 31, 2019	$ 73,330	$ 8,560	$ 842,906	$ 424	$ 18,724	$ 275,347	$ 1,219,291
Carrying amount at December 31, 2019	$ 169,593	$ 16,181	$ 653,597	$ 951	$ 3,940	$ 117,153	$ 961,415
Cost							
Balance at January 1, 2018	$ 242,923	$ 23,430	$ 700,589	$ 9,390	$ 17,781	$ 264,887	$ 1,259,000
Additions	-	2,477	678,675	1,327	4,883	101,847	789,209
Disposals	-	-	(20,098)	(9,342)	-	(1,160)	(30,600)
Balance at December 31, 2018	$ 242,923	$ 25,907	$ 1,359,166	$ 1,375	$ 22,664	$ 365,574	$ 2,017,609
Accumulated depreciation							
Balance at January 1, 2018	$ 63,797	$ 3,311	$ 482,838	$ 5,383	$ 16,887	$ 234,090	$ 806,306
Depreciation	4,767	3,159	150,946	808	675	17,224	177,579
Disposals	-	-	(20,098)	(6,033)	-	(1,160)	(27,291)
Balance at December 31, 2018	$ 68,564	$ 6,470	$ 613,686	$ 158	$ 17,562	$ 250,154	$ 956,594
Carrying amount at December 31, 2018	$ 174,359	$ 19,437	$ 745,480	$ 1,217	$ 5,102	$ 115,420	$ 1,061,015

10. LEASE ARRANGEMENTS

a. Right-of-use assets - 2019

	Land	Buildings	Transportation Equipment	Total
Cost				
Balance at January 1, 2019	$ -	$ -	$ -	$ -
Effect of retrospective application of IFRS 16	58,995	137,698	5,653	202,346
Balance at January 1, 2019 (restated)	58,995	137,698	5,653	202,346
Additions	-	7,650	467	8,117
Lease modification	-	-	(1,163)	(1,163)
Balance at December 31, 2019	$ 58,995	$ 145,348	$ 4,957	$ 209,300
Accumulated depreciation				
Balance at January 1, 2019	$ -	$ -	$ -	$ -
Effect of retrospective application of IFRS 16	-	-	-	-
Balance at January 1, 2019 (restated)	-	-	-	-
Depreciation	1,612	31,677	1,374	34,663
Lease modification	-	-	(170)	(170)
Balance at December 31, 2019	$ 1,612	$ 31,677	$ 1,204	$ 34,493
Carrying amounts at December 31, 2019	$ 57,383	$ 113,671	$ 3,753	$ 174,807

	Year Ended December 31, 2019
Income from the subleasing of right-of-use assets (presented in other income)	$ 299

b. Lease liabilities - 2019

Item	Lease Term	Discount Rate	December 31, 2019
Land	2019.01-2055.07	1.62%	$ 57,803
Buildings	2019.01-2025.12	0.825%-1.003%	114,064
Transportation equipment	2019.01-2023.08	0.825%	3,768
Total			175,635
Less: Lease liabilities-Current			(29,413)
Lease liabilities-Non Current			$ 146,222

c. Material lease-in activities and terms

The Company leases land and buildings for the use of plants and offices with lease terms of 1 to 37 years. The lease contract for land located in the ROC. specifies that lease payments will be adjusted on the basis of changes in announced land value prices and other factors at any time. The Company does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms. In addition, the Company is prohibited from subleasing or transferring all or any portion of the underlying assets without the lessor's consent.

d. Subleases

The other sublease transaction is set out below:

Sublease of right-of-use assets - 2019

The Company subleased its leasehold parking lot under operating leases with lease term of 3 years and with an option to extend for an additional 1 year.

The maturity analysis of lease payments receivable under operating subleases was as follows:

	December 31, 2019
Year 1	$ 299
Year 2	299
Year 3	299
	$ 897

e. Other lease information

2019

	Year Ended December 31, 2019
Expenses relating to short-term leases	$ 3,496
Expenses relating to low-value asset leases	$ 30
Total cash outflow for leases	$ (39,962)

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

2018

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

	December 31, 2018
Not later than 1 year	$ 33,690
Later than 1 year and not later than 5 years	61,851
	$ 95,541

The lease payments recognized in profit or loss was as follows:

	Year Ended December 31, 2018
Minimum lease payments	$ 30,842

11. INTANGIBLE ASSETS

	Software	Patents	Total
Cost			
Balance at January 1, 2019	$ 822,556	$ 519	$ 823,075
Additions	376,713	-	376,713
Disposals	(268,763)	-	(268,763)
Balance at December 31, 2019	$ 930,506	$ 519	$ 931,025

(Continued)

	Software	Patents	Total
Accumulated amortization			
Balance at January 1, 2019	$ 534,631	$ 424	$ 535,055
Amortization	252,751	28	252,779
Disposals	(268,763)	-	(268,763)
Balance at December 31, 2019	$ 518,619	$ 452	$ 519,071
Carrying amount at December 31, 2019	$ 411,887	$ 67	$ 411,954

(Concluded)

	Software	Technology License Fees	Patents	Total
Cost				
Balance at January 1, 2018	$ 687,166	$ 6,000	$ 519	$ 693,685
Additions	190,855	-	-	190,855
Disposals	(55,465)	(6,000)	-	(61,465)
Balance at December 31, 2018	$ 822,556	$ -	$ 519	$ 823,075
Accumulated amortization				
Balance at January 1, 2018	$ 363,757	$ 6,000	$ 395	$ 370,152
Amortization	226,339	-	29	226,368
Disposals	(55,465)	(6,000)	-	(61,465)
Balance at December 31, 2018	$ 534,631	$ -	$ 424	$ 535,055
Carrying amount at December 31, 2018	$ 287,925	$ -	$ 95	$ 288,020

12. OTHER CURRENT ASSETS

	December 31	
	2019	2018
Prepayment for purchases	$ 174,624	$ 194,173
Prepaid license fees	172,536	117,641
Tax receivable	86,722	92,978
Prepaid expenses	30,085	35,539
Prepaid income tax	722	29
Temporary payments	-	195
	$ 464,689	$ 440,555

13. OTHER LIABILITIES

	December 31	
	2019	2018
Current		
Payable for salaries and bonuses	$ 235,445	$ 245,115
License fees payable	160,579	125,615
Payable for royalties	59,556	31,609
Refund liabilities	621	106,123
Others	286,206	377,509
	$ 742,407	$ 885,971
Non-current		
License fees payable	$ 112,877	$ 53,239

Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. The Company recognizes the estimation of refund liabilities based on historical experience and the consideration of varying contractual terms.

The license fees payable are primarily attributable to several agreements that the Company entered into for certain technology license and software.

14. RETIREMENT BENEFIT PLANS

a. Defined contribution plans

The pension mechanism under the Labor Pension Act is deemed a defined contribution retirement plan. Pursuant to the Act, the Company makes monthly contributions equal to 6% of each employee's monthly salary to employees' pension accounts. Accordingly, the Company recognized expenses of NT$45,706 thousand and NT$41,465 thousand in the parent company only statements of comprehensive income for the years ended December 31, 2019 and 2018, respectively.

b. Defined benefit plans

The Company has a defined benefit plan under the Labor Standards Act, which provides benefits based on an employee's length of service and average monthly salary of the last six months prior to retirement. The Company contributes an amount equal to 2% of salaries paid each month to a pension fund (the Fund), which is administered by the Labor Pension Fund Supervisory Committee (the Committee) and deposited in the Committee's name in the Bank of Taiwan. Before the end of each year, the Company assesses the balance in the Fund. If the amount of the balance in the 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 Fund is managed by the Bureau of Labor Funds, Ministry of Labor ("the Bureau"); as such, the Company has no right to influence the investment policy and strategy.

The amounts arising from the defined benefit obligation of the Company under the financial position were as follows:

	December 31 2019	December 31 2018
Present value of defined benefit obligation	$ 72,709	$ 65,279
Fair value of plan assets	(40,605)	(37,046)
Net defined benefit liabilities	$ 32,104	$ 28,233

Movements in net defined benefit liabilities were as follows:

	Present Value of the Defined Benefit Obligation	Fair Value of the Plan Assets	Net Defined Benefit Liabilities
Balance at January 1, 2018	$ 60,860	$ (33,919)	$ 26,941
Service cost			
Current service cost	986	-	986
Net interest expense (income)	761	(436)	325
Recognized in profit or loss	1,747	(436)	1,311
Remeasurement			
Return on plan assets	-	(890)	(890)
Actuarial gain - changes in demographic assumptions	(294)	-	(294)
Actuarial loss - changes in financial assumptions	2,284	-	2,284
Actuarial loss - experience adjustments	682	-	682
Recognized in other comprehensive (income) loss	2,672	(890)	1,782
Contributions from the employer	-	(1,801)	(1,801)
Balance at December 31, 2018	65,279	(37,046)	28,233
Service cost			
Current service cost	1,245	-	1,245
Net interest expense (income)	652	(379)	273
Recognized in profit or loss	1,897	(379)	1,518
Remeasurement			
Return on plan assets	-	(1,270)	(1,270)
Actuarial loss - changes in demographic assumptions	1,271	-	1,271
Actuarial loss - changes in financial assumptions	2,374	-	2,374
Actuarial loss - experience adjustments	1,888	-	1,888
Recognized in other comprehensive (income) loss	5,533	(1,270)	4,263
Contributions from the employer	-	(1,910)	(1,910)
Balance at December 31, 2019	$ 72,709	$ (40,605)	$ 32,104

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

	Year Ended December 31 2019	Year Ended December 31 2018
General and administrative expenses	$ 1,518	$ 1,311

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 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 2019	December 31 2018
Discount rate	0.75%	1.00%
Expected rate of salary increase	3.00%	3.00%
Turnover rate	2.44%	2.99%

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:

	December 31 2019	December 31 2018
Discount rate		
0.25% increase	$ (2,432)	$ (2,276)
0.25% decrease	$ 2,539	$ 2,379
Expected rate of salary increase		
0.25% increase	$ 2,472	$ 2,323
0.25% decrease	$ (2,381)	$ (2,235)
Turnover rate		
10% increase	$ (705)	$ (863)
10% decrease	$ 720	$ 883

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	
	2019	2018
The expected contributions to the plan for the next year	$ 2,053	$ 1,907
The average duration of the defined benefit obligation	13 years	14 years

The maturity analysis of undiscounted pension benefit is as follows:

	December 31	
	2019	2018
Later than 1 year and not later than 5 years	$ 6,141	$ 4,310
Later than 5 years	74,150	69,728
	$ 80,291	$ 74,038

15. EQUITY

a. Share capital

	December 31	
	2019	2018
Authorized	$ 1,500,000	$ 1,500,000
Issued	$ 1,340,119	$ 1,340,119

As of December 31, 2019 and 2018 the authorized shares are 150,000 thousand shares, with par value of $10 per share is entitled to the right to vote and to receive dividends; the Company's issued and paid shares were 134,011 thousand shares.

b. Capital surplus

	December 31	
	2019	2018
From merger	$ 16,621	$ 16,621
Additional paid-in capital	13,232	13,232
Donations	2,660	2,660
Dividends from claims extinguished by prescription	65	30
	$ 32,578	$ 32,543

Under the Company Law, the capital surplus generated from the excess of the issuance price over the par value of capital stock (including the stock issued for new capital and mergers) and donations may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be appropriated as cash dividends or stock dividends, which are limited to a certain percentage of the Company's paid-in capital under capital surplus. In addition, the capital surplus from dividends from claims extinguished by prescription may be used to offset a deficit.

c. Retained earnings and dividend policy

According to the Company's Articles of Incorporation when allocating the net profits for each fiscal year, the Company shall offset its losses in previous years before set aside the following items accordingly:

1) Legal reserve at 10% of the remaining profit;

2) Special reserve in accordance with the resolution in the shareholders' meeting;

3) Any balance remaining shall be allocated to shareholders according to the resolution in the shareholders' meeting.

The Articles of Incorporation provide the policy about employee' compensation and remuneration to directors, please refer to Note 22.

The Company's profit distribution, the proportion of cash dividends shall not be lower than 60% of the total dividends, depending on future expansion plans and cash needs.

The appropriation for legal reserve shall be made until the reserve equals the Company's paid-in capital. The reserve may be used to offset a deficit, or be distributed as dividends and bonuses to the extent that the portion exceeds 25% of the paid-in capital if the Company incurs no loss.

A special reserve equivalent to the net debit balance of other components of shareholders' equity such as exchange differences on the translation of foreign operations, shall be made from unappropriated earnings. Any special reserve appropriated may be reversed to the extent that the net debit balance reverses.

The appropriations of earnings for 2018 and 2017 had been approved in the Company's shareholders' meetings held on May 16, 2019 and May 17, 2018, respectively. The appropriations and dividends per share were as follows:

	Appropriation of Earnings		Dividends Per Share (NT$)	
	For Fiscal Year 2018	For Fiscal Year 2017	For Fiscal Year 2018	For Fiscal Year 2017
Legal reserve	$ 98,816	$ 85,481		
Special reserve (reversal of special reserve)	(2,304)	9,426		
Cash dividends to shareholders	670,060	670,060	$ 5.00	$ 5.00
	$ 766,572	$ 764,967		

The appropriation of earnings for 2019 had been proposed by the Company's board of directors on February 6, 2020. The appropriation and dividends per share were as follows:

	Appropriation of Earnings	Dividends Per Share (NT$)
Legal reserve	$ 62,920	
Special reserve	12,109	
Cash dividends to shareholders	670,060	$5.00
	$ 745,089	

The appropriations of earnings for 2019 are to be resolved in the Company shareholders' meeting which is expected to be held on May 14, 2020.

d. Others

Changes in foreign currency translation reserve were as follows:

	Years Ended December 31	
	2019	2018
Balance, beginning of year	$ (8,636)	$ (10,940)
Exchange differences on translation of foreign operations	(12,109)	2,304
Balance, end of year	$ (20,745)	$ (8,636)

The exchange differences on translation of foreign operation's net assets from its functional currency to the Company's presentation currency are recognized directly in other comprehensive income and also accumulated in the foreign currency translation reserve.

16. NET REVENUE

The analysis of the Company's net revenue was as follows:

	Years Ended December 31	
	2019	2018
Revenue from customer contracts		
Net revenue from sale of goods	$ 7,188,728	$ 9,167,596
Net revenue from NRE service	3,521,340	4,292,208
	$ 10,710,068	$ 13,459,804

Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. The Company recognizes the estimation of refund liabilities based on historical experience and the consideration of varying contractual terms, which is classified under accrued expenses and other current liabilities.

a. Contract balances

	December 31, 2019	December 31, 2018	January 1, 2018
Account receivables	$ 1,377,203	$ 903,168	$ 894,317
Contract assets - current	$ 324,965	$ 56,976	$ 13,392
Contract liabilities - current	$ 1,109,042	$ 869,174	$ 1,630,281

The changes in the contract asset and the contract liability balances primarily result from the timing difference between the satisfaction of performance obligation and the customer's payment.

For the year ended December 31, 2019 and 2018, the Company recognized NT$756,052 thousand and NT$1,451,151 thousand in revenue from the beginning balance of contract liability, respectively.

b. Disaggregation of revenue from contracts with customers

	Years Ended December 31	
Production	2019	2018
ASIC and wafer product	$ 7,188,728	$ 9,167,596
NRE	3,205,782	4,078,719
Others	315,558	213,489
	$ 10,710,068	$ 13,459,804

	Years Ended December 31	
Region	2019	2018
United States	$ 3,752,928	$ 2,811,100
China	1,622,604	2,300,679
Taiwan	1,543,054	2,792,676
Korea	1,430,262	1,129,735
Japan	1,313,786	3,609,609
Europe	1,047,434	816,005
	$ 10,710,068	$ 13,459,804

The Company categorized the net revenue mainly based on the country in which the customer's headquartered.

	Years Ended December 31	
Application Type	2019	2018
Computer	$ 4,608,339	$ 5,619,289
Consumer	3,640,696	5,953,549
Communication	1,175,885	811,023
Others	1,285,148	1,075,943
	$ 10,710,068	$ 13,459,804

	Years Ended December 31	
Customer Type	2019	2018
System House	$ 6,688,962	$ 9,706,104
Fabless	4,021,106	3,753,700
	$ 10,710,068	$ 13,459,804

	Year Ended December 31, 2019		Year Ended December 31, 2018	
Resolution	Net Revenue from NRE Service	Net Revenue from Sale of Goods	Net Revenue from NRE Service	Net Revenue from Sale of Goods
7-nanometer	$ 267,824	$ 174,980	$ 741,655	$ 1,751,012
16-nanometer	1,354,368	233,805	1,527,987	74,632
28-nanometer	1,028,873	2,739,927	1,239,050	2,128,432
40-nanometer	116,640	1,253,001	270,101	1,080,987
65-nanometer and above	438,077	2,787,015	299,926	4,132,533
Others	315,558	-	213,489	-
	$ 3,521,340	$ 7,188,728	$ 4,292,208	$ 9,167,596

17. OTHER INCOME

	Years Ended December 31 2019	2018
Interest income		
Bank deposits	$ 24,786	$ 26,473
Income (expenses) of rental assets		
Rental income	299	397
Depreciation of rental assets	-	(2)
Government grants	-	645
Other income	6,745	6,936
	$ 31,830	$ 34,449

18. OTHER GAINS AND LOSSES

	Years Ended December 31 2019	2018
Gain on financial assets at fair value through profit or loss	$ 944	$ 1,278
Gain on lease modification	26	-
Loss on disposal of property, plant and equipment, net	-	(4)
Loss on disposal of investments accounted for using equity method	(625)	-
Loss on foreign exchange, net	(6,897)	(3,248)
	$ (6,552)	$ (1,974)

19. FINANCE COSTS

	Years Ended December 31 2019	2018
Interest on lease liabilities	$ 2,202	$ -

20. INCOME TAX

a. Income tax expense recognized in profit or loss

Income tax expense consisted of the following:

	Years Ended December 31 2019	2018
Current income tax expense		
Current tax expense recognized in the current period	$ 89,073	$ 150,862
Income tax adjustments on prior years	(445)	(6,384)
	88,628	144,478
Deferred income tax expense (benefit)		
Effect of tax rate changes	-	3,947
Temporary differences	(38,822)	(14,555)
	(38,822)	(10,608)
Income tax expense recognized in profit or loss	$ 127,450	$ 133,870

A reconciliation of income before income tax and income tax expense recognized in profit or loss was as follows:

	Years Ended December 31 2019	2018
Income before tax	$ 760,917	$ 1,122,026
Income tax expense at the statutory rate	$ 152,183	$ 224,405
Tax effect of adjusting items:		
Nondeductible items in determining taxable income	28,851	12,321
Tax-exempt income	(37,466)	(94,443)
Investment tax credits used	(26,663)	(14,536)
Additional income tax on unappropriated earnings	10,990	8,560
Income tax adjustments on prior years	(445)	(6,384)
Effect of tax rate changes	-	3,947
Income tax expense recognized in profit or loss	$ 127,450	$ 133,870

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 the 2018 unappropriated earnings will be reduced from 10% to 5%.

In July 2019, the President of the ROC announced the amendments to the Statute for Industrial Innovation, which stipulate that the amounts of unappropriated earnings in 2018 and thereafter that are reinvested in the construction or purchase of certain assets or technologies are allowed as deduction when computing the income tax on unappropriated earnings. The Company has already deducted the amount of capital expenditure from the unappropriated earnings in 2018 that was reinvested when calculating the tax on unappropriated earnings for the year ended December 2019.

b. Deferred income tax balance

The analysis of deferred income tax assets and liabilities in the parent company only balance sheets was as follows:

	December 31 2019	2018
Deferred income tax assets		
Temporary differences		
Write-down of inventory	$ 29,768	$ 14,706
Allowance for credit impairment loss exceeded	1,106	-
Provisions	124	13,435
Share of loss of subsidiaries accounted for using equity method	-	21,851
Others	7,746	8,588
	$ 38,744	$ 58,580
Deferred income tax liabilities		
Temporary differences		
Share of profit of subsidiaries accounted for using equity method	$ (41,127)	$ (22,141)

Movements of deferred income tax assets and deferred tax liabilities were as follows:

Year ended December 31, 2019

	Balance, Beginning of Year	Recognized in Profit or Loss	Balance, End of Year
Deferred income tax assets			
Temporary differences			
Write-down of inventory	$ 14,706	$ 15,062	$ 29,768
Allowance for credit impairment loss exceeded	-	1,106	1,106
Provisions	13,435	(13,311)	124
Share of loss of subsidiaries accounted for using equity method	21,851	(21,851)	-
Others	8,588	(842)	7,746
	$ 58,580	$ (19,836)	$ 38,744

Year ended December 31, 2018

	Balance, Beginning of Year	Recognized in Profit or Loss	Balance, End of Year
Deferred income tax assets			
Temporary differences			
Share of loss of subsidiaries accounted for using equity method	$ 21,122	$ 729	$ 21,851
Write-down of inventory	2,322	12,384	14,706
Provisions	82	13,353	13,435
Others	10,336	(1,748)	8,588
	$ 33,862	$ 24,718	$ 58,580

Year ended December 31, 2019

	Balance, Beginning of Year	Recognized in Profit or Loss	Balance, End of Year
Deferred income tax liabilities			
Temporary differences			
Share of profit of subsidiaries accounted for using equity method	$ (22,141)	$ (18,986)	$ (41,127)

Year ended December 31, 2018

	Balance, Beginning of Year	Recognized in Profit or Loss	Balance, End of Year
Deferred income tax liabilities			
Temporary differences			
Share of profit of subsidiaries accounted for using equity method	$ (8,031)	$ (14,110)	$ (22,141)

c. Deductible temporary differences for which no deferred tax assets have been recognized in the parent company only balance sheets

As of December 31, 2019 and 2018, the aggregate deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT$26,550 thousand and NT$9,517 thousand, respectively.

d. Information about tax exemption

As of December 31, 2019, the profits generated from the following projects of the Company are exempt from income tax for a five-year period:

	Tax-exemption Period
Construction and expansion of 2009	2016 to 2020

e. Income tax examination

The tax authorities have examined income tax returns of the Company through 2017.

21. EARNINGS PER SHARE

	Years Ended December 31 2019	2018
Basic EPS	$4.73	$7.37
Diluted EPS	$4.71	$7.33

EPS is computed as follows:

	Amounts (Numerator)	Number of Shares (Denominator) (In Thousands)	EPS (NT$)
Year ended December 31, 2019			
Basic EPS			
Net income available to common shareholders	$ 633,467	134,011	$4.73
Effect of dilutive potential common stock	-	377	
Diluted EPS			
Net income available to common shareholders (including effect of dilutive potential common stock)	$ 633,467	134,388	$4.71

(Continued)

	Amounts (Numerator)	Number of Shares (Denominator) (In Thousands)	EPS (NT$)
Year ended December 31, 2018			
Basic EPS			
Net income available to common shareholders	$ 988,156	134,011	$7.37
Effect of dilutive potential common stock	-	776	
Diluted EPS			
Net income available to common shareholders (including effect of dilutive potential common stock)	$ 988,156	134,787	$7.33

(Concluded)

If the Company settles employees' compensation by issuing share or by cash, the Company assumes the entire amount of the compensation will be settled in shares which should be included in the weighted average number of shares outstanding in calculation of diluted EPS, if the shares have a dilutive effect. Such dilutive effect of the potential shares needs to be included in the calculation of diluted EPS until employees' compensation to be settled in the form of common stocks are approved in the following year.

22. ADDITIONAL INFORMATION OF EXPENSES BY NATURE

Net income included the following items:

	Years Ended December 31 2019	2018
a. Depreciation expenses		
Depreciation of property, plant and equipment		
Recognized in cost of revenue	$ 5,259	$ 4,856
Recognized in operating expenses	274,092	172,721
Recognized in other income - depreciation of rental assets	-	2
	279,351	177,579
Depreciation of right-of-use assets		
Recognized in cost of revenue	3,901	-
Recognized in operating expenses	30,762	-
	34,663	-
	$ 314,014	$ 177,579
b. Amortization of intangible assets		
Recognized in cost of revenue	$ 193	$ 2,183
Recognized in operating expenses	252,586	224,185
	$ 252,779	$ 226,368
c. Research and development costs expensed as occurred	$ 1,903,320	$ 1,948,447

	Years Ended December 31 2019	2018
d. Employee benefits expenses		
Post-employment benefits (Note 14)		
Defined contribution plans	$ 45,706	$ 41,465
Defined benefit plans	1,518	1,311
	47,224	42,776
Other employee benefits	1,404,704	1,520,639
	$ 1,451,928	$ 1,563,415
Employee benefits expense summarized by function		
Recognized in cost of revenue	$ 166,265	$ 190,599
Recognized in operating expenses	1,285,663	1,372,816
	$ 1,451,928	$ 1,563,415

e. Employee's compensation and remuneration to directors

The Company shall allocate employees' compensation and remuneration to directors no less than 2% and no more than 2% of net income before tax which is not deducted from employees' compensation and remuneration to directors, respectively. Directors who also serve as executive officers of the Company are not entitled to receive the remuneration to directors. The Company shall first offset its losses in previous years then allocate employees' compensation and remuneration to directors. The Company may issue stock or cash compensation to employees of an affiliated company upon meeting the conditions set by the Board of Directors.

For 2019 and 2018, the Company accrued employees' compensation and remuneration to directors had been approved in the Board of Directors meeting held on February 6, 2020 and January 31, 2019, respectively, and were based on certain percentage of net income before tax without deduction of the employees' compensation and remuneration to directors. The accrued amounts were as follows:

	Years Ended December 31 2019	2018
Employees' compensation	$ 75,228	$ 153,240
Remuneration to directors	5,463	14,193

The aforementioned amount is the same as the amount which had been charged against expenses of 2019 and 2018, respectively.

If there is a change in the proposed amounts after the annual parent company only financial statements are authorized for issue, the differences are recorded as a change in the accounting estimate.

The Company's employees' compensation and remuneration to directors in the amounts of NT$133,501 thousand and NT$12,206 thousand in cash for 2017 was approved by the Board of Directors in their meetings held on February 1, 2018. The aforementioned approved amounts did not have any difference with the amounts recognized in the parent company only financial statements for the year ended December 31, 2017.

The information about appropriations of the Company's employees' compensation and remuneration to directors is available on the Market Observation Post System website.

23. CASH FLOW INFORMATION

Reconciliation of liabilities arising from financing activities:

	Balance as of January 1, 2019	Cash Flows	Non-cash Changes: Lease Additions	Non-cash Changes: Lease Decrease	Non-cash Changes: Foreign Exchange Movement	Balance as of December 31, 2019
Guarantee deposits	$ 3,072	$ -	$ -	$ -	$ (74)	$ 2,998
Lease liabilities	202,346	(33,809)	8,117	(1,019)	-	175,635

	Balance as of January 1, 2018	Cash Flows	Non-cash Changes: Foreign Exchange Movement	Balance as of December 31, 2018
Guarantee deposits	$ 2,976	$ -	$ 96	$ 3,072

24. CAPITAL MANAGEMENT

The Company manages its capital to ensure that entities in the Company are able to operate sustainability while maximizing the return to stakeholders through the optimization of the debt and equity balance. The Company engages in the semiconductor design services, which is closely tied with customer demand. Business is influenced by the cyclical nature of the semiconductor industry but not significantly. In consideration of the industry dynamics, the Company manages its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, capital asset purchases, research and development activities, dividend payments, debt service requirements and other business requirements associated with its existing operations over the next 12 months. Through capital management, the Company is capable of coping with changes in the industry, striving for improvement, and ultimately creating shareholder value.

25. FINANCIAL INSTRUMENTS

a. Categories of financial instruments

	December 31 2019	December 31 2018
Financial assets		
Amortized cost		
Cash and cash equivalents	$ 2,298,887	$ 3,697,975
Accounts receivable, net (including related parties)	1,418,311	910,206
Other financial assets	330	845
Refundable deposits	1,598	2,266
Pledged time deposits	22,200	22,200
	$ 3,741,326	$ 4,633,492

(Continued)

	December 31 2019	December 31 2018
Financial liabilities		
Amortized cost		
Accounts payable (including related parties)	$ 1,543,569	$ 1,237,903
Payables on machinery and equipment	58,524	364,475
Accrued expenses and other current liabilities	338,279	397,669
Other long-term payables	273,456	178,854
Guarantee deposits	2,998	3,072
	$ 2,216,826	$ 2,181,973

(Concluded)

b. Financial risk management objectives and policies

The Company's objectives of financial risk management are to manage its exposure to market risk, credit risk and liquidity risk related to the operating activities. To reduce the related financial risks, the Company engages in identifying, assessing and avoiding the market uncertainties 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 the Audit Committee and Board of Directors in accordance with procedures required by relevant regulations and internal controls. During the implementation of such plans, the treasury function must comply with certain treasury procedures that provide guiding principles for overall financial risk management and segregation of duties.

c. Market risk

Foreign currency risk

The Company's operating activities are mainly denominated in foreign currency and exposed to foreign exchange risk. To protect the volatility of future cash flows arising from changes in foreign exchange rates, the Company maintains a balance of net foreign currency assets and liabilities in hedge.

The Company's sensitivity analysis to foreign currency risk mainly focuses on the foreign currency monetary items at the end of the reporting period. Assuming a 10% strengthening of New Taiwan Dollars against the relevant currencies, the net income before tax for the years ended December 31, 2019 and 2018 would have decreased by NT$96,452 thousand and NT$87,870 thousand, respectively.

d. Credit risk management

Credit risk refers to the risk that a counter party will default on its contractual obligations resulting in financial loss to the Company. The Company is exposed to credit risk from operating activities, primarily trade receivables, and from investing activities of deposits with banks. Credit risk is managed separately for business related and financial related exposures. As of the balance sheet date, the Company's maximum credit risk exposure is mainly from the carrying amount of financial assets recognized in the parent company only balance sheet.

Business related credit risk

The Company has considerable trade receivables outstanding with its customers worldwide. A substantial majority of the Company's outstanding trade receivables are not covered by collateral or credit insurance. While the Company has procedures to monitor and limit exposure to credit risk on trade receivables, there can be no assurance such procedures will effectively limit its credit risk and avoid losses.

As of December 31, 2019 and 2018, the Company's ten largest customers accounted for 69% and 55% of accounts receivable, respectively. The Company believes the concentration of credit risk is insignificant for the remaining accounts receivable.

Financial credit risk

The Company monitors and reviews the transaction limit applied to counter parties and adjusts the concentration limit according to market conditions and the credit standing of the counter parties regularly. The Company mitigates its exposure by selecting financial institution with well credit.

e. Liquidity risk management

The objective of liquidity risk management is to ensure the Company has sufficient liquidity to fund its business requirements. The Company manages its liquidity risk by maintaining adequate cash and banking facilities.

As of December 31, 2019 and 2018, the unused financing facilities of the Company amounted to NT$1,600,000 thousand and NT$1,300,000 thousand, respectively.

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual undiscounted payments.

Non-derivative Financial Liabilities	Less Than 1 Year	2-3 Years	4+ Years	Total
December 31, 2019				
Accounts payable (including related parties)	$ 1,543,569	$ -	$ -	$ 1,543,569
Payables on machinery and equipment	58,524	-	-	58,524
Accrued expenses and other current liabilities	338,279	-	-	338,279
Lease liabilities	31,361	64,235	101,524	197,120
Other long-term payables	160,579	112,877	-	273,456
Guarantee deposits	-	-	2,998	2,998
	$ 2,132,312	$ 177,112	$ 104,522	$ 2,413,946

Additional information about the maturity analysis for lease liabilities:

	Less than 4 Year	4-10 Years	10-15 Years	15-20 Years	20+ Years
Lease liabilities	$ 95,596	$ 46,815	$ 10,692	$ 10,692	$ 33,325

Non-derivative Financial Liabilities	Less Than 1 Year	2-3 Years	4+ Years	Total
December 31, 2018				
Accounts payable (including related parties)	$ 1,237,903	$ -	$ -	$ 1,237,903
Payables on machinery and equipment	364,475	-	-	364,475
Accrued expenses and other current liabilities	397,669	-	-	397,669
Other long-term payables	125,615	53,239	-	178,854
Guarantee deposits	-	-	3,072	3,072
	$ 2,125,662	$ 53,239	$ 3,072	$ 2,181,973

f. Fair value of financial instruments

The carrying amounts of the Company's financial assets and financial liabilities measured at amortized cost at the end of financial reporting period recognized in the parent company only financial statements approximate their fair values. Further, the Company did not have any financial assets and financial liabilities measured at fair values at the end of the reporting period.

26. RELATED PARTY TRANSACTIONS

Besides information disclosed elsewhere in the other notes, details of transactions between the Company and its related parties are disclosed below:

a. Related party name and categories

Related Party Name	Related Party Categories
Taiwan Semiconductor Manufacturing Co., Ltd. (TSMC)	An investor accounted for using equity method
TSMC North America (TSMC-NA)	A subsidiary of TSMC
Vanguard International Semiconductor Corporation (VIS)	An associate of TSMC
TSMC Europe B.V. (TSMC-EU)	A subsidiary of TSMC
VisEra Technologies Co., Ltd. (VisEra)	A subsidiary of TSMC

b. Operating transactions

Items	Related Party Name and Categories	Years Ended December 31 2019	2018
Net revenue from sale	Investors with significant influence over the company	$ 120,699	$ 87,392
	Other related parties	-	29
		$ 120,699	$ 87,421

(Continued)

Items	Related Party Name and Categories	Years Ended December 31	
		2019	2018
Purchases	Subsidiaries	$ -	$ 1,409
	Investors with significant influence over the company		
	TSMC	2,921,516	5,067,794
	TSMC-NA	1,193,214	1,141,840
		4,114,730	6,209,634
	Other related parties	46,568	43,905
		$ 4,161,298	$ 6,254,948
Manufacturing overhead	Subsidiaries	$ 690,239	$ 457,259
	Investors with significant influence over the company		
	TSMC	412,343	917,774
	TSMC-NA	283,857	357,996
		1,386,439	1,733,029
	Other related parties	567	-
		$ 1,387,006	$ 1,733,029
Operating expenses	Subsidiaries	$ 372,371	$ 393,312
	Investors with significant influence over the company	10,166	5,096
		$ 382,537	$ 398,408
Other Income	Investors with significant influence over the company	$ -	$ 27

(Concluded)

The following balances were outstanding at the end of reporting period:

Items	Related Party Name and Categories	December 31	
		2019	2018
Receivables from related parties	Investors with significant influence over the company		
	TSMC	$ 41,108	$ 7,038
Other current assets	Subsidiaries	$ -	$ 3,246
	Investors with significant influence over the company		
	TSMC	-	1,434
		$ -	$ 4,680
Refundable deposits	Investors with significant influence over the company		
	VisEra	$ 2,832	$ 2,832

(Continued)

Items	Related Party Name and Categories	December 31	
		2019	2018
Payables to related parties	Subsidiaries	$ 29,168	$ -
	Investors with significant influence over the company		
	TSMC	437,078	384,860
	TSMC-NA	283,396	106,125
		749,642	490,985
	Other related parties	10,019	14,553
		$ 759,661	$ 505,538
Accrued expenses and other current liabilities	Subsidiaries	$ 53,121	$ 45,965
	Investors with significant influence over the company	700	610
		$ 53,821	$ 46,575

(Concluded)

The terms of sales to related parties were not significantly different from those of sales to third parties. For other related party transactions, the terms of transactions were determined in accordance with mutual agreement because there were no comparable terms for third-party transactions. The payment term granted to related parties is due 30 days from the invoice date or 30 days from the end of the month when the invoice is issued, while the payment term granted to third parties is due 30 days from the invoice date or 75 days from the end of the month when the invoice is issued.

c. Lease arrangements

Line Item	Related Party Name and Categories	December 31, 2019
Lease liabilities - current	Investors with significant influence over the company	
	VisEra	$ 16,074
Lease liabilities - non-current	Investors with significant influence over the company	
	VisEra	$ 82,831

Line Item	Related Party Name and Categories	Year Ended December 2019
Interest expense	Investors with significant influence over the company	
	VisEra	$ 1,079

Line Item	Related Party Name and Categories	Year Ended December 2018
Lease expense	Investors with significant influence over the company	
	VisEra	$ 16,992

The Company leased server room from related parties. The lease terms and prices were determined in accordance with mutual agreements. The rental expense was paid monthly.

d. Compensation of key management personnel:

The remuneration to directors and other key management personnel were as follows:

	Years Ended December 31	
	2019	2018
Short-term employee benefits	$ 60,628	$ 100,644
Post-employment benefits	436	540
	$ 61,064	$ 101,184

The remuneration to directors and other key management personnel were determined by the Company's Compensation Committee in accordance with the individual performance and the market trends.

27. PLEDGED OR MORTGAGED ASSETS

As of December 31, 2019 and 2018 the Company provided pledged time deposits of NT$20,000 thousand as collateral for customs clearance and also provided pledged time deposits of NT$2,200 thousand as collateral for lease a parcel of land from the Science Park Administration (SPA).

28. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

The Company has entered into license agreements with several companies that own intellectual property rights. According to the agreements, the Company shall pay specific amounts of money to obtain licenses of their intellectual property rights or shall pay royalties at specific percentages of sales amount of identified products. Under the agreements the Company shall pay at least US$9,400 thousand to the counter parties in the period since December 2017.

The Company has entered into a license agreement, and according to the agreement, the Company shall pay specific amounts of money to obtain license of their intellectual property rights. Under the agreement the Company shall pay at least US$2,000 thousand to the counter party in the period from December 2019 to March 2022.

The Company also has entered into license agreements, and according to the agreement, the Company shall pay at least US$5,000 thousand and US$5,500 thousand to the counter party in the period from May 2019 to April 2022 and October 2021, respectively.

29. EXCHANGE RATE INFORMATION OF FOREIGN-CURRENCY FINANCIAL ASSETS AND LIABILITIES

The significant foreign-currency financial assets and liabilities were as follows:

(Unit: Foreign Currency in Thousands)

	Foreign Currencies (In Thousands)	Exchange Rate (Note)	Carrying Amount
December 31, 2019			
Monetary items of financial assets			
USD	$ 93,055	29.98	$ 2,789,790
Non-monetary items of financial assets			
RMB	43,452	4.2975	186,732
USD	4,273	29.98	128,110
JPY	184,510	0.2760	50,925
EUR	302	33.59	10,156
KRW	256,173	0.02617	6,704
Monetary items of financial liabilities			
USD	59,773	29.98	1,791,998
JPY	68,933	0.2760	19,026
RMB	2,781	4.2975	11,953
December 31, 2018			
Monetary items of financial assets			
USD	73,077	30.715	2,244,565
EUR	117	35.2	4,103
Non-monetary items of financial assets			
USD	5,044	30.715	154,939
RMB	20,662	4.4753	92,471
JPY	151,316	0.2782	42,096
EUR	257	35.2	9,049
KRW	242,885	0.02775	6,740
Monetary items of financial liabilities			
USD	43,820	30.715	1,345,946
JPY	61,326	0.2782	17,061
EUR	152	35.2	5,347

Note: Exchange rate represents the number of N.T. dollars for which one foreign currency could be exchanged.

The significant (realized and unrealized) foreign exchange gains were as follows:

	Years Ended December 31			
	2019		2018	
Foreign Currencies	Exchange Rate	Net Foreign Exchange Gain (Loss)	Exchange Rate	Net Foreign Exchange Gain (Loss)
JPY	0.2837 (JPY:NTD)	$ 1,093	0.2730 (JPY:NTD)	$ 781
RMB	4.4934 (RMB:NTD)	251	4.5666 (RMB:NTD)	228
KRW	0.02674 (KRW:NTD)	5	0.02761 (KRW:NTD)	3
EUR	34.6128 (EUR:NTD)	1	35.6055 (EUR:NTD)	137
USD	30.9117 (USD:NTD)	(8,247)	30.1492 (USD:NTD)	(4,397)
		$ (6,897)		$ (3,248)

30. OPERATING SEGMENT INFORMATION

The Company operates in individual industry on the basis of how the Company's chief operating decision maker regularly reviews information in order to allocate resources and assess performance. The basis for the measurement of the operating segment profit (loss), assets and liabilities is the same as that for the preparation of financial statements. Please refer to the consolidated financial statements for the years ended December 31, 2019 and 2018.

31. ADDITIONAL DISCLOSURES

a. Significant transactions and b. Related information of reinvestment

1) Financings provided: None;

2) Endorsements/guarantees provided: None;

3) Marketable securities held (excluding investments in subsidiaries, associates and jointly controlled entities): Please see 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: Please see Table 2 attached;

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 of at least NT$100 million or 20% of the paid-in capital: Please see Table 3 attached;

8) Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital: None;

9) Information about the derivative instruments transaction: None;

10) Names, locations, and related information of investees over which the Company exercises significant influence (excluding information on investment in Mainland China): Please see Table 4 attached;

c. Information on investment in Mainland China

1) The name of the investee in Mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, net income (losses) of the investee, investment income (losses), ending balance, amount received as dividends from the investee, and the limitation on investee: Please see Table 5 attached.

2) Significant direct or indirect transactions with the investee, its prices and terms of payment, unrealized gain or loss, and other related information which is helpful to understand the impact of investment in Mainland China on financial reports: Please see Table 6 attached.

TABLE 1

GLOBAL UNICHIP CORP.

MARKETABLE SECURITIES HELD
DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2019				Note
				Shares	Carrying Amount	Percentage of Ownership (%)	Fair Value	
The Company	Preferred stock							
	eTopus Technology Inc.	-	Financial assets at fair value through profit or loss - non-current	1,515,151	$ -	3.0	$ -	

TABLE 2

GLOBAL UNICHIP CORP.

MARKETABLE SECURITIES ACQUIRED AND DISPOSED OF AT COSTS OR PRICES OF AT LEAST NT$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Type and Name of Marketable Securities	Financial Statement Account	Counter party	Relationship	Beginning Balance		Acquisition		Disposal				Ending Balance	
					Shares	Amount	Shares	Amount	Shares	Amount	Carrying Amount	Gains on Disposal	Shares	Amount
The Company	Taishin 1699 Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	$ -	33,231,969	$ 450,000	33,231,969	$ 450,369	$ 450,000	$ 369	-	$ -
	Jih Sun Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	-	30,983,154	460,000	30,983,154	460,250	460,000	250	-	-
	UPAMC James Bond Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	-	21,849,378	365,000	21,849,378	365,097	365,000	97	-	-
	Fuh Haw Money Market Fund	Financial assets at fair value through profit or loss	-	-	-	-	38,066,792	550,000	38,066,792	550,077	550,000	77	-	-

TABLE 3

GLOBAL UNICHIP CORP.

TOTAL PURCHASE FROM OR SALE TO RELATED PARTIES OF AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(Amounts in Thousands of New Taiwan Dollars)

Company Name	Related Party	Nature of Relationship	Transaction Details				Abnormal Transaction		Accounts Payable or Receivable		Note
			Purchases/ Sales	Amount	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance	% to Total	
The Company	TSMC	TSMC is an investor accounted for using equity method	Purchases	$ 2,921,516	70	30 days after monthly closing	Note 26	Note 26	$ (437,078)	(28)	
			Sales	120,699	1	30 days after monthly closing	Note 26	Note 26	41,108	3	
	TSMC-NA	TSMC-NA is a subsidiary of TSMC	Purchases	1,193,214	29	30 days after invoice date and 30 days after monthly closing	Note 26	Note 26	(283,396)	(18)	

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