Apacer

Stock Code: 8271

TAIWAN EXCELLENCE 2019

Apacer Technology Inc.

2018 Annual Report

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

Apacer annual report is available at http://www.apacer.com

Printed on April 26th, 2019

1. Spokesperson
Name: Lai Zi-Wen
Title: CFO
Tel.: (02)2267-8000
E-mail: public@apacer.com
Deputy spokesperson: Chang Chia-Kun
Title: President
Tel.: (02)2267-8000
E-mail: public@apacer.com

2. Addresses and phone no. of Headquarters and Factory
Headquarters
Address: 1F, No. 32, Zhongcheng Rd., Tucheng Dist., New Taipei City 236
Tel.: (02)2267-8000
Factory
Address: 2, 3F, No. 32, Zhongcheng Rd., Tucheng Dist., New Taipei City 236
Tel.: (02)2267-8000

3. Stock transfer agency
Name: KGI Securities Co. Ltd., Stock Administration
Address: 5F, No. 2, Sec. 1, ChongQing S. Rd., Zhongzheng Dist. Taipei City
Website: http://www.kgieworld.com.tw
Tel.: (02)2389-2999

4. CPA(s) for the most recent FY
Name(s): Philip Tang, Grace Chen
Accounting firm(s): KPMG Taiwan
Address: 68F, No. 7, Sec. 5, XinYi Rd., Taipei City
Website: www.kpmg.com.tw
Tel.: (02)8101-6666

5. Name(s) of the exchange(s) where our securities are traded offshore, and the method(s) by which the information of the offshore securities is accessed: N/A

6. Company website: http://www.apacer.com/

Contents

Letter to Shareholders

Dear shareholders:

Looking back on 2018, the memory market still maintained a high growth momentum. However, after two years of rapid growth, with the uncertainty of the global economic environment and the impact of the tense situation between the US-China trade, the Q4 memory market in 2018 began to decline, resulting in a single-digit decrease of the annual revenue. On behalf of the Board of Directors, we would like to express our gratitude to all our customers, shareholders and employees for their support and contribution.

The consolidated operating revenue in FY 2018 was TWD 9.44 billion and the consolidated gross operating profit was TWD 1.31 billion. The consolidated net profit after tax was TWD 0.36 billion and the earnings per share after tax were TWD 3.56. We will briefly present the operating performance in FY 2018 and the operational plan for FY 2018 as follows:

I. Consolidated operating performance in FY 2018:

Unit: TWD 1,000

Item	FY 2018	FY 2017	Increase (decrease)
Operating revenue	9,441,618	10,043,476	(601,858)
Gross operating profit	1,309,289	1,298,790	10,499
Net operating profit	437,883	474,842	(36,959)
Net non-operating income (expense)	623	(1,802)	2,425
Net profit after tax	358,830	404,957	(46,127)
Net profit attributable to shareholders of the parent company	358,839	405,418	(46,579)
Non-controlling interests	(9)	(461)	452
Earnings per share after tax (in TWD)	3.56	4.02	(0.46)

II. The operation status and research results of 2018:

While ranking in the top-35 of Taiwan global brands of the InterBrand appraisal, Apacer repositioned the core values of our brand from “reliability and innovation” to “keeping our words, insisting on the best, and advancing with our partners” via the Branding Taiwan Project under support of the Industrial Development Bureau. In this case, we achieved the goal of strengthening the brand value and assets and developing high quality Taiwan brand.

As for R & D, we continued to develop our outstanding capabilities in innovation and R&D and acquired 246 applied or applying patents in Taiwan and other countries by the end of the year. We also invested in developing comprehensive product solutions and optimized user experience and actively invest in the industrial IoT and related optical inspection technology. Besides receiving the approval of Taiwan Excellence Awards for ten consecutive years, our product designs have also been issued the achievement award. These records demonstrated our core capabilities in the industrial control, memory storage, mobile storage, eSports and industrial IoT application fields.

In the field of industrial control, we introduced the CoreVolt technology that stabilizes the power of SSD, the CoreLife technology extending the storage service life, and the high rugged memory module XR-DIMM etc. We also presented the world's fastest technical grade memory card CFexpress. As for the mobile storage applications, we applied stronger and more intense design technology to develop external storage devices and introduced the RGB LED synchronized display control and light guiding technology to the eSport products and memory modules. To respond to the industrial IoT trend, we continued to deploy the transmission technology of IoT cloud and terminal devices connection, establish the industrial IoT solution platform, and integrate the pioneering optical technologies with optical equipment for industrial inspection to develop core optical inspection technology and applications. There were successful cases of applying the technologies to the plant factory and the assembly and testing house.

III. Operational plan for FY 2019:

(I) Operational guidelines

Using the memory as the basic core, Apacer has insight into the demand for industrial development and applications , which informs its design of innovative and leading products with excellent quality and functionality for various market segments and firmly maintain our leading advantage in the field of digital storage.

(II) Operational objectives

By deepening the industrial control technology application, optimizing the user experience and improving the brand visibility and persistently accumulating the brand value, we strengthen the reliability in the heart of high-profile customers. We also promote the intelligent value-added concept in all aspects from sales thinking to integrated value-added services to provide the customer with a comprehensive solution and recreate the value and competition advantages.

(III) Core policies on production and sale

Mastering the changes in the global economic prosperity and the market demand and maintaining long-term good interaction mode with the main upstream suppliers, we obtain competitive advantage by stable supply of goods and procurement cost. Meanwhile, we decrease the operational management risk and increase the operation performance by real-time and strict management indicators.

(IV) Development strategies

As the technology and application of the industrial IoT (IIoT), artificial intelligence (AI) and 5G technology become mature, we focus on the seven applications in the industrial control field by providing advanced software, firmware and hardware technology and storage and customized solutions with high reliability and durability to deeply develop the industrial control market. R&D momentum is increased with the anticipation of market demand for the NVMe and PCIe products. As for the consumer product market, in addition to the promotion of technology and products, we will continue to expand the overseas domain and positively focus on the investment of the eSport market. Aiming at intelligent applications, we pay attention to establishment of the collaboration platform with the strategic partners, the optical inspection application and the system integration kit to provide the customer with a comprehensive value-added service.

Stable operation is the long-lasting operation idea upheld by Apacer. To achieve the goal of sustainability, besides complying with the regulations to respond to the spirit of the corporate social responsibility (CSR), we implement it thoroughly in our operations. For example, we received the Work -Life Balance Award of the Ministry of Labor, sponsored local organizations to preserve traditional arts, won the golden award of TCSA Corporate Sustainability Report Award etc. We also expect to begin a CSR deepening project with our employees to fulfill the corporate responsibility to the society.

Looking into 2019, Apacer will apply the core value of “keeping our word, insisting on the best and advancing with our partners” to constantly create the value of technology, product and service. By cultivating our core competitiveness and promoting the enterprise sustainability, we march toward the business vision of “becoming the top manufacturer in the integration of IT-enabled information services with digital storage as the core technology.”

Chairperson

General manager

Accounting manager

Company Profile

I. Founding date
April 16, 1997

II. History

1997	April	We were founded in Taipei City as BizAnchor Service Network Inc., an enterprise invested by Acer Group and with TWD 10 million as initial capital. We were a professional manufacturer of memory modules.
	July	We moved to Xizhi Township, Taipei County, and we renamed ourselves Apacer Technology Inc.
	October	For the development of global logistics, we founded Apacer Memory America Inc. as our US subsidiary.
1998	January	The Longtan Factory was established.
	February	With the European market booming, we founded Apacer Technology B.V. as our European subsidiary.
1999	August	We received the ISO 9002 certification.
2000	July	We conducted an initial public offering.
	August	To expand business in the Japanese market, we founded Apacer Technology Corp. as our Japanese subsidiary.
2001	March	We invested in AQR Technology Inc. and acquired 100% of its shares.
	August	With approval from the Ministry of Economic Affairs (MOEA) through Letter (90) No. 90030399 of Investment Commission, we acquired Grand Scope Ltd. as our Hong Kong subsidiary.
	October	With approval from MOEA through Letter II(90) No. 90036342 of Investment Commission of MOEA, we acquired Apacer Technology (BVI) Inc. as our subsidiary in the British Virgin Islands.
	October	To expand our business in the Chinese market, and with approval from the Ministry of Economic Affairs through Letter II(90) No. 90036342 of Investment Commission of MOEA, Apacer Electronic (Shanghai) Co., Ltd was founded with investment from Apacer Technology (BVI) Inc.
2002	August	To expand our business into multimedia and digital storage sector, we acquired 100% of the shares of Pronology Services Inc.
2003	April	We released the Disc Steno CP100, the world's first Disc Steno portable CD recorder. Disc Steno CP100 operates on the basis of "stand-alone", a state-of-the-art concept. Through integration of the card-reading function and recording technology, it transfers digital images from memory cards to CDs and enables more diverse usage of such images.
	August	We received the ISO 9001:2000 certification.
2004	January	The Disc Steno CP200 portable CD recorder and the Audio Steno MS400 USB flash drive won the Taiwan Excellence Award.
	January	Our shares began to be traded as emerging stocks in the over-the-counter (OTC) market.
2005	April	The Longtan Factory received the ISO 14001:2004 certification.
	May	We passed the test of Sony's SS-00259 standards for environmental protection, and our memory modules for notebooks and desktops passed the test of the "Restriction of Hazardous Substances" (RoHS) directive.

	June	We took the lead in the industry to release FB-DIMM products that meet the demands of servers and workstations for high bandwidth, speed and capacity.
	June	Our embedded flash memory modules received RoHS certification.
	June	Share Steno, the world's first OTG USB device for storage of digital images, won the National Award of Excellence.
	November	We established the e-Flash Business Development Center to actively develop industrial flash products for the storage solutions of OS and AP platforms.
2006	April	Our FB-DIMM passed the test of the Intel Platform Memory Organization, making us the first DRAM manufacturer in Asia to receive the certificate.
	April	FB-DIMMs compatible with Intel server platforms were released, and we became Intel's enabling partner.
	May	We unveiled world's first 2.5 inch SATA RAID flash drive (SRFD) that greatly enhance the reliability and security of data saving.
	September	Our FB-DIMM became the first product of its kind worldwide to pass the CMTL compatibility test.
	October	Our AH520, AA220, FB-DIMM, and DDR400 VLP ECC RDIMM 2GB won the Taiwan Excellence Award.
	October	Our AH520 won the G-Mark international design award in Japan.
	November	We became an official supplier of memory modules for the 2006 World Cyber Games (WCG) in Italy.
		Our Handy Steno became compatible with the latest ReadyBoost technology for Windows Vista.
2007	January	We became the only official manufacturer of memory modules for Microsoft Windows Vista.
	March	To expand business in the Indian market, we founded Apacer Technologies Pvt Ltd. as our Indian subsidiary.
	May	Our "A+ Project for Enhancing Global Logistics Values" was selected as a pilot project sponsored by MOEA.
	June	The Company became an official supplier of memory modules for the Taiwan Regional Qualifier of the 2007 WCG.
	September	The objective of our 10th anniversary was to make us one of the three largest brands of memory storage in the world.
	November	The Company's AU860 MP4 player and AH225 USB flash drive won the G-Mark international design award in Japan.
2008	February	We unveiled the ADM III SSD, with a speed three times faster than its predecessors to meet the application demand on storage speed.
	March	We unveiled the Aeolus DDR3-1800MHz/1600MHz memory modules, which adopt the world's first active fan/dual-layer heat sink designed for overclocking.
	April	We were selected for the "Coaching Project for International Brand Management" of the Bureau of Foreign Trade, MOEA.
	April	Our AH421 won the 2008 iF Product Design Award.
	May	Our Aeolus active overclocking memory modules won the Taiwan Excellence Award, Innovation Award from the PC World magazine in Greece, and the Editor's Choice award from PC Magazine in Russia.
	May	In cooperation with Diskeeper, the leading manufacturer of disk defragmentation tools, we introduced the SSD *Optimizer*, the world's first SSD solution with disk defragmentation software.

	June	In cooperation with RTD, the founder of PC/104 Consortium, we developed the micro SATA Disk Chip (SDC) SSD designed for PC/104 platforms.
	September	Our memory module products won the NOVA Channel Award as the first choice of retailers.
	October	Our AH225 and AH421 USB flash drives won the Best Iinnovation Award from Tweak in Germany.
	November	Our HT203 USB flash drive won the Rexware Golden Award in France.
2009	March	By exclusively adopting the innovative stacking technology, we unveiled SAFD 254, the only high-capacity industrial SSD which supports a wide range of operating temperature.
	April	We established an office in Shenzhen, China.
	November	We became an official supplier of memory modules for the 2009 WCG Finals in Chengdu, China.
	November	We established the VA-Consumer Product Department which covers four product lines: digital storage, multimedia entertainment, digital sharing, digital peripherals.
2010	January	The design of the power supplies of the proprietary port of our SDM 7P/180D LP industrial SSD won the 18th Taiwan Excellence Award.
	March	Our SmartBadge, which integrates demands for business security and data storage, won the iF Product Design Award.
	September	Our SmartBadge won the G-Mark international design award in Japan.
	December	We became a listed company on the Taiwan Stock Exchange.
2011	January	Our SUFD industrial SSD, AS602 consumer SSD, and AH128/AH129 USB flash drives won the Taiwan Excellence Award.
	February	We unveiled ultra-high speed industrial CFast cards, with a groundbreaking transmission speed three times faster than those of conventional IDE interfaces.
	November	We unveiled the world's fastest UHS microSDXC 64GB memory card with high capacity.
	December	Our AC232 external hard drive won the 20th Taiwan Excellence Award.
2012	January	We unveiled the 8GB DDR3 1600 UDIMM with ECC memory module for servers. With high capacity and processor speed, the product module enables servers to run flawlessly at high speed (12800MB/s).
	April	We unveiled the mPDM (mini PCIe Disk Module) modular SSD, which has higher transmission speed and provides higher storage capacity for high-end applications including web storage and business servers.
	May	The Comapny unveiled the DDR3-1600 ECC RDIMM memory module designed for storage servers.
	July	We unveiled the AC232 USB 3.0 high-speed portable hard drive with a stylish ocean pattern. The product features an exclusive anti-slip/anti-shock design and a flowery pattern, and it protects valuable data.
	September	We unveiled more ultra-high speed industrial CFast cards with a further enhanced speed to expand our share in the market of high-performance computing.

	December	Our SDM4 7P/180D ultra-slim SSD and WiFun AF750 portable wireless storage device won the 21st Taiwan Excellence Award.
2013	January	We unveiled three models of the latest SATA 3.0 SSDs with high-speed transmission interfaces, able to meet the demands for cloud applications, huge data volumes and mobility.
	March	As the trend of mobility has kept moving forward, we adopted three strategies for market planning: organizational innovation, model innovation, management innovation.
	June	We became the world's no. 1 supplier of industrial SSDs.
	July	We established our operational headquarters in Tucheng to realize the plan of bringing the factory and head office together. The establishment successfully set a milestone for us in the process of fulfilling the objective of sustainable development.
	August	We took the lead in the industry to unveil the 22 Pin SATA 6Gb/s high-speed modular SSD, along with mobile peripherals to meet the demands for mobile applications.
	November	We released the SSDWidget real-time monitoring software using cloud technology.
	December	We were the only industrial SSD manufacturer to win the 22nd Taiwan Excellence Award. The award-winning products: SSDWidget (the world's first cloud monitoring software), SFD 25A-M (the first ultra-slim SSD which is only 5mm-thin), CSD (a dual-drive SSD with groundbreaking and unique design).
2014	March	We unveiled our vision for business operations in 2014. We adopted H.O.R.S.E., the five operational strategies designed to provide more comprehensive user experience for business clients and end users, explore potential business opportunities in all aspects, and plan for the development of the global market.
	May	With rapid global growth of cloud applications and big data, we unveiled the SATA 3 high-capacity SFD 25H-M SSD, a whole new product with highly enhanced features.
	June	We continued to be ranked by Gartner as the world's no. 1 supplier of industrial SSDs in 2013.
	September	We participated in the Green Power Purchase Program launched by the government as we made commitments to green energy policies and the promotion of energy conservation and CO2 emission reduction.
	November	Chang Chia-Kun, our President, was among the "Top 100 MVP Managers" selected by the magazine Manager Today. He also received the Outstanding IT Elite Award. These honors are highly respected in the IT industry.
	December	For the sixth consecutive year, we were honored with Taiwan Excellence Awards. Five products won awards at the 23rd edition of these Awards: UrKey Technology SSD (provides comprehensive data security and protection), Combo SDIMM (a hybrid SSD-DRAM memory module featuring innovative storage design), WP210 (a power speaker which breaks technological limits), AH450 USB3.0 (a USB flash drive with appearance of silver), AH175 (dual-functional OTG flash drive) + FileBridge mobile app (this combination provides integration of software and hardware).
2015	January	We and Phison Electronics Corp. jointly announced our entering into strategic cooperation through private placement. The aim is to.

		reinforce our robust experiences and R&D capabilities in the fields of industrial SSDs and controllers through this mutual investment.
	January	We unveiled our vision for business operations in 2015. We launched the 3.0 Upgrade Plan, aiming to expand business operations and develop the global market by focusing on breakthroughs in four aspects: forming strategic niche alliances in the field of industrial control, following the trend of mobile devices, expanding business operations in eSports, and development of cloud integration.
	February	We entered into a co-branding partnership with Jimmy Liao, a famous picture book illustrator in Taiwan, in unveiling the Jimmy Limited Edition of the WP210 power speaker with wireless charging and the compact and adorable WS211 Bluetooth speaker.
	April	We unveiled the flagship Blade DDR4 overclocking memory module, a cross-generational, top-class DDR4 product which is compatible with the Intel Haswell-E processor and X99 chipset and boasts a clock rate of up to 3300 MHz, bringing unprecedented computing performance and energy-saving efficiency.
	May	We unveiled wholly new upgraded SSD solutions for industrial control, and offered high-speed, high-capacity SSD products of the PCIe and SATA 3 series.
	June	For the third consecutive year, we were ranked by the market research ageny Gartner as the world's no. 1 supplier of industrial SSDs.
	July	Using the technologies of proprietary micro optics and spectrum measuring system integration, we developed lightweight and portable spectral luminance and color meters.
	October	We unveiled the high-capacity 16GB DDR3L 1600 SODIMM, which passed the test of CMTL certification. Operating at a voltage of just 1.35V, the product shows impressive efficiency on a low-power and high-performance basis, becoming the world's only high-capacity memory product that has passed the compatibility test of Intel NUC 5i5MYBE/5i3MYBE/5i3RYH platforms.
	December	For the seventh consecutive year, we were honored by the Taiwan Excellence Award. Five products won at these 24th Awards: NFC SSD (upgrades data security and protection with wireless communication technologies), CoreAnalyzer software (with unique and innovative SSD analyzing technology), NOX DDR4 SO-DIMM (a memory module with high stability and performance), AH650 (a USB fingerprint flash drive that secures the user's private data), AH157/AH116 (lightweight, portable mini-sized USB flash drives).
2016	January	We unveiled the USB 3.0 fingerprint flash drives which use exclusive biometric identification technology and are capable of 360º all-angle sensing and discrete management of public and private data. Soon after release, the product won the 2016 Taiwan Excellence Award and was listed as one of the Top 100 Innovative Products of the 2015 IT Month.
	March	We unveiled our vision for business operations in 2016. Through developing core storage technologies, we focused on vertical applications for industries. Following trends in the consumer market, we seek to develop an IT-enabled service ecosystem integrating the storage, reception, analysis, control and sharing of information. The aim is to take the lead in the development of the growing areas of cloud application and IoT.

	May	We unveiled the first ALLONE controller, featuring the AvataRAM innovative storage solution with low latency and long lifespan.
	June	For the fourth consecutive year, we were ranked by the market research ageny Gartner as the world's no. 1 supplier of industrial SSDs. In addition, we ranked 9th on DRAMeXchange's survey of revenues of memory module manufacturers worldwide in 2015.
	June	We unveiled the AH190 dual-interface USB flash drive exclusively designed for Apple devices. The product passed the most stringent test of Apple MFi certification.
	August	We unveiled the UDM USB 3.0 1U modular SSD exclusively designed for 1U servers and with a height of just 22.4 mm.
	August	We unveiled the Z280 M.2 SSD which conformsed to the newest NVMe 1.2 standards and was the world's first product of its kind to adopt the native PCIe Gen3 x4 interface specifications.
	October	We and Clevo Co. cooperated in developing the NOX DDR4 SO-DIMM heat-resistant memory with a clock rate of up to 3000 MHz. Performance was pushed to the limit with the aim to develop the world's best gaming laptops.
	November	In cooperation with the illustrator Crystal who is well-known in Taiwan, we unveiled several co-branded products including the AH333 USB flash drive and the AC233 portable hard drive.
	November	Our NOX DDR4 SO-DIMM was tested in combination with Gigabyte's BRIX ultra compact gaming computer. The test showed NOX DDR4 SO-DIMM, a product validated by real records, was the only laptop memory that could maintain stable operation when running at a clock rate of 3200 MHz.
	December	Victor Lin, our Vice President and CFO, won the 34th National Manager Excellence Award - Financial Manager.
	December	For the eighth consecutive year, we were honored with Taiwan Excellence Awards. Six products won in these 25th Awards: AS720 (an exclusive, proprietary dual-interface SSD), AS330 SSD in combination with the high-performance PANTHER DDR4 gaming PC memory module, AH180 (a USB 3.1 Type-C dual flash drive for mobile applications), AH159/AH118 (lightweight and super-mini USB 3.1 Gen 1.0/2.0 flash drives), AC830 (a military-grade shockproof portable hard drive), SDM7 7P/180D DP (an ultra compactindustrial SSD).
2017	January	BLADE,COMMANDO,and PANTHER DDR4 Gaming PC Memory passed the QVL verification of leading companies to provide total support of the latest Intel® 200 series motherboards.
	February	NVMe PCIe SSD was launched. It provides a transmission rate up to PCIe Gen3 x4 and supports the industry-leading NVMe (Non-Volatile Memory Express) technology to substantially improve IOPS low latency performance, and also break through the bottleneck of the AHCI standard to demonstrate the full capability of SSD.
	March	The first drop-resistant mobile hard disk AC730 of military specifications was launched. The armor made of aluminum alloy can bear a load of 1500kg with anti-drop capability of military specifications as well as IP68 waterproof and dust-resistance features. The internal suspension and shockproof functions with five defending capabilities are available.
	April	The integrated CAN bus communication module and GPS-based

		EFC-G/EFC-R series products with dual-board modules. With the support of the integrated software kit (SDK) for selectable car-borne information and communication network cloud to provide control centers with intelligent and complete vehicle solutions such as fleet management, vehicle safety monitoring, and unmanned vehicle monitoring.
	April	The durable microSDHC/XC memory cards were introduced to provide the best solution with an all-weather safety surveillance system. The first anti-vulcanization series memory in the world was launched for the environment exposed to sulfur. The product has been highly recognized and is patented in many countries. The brand-new anti-vulcanization memory can effectively solve the problem of vulcanized corrosion from polluted environments, improve the overall service life of the system, and meet the requirements for stable operation for a long period of time in a harsh environment.
	April	The first anti-vulcanization series memory in the world was launched for the environment exposed to sulfur. The product has been highly recognized and is patented in many countries. The brand-new anti-vulcanization memory can effectively solve the problem of vulcanized corrosion from polluted environments, improve the overall service life of the system, and meet the requirements for stable operation for a long period of time in a harsh environment.
	May	A celebration was held for our 20th anniversary. We have been rated by Gartner as the best SSD supplier in the world for five consecutive years since 2012 , and set a solid foundation for our leading position in the industrial control market.
	August	We participated in the (Australasian Gaming Expo) in Sydney, Australia, and displayed a full range of storage solutions that we developed for gaming applications, including CF Card, CFast Card, SDM (SATA Disk Module), M.2 SSD, DRAM and other memory modules.
	September	The super gaming SSD - Apacer COMMANDO Series PT920 - was introduced to the market. The product uses the PCIe Gen 3 x4 high speed interface to ensure a reading/writing rate of 2500/1350 MB every second. The random write speed demonstrates excellent performance of 175,000 IOPs.
	October	The dedicated portable storage solution AH790 Rotary Disk for iPhone and iPad were launched. The product passes the Apple MFi certification to a maximum capacity of 64GB, and features rotary switching between Lightning and USB 3.1 Gen1 Type-A ports.
	October	We won the great honor of Taiwan Excellence Award for nine consecutive years. Six products of "innovative value" won in the 26th Taiwan Excellence Awards, including the PM110-25 SSD, with a PCIe interface, of military specifications, the SV250-7 Series of the new generation supported with the innovative Multi-PowerPath power supply technology, the DDR3 Memory Series for gaming competition and the PCIe SSD, the ASMini Pocket SSD as the first choice for businessmen, and the AC630, AC631 and AC632 portable HDs that passed the anti-drop certification of US military specifications.
	November	We worked with 714 Planet, an original illustration brand name in Taiwan, to introduce three Apacer X P714 joint models - Up in the Air, Escort, and Support - of AH336 USBs and AC233 USB 3.1 Gen 1 1TB portable HDs with the "Dream Planet" as the concept of the creation.

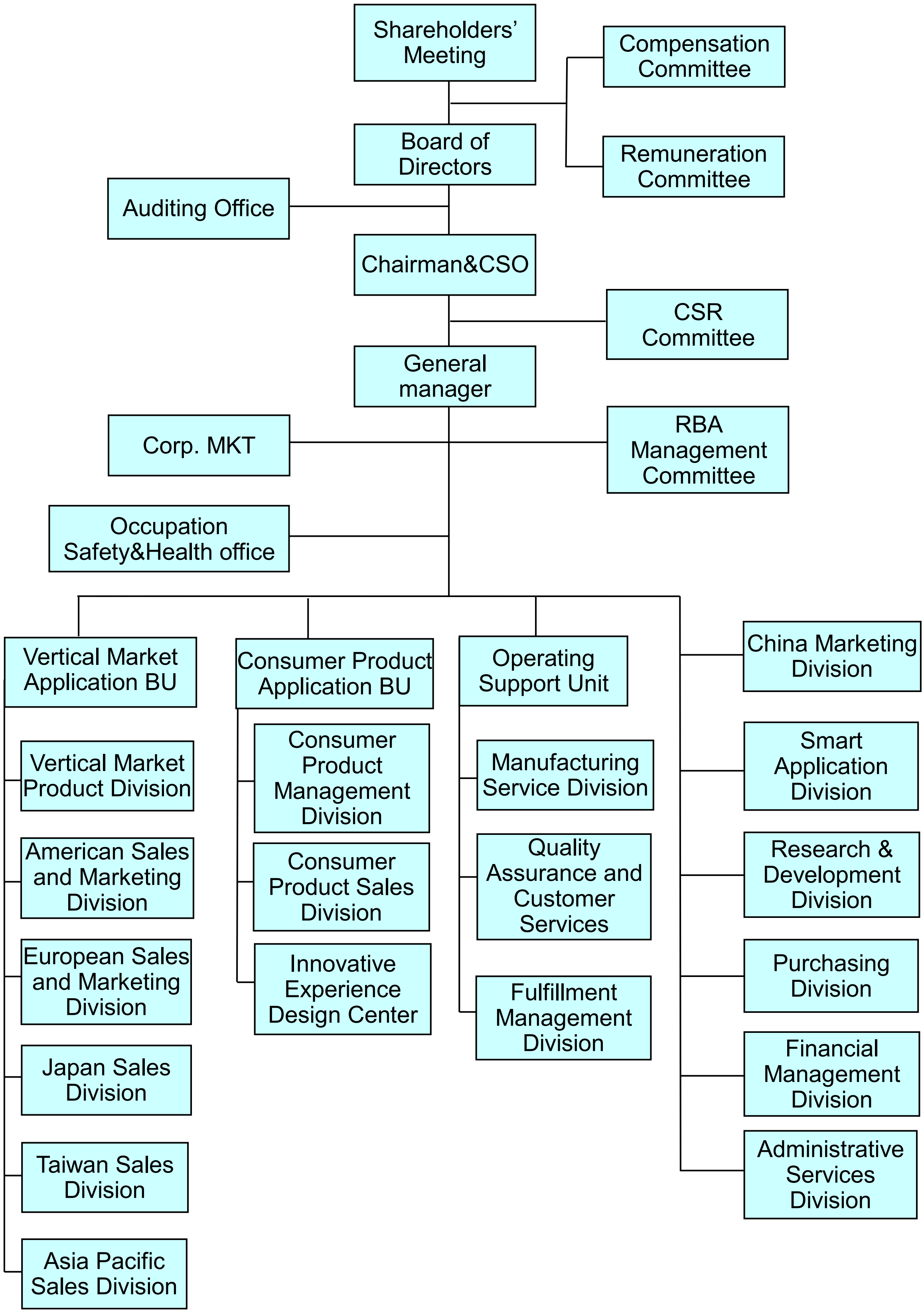
	November	We won the "Silver Award" for the electronic information manufacturing industry in the Corporate Sustainability Report Category of the 2017 Taiwan Corporate Sustainability Awards (TCSA).
2018	February	We participated as an exhibitor in Embedded World 2018, the largest international trade fair for industrial computers held every year in Nuremberg, Germany. We demonstrated our rugged SSD technology.
	March	With the release of the PANTHER DDR4 memory and SSD, whose excellent performance and tough appearance quickly drew the interest of modders and eSport players from countries around the world.
	March	We became the first manufacturer in the industry to begin mass production of the DDR4 2666 industrial memory module for servers of all series. The memory module can be supported by the latest Intel Purley and AMD EPYC processors, riding on a wave of demands for new servers in the global market.
	April	We introduced the technical-grade wide-temperature identification and established the market specifications.
	May	During the COMPUTEX exhibition, we used “The technical town with intelligent IoT” as the theme to display our latest technologies, products and software-hardware integration in six application fields across industrial IoT, transportation, national defense application, gaming and eSports and entertainments.
	June	We released the high rugged memory module XR-DIMM to build the highest reliability in the industry and was the first to introduced it into the military specification application.
	July	We launched the brand-new high specification V30/V10 microSDXC/SDHC memory card.
	August	By the great achievement in the active exploration of the optical inspection, we promoted the luminance inspection project for liquid crystal panels with high-end customization and wireless transmission support. This project also has a “depolarization ” patent to solve errors of the optical spectrometer and optimize the automated optical inspection (AOI) results. Numerous well known manufacturers of panels and industrial computer have introduced this project into their factory. With great results from the positive investment in the vertical application market, we participated in the Australasian Gaming Expo fro two consecutive years to expand our share in the gaming storage market via our core technology.
	October	For the tenth consecutive year, we were honored by the Taiwan Excellence Awards for eight products that stood out this year, including industrial control, optics and consumer product applications. We also won the achievement award as the grand total of our awarded products has exceeded 50 products.
	November	To follow the burgeoning illumination inspection trend, Apacer attended the world’s largest Hong Kong International Lighting Fair and introduced the high customized solutions for measurement from the real-time illuminance sensing to the professional illuminance formula calibration.
	December	Appreciated by 435 professional judges of the most authoritative and representative Taiwan Corporate Sustainability Award, our 2017

		corporate social responsibility report stood out among 148 competing enterprises and won the "Golden Award" in the electronic information manufacturing industry category.
	December	We participated in the InterBrand appraisal and ranked in the top-35 of Taiwan global brands and won the "Emerging Brands" award.
	December	We released the world's fastest technical grade memory card CFexpress to meet the specifications of the latest CFA CFexpress1.0 and NVME. By adopting the XQD standard and high-speed PCIe Gen3x2 interface along with the advantages of high capacity, high efficiency and low latency, we continued to expand the market of high performance computing, AI and deep learning and intelligent image analysis.
2019	January	Apacer and IoT partners promoted the painless and intelligent upgrade of Long-term care ward, and used LINE to control environmental monitoring equipment and robot-assisted patrol room to create the system that is closest to the needs of caregivers.
	February	Apacer has landed on the military equipment market in West 2019 with high-security technology and rugged storage solutions.
	March	2019 Embedded World introduces a new high-speed storage solution that focuses on the AIOT/IoT storage core application, adding new momentum to the operation. Smart City Environment Monitoring The first road, Apacer participated in the Smart City Exhibition and promoted the environmental control solution. Participated in the Tokyo International Information Technology Week in Japan, showing the fire control of industrial control.

Corporate Governance

I. Organizational system

(I) Organizational structure



(II) Tasks of the main divisions

Division	Tasks
Auditing Office	(1) Assess the defects of the internal control system and the efficiency of operations. (2) Providing advices for improvement to ensure continuous and effective implementation of the internal control system. (3) Assisting the BoD and the management in fulfilling their responsibilities.
Occupational Safety & Health Office	(1) Planning and promoting the system and related measures for the occupational safety and health policy. (2) Planning and promoting the system and related measures for the occupational accidents labor protection policy. (3) Planning and promoting the occupational safety and health insurance.
Corp. MKT	(1) Design and informative promotion of corporate image. (2) Planning and implementing the promotion of CSR activities.
Vertical Market Application BU – Vertical Market Product Management Division	(1) Market research, compilation and analysis of market intelligence, and formulation of strategies for the planning of B2B product marketing and sales. (2) Formulation of strategies for the direction of the design, planning and R&D of new products. (3) Coordination with business units over inter-division resource integration to increase output. (4) Integrating all B2B business resources and determining sales and marketing strategies. (5) Handling of major customer complaints and exploration of special channels for products. (6) Planning and implementing the design and informative promotion of B2B products.
Vertical Market Application BU – Regional Sales and Marketing Divisions / Regional Sales Departments	(1) Market research, information gathering, and formulation of strategies regarding the planning of market business in line with the annual operational objectives. (2) Developing B2B business globally and exploring new customers. (3) Integrating all B2B business resources and determining sales and marketing strategies. (4) Handling of major customer complaints and exploration of special channels for products. (5) Planning of distribution, production and priorites regarding domestic/foreign orders. (6) Collection of customer demands.

Division	Tasks
Consumer Product Application BU – Consumer Product Management Division	(1) Market research, compilation and analysis of market intelligence, and formulation of strategies for the planning of B2C product marketing and sales. (2) Formulating strategies regarding the direction of the design, planning and R&D of new products for the PC series. (3) Coordination with business units over inter-division resource integration to increase output. (4) Integrating all B2C business resources and determining sales and marketing strategies. (5) Handling of major customer complaints and exploration of special channels for products.
Consumer Product Application BU – Consumer Product Sales Division	(1) Market research, information gathering, and formulation of strategies regarding the planning of market business in line with the annual operational objectives. (2) Formulating strategies regarding the direction of the design, planning and R&D of new products for the Mobility series. (3) Developing B2C business globally and exploring new customers. (4) Integrating all B2C business resources and determining sales and marketing strategies. (5) Handling of major customer complaints and exploration of special channels for products.
Consumer Product Application BU – Innovative Experience Design Center	(1) Design and planning of new products. (2) Innovation and development of new products. (3) Observation and analysis of relevant market trends, color planning, and analysis of material usage. (4) Planning and implementing the design and informative promotion of B2C products.
Rear Support Unit – Manufacturing Service Division	(1) Manufacturing of our products. (2) Management of self-manufactured/outsourced products and outsourcing contractors. (3) Research and improvement regarding production engineering and technologies.
Rear Support Unit – QA and CS Division	(1) Inspection and test of the quality of products. (2) Inspection and improvement control of product hazardous substances. (3) Verification and troubleshooting regarding tests on product technologies (4) Analysis of new products and their defect rates. (5) Providing technical consultation and service to customers. (6) Handling customer complaints. (7) Document control center.

Division	Tasks
Rear Support Unit – Fulfillment Management Division	(1) Fulfillment of domestic/foreign orders and delivery of products. (2) Providing support and service to sales business in regions worldwide. (3) Planning of distribution, production and priorites regarding domestic/foreign orders. (4) Raw materials management, warehousing and transportation services. (5) Inventory control and warehousing and transportation of various products. (6) Responsible for the overall management of global import and export business.
AMC China Sales & Marketing Division	(1) Market research, information gathering, and formulation of strategies regarding the planning of market business in line with the annual operational objectives. (2) Developing business globally and exploring new customers. (3) Integrating all business resources and determining sales and marketing strategies. (4) Handling of major customer complaints and exploration of special channels for products.
Engineering Application Division	(1) Market research, information gathering, and formulation of strategies regarding the planning of market business in line with the annual operational objectives. (2) Develop business of smart application products and explore new customers. (3) Integrating all B2B business resources and determining sales and marketing strategies. (4) Handling of major customer complaints and exploration of special channels for products. (5) Planning of distribution, production and priorities regarding domestic/foreign orders. (6) Collection of customer demands.
Research & Development Division	(1) Formulate strategies regarding the direction of R&D of new products. (2) Submission of research plans, and R&D of the hardware technologies of new products. (3) R&D of our core technologies, and submission of patent application. (4) Inter-division coordination and integration, and technical improvement of our products.
Purchasing Division	(1) Planning and managing the procurement of raw materials and components for products. (2) Bargaining with and managing the contractors of externally procured products.

Division	Tasks
Financial Management Division	(1) Establishing procedures for accounting and tax matters and financial statements of the Company. (2) Control ling accounting and tax matters of subsidiaries. (3) Matters related to convening BoD meetings. (4) Controlling our cash flow, and movement of funds. (5) Announcement and disclosure of material information, and maintenance of investor relations. (6) Reinvestment and risk control/management.
Administrative Service Division	(1) Management and establishment of our information systems. (2) Establishment of database and system planning for data security/protection. (3) Assistance in consultation regarding the information technologies of the Company. (4) Matters related to legal affairs, patents and trademarks of the Company. (5) Matters related to the management of contracts and seals of the Company. (6) Planning and formulation of HR strategies and management systems for general and factory affairs of the Company. (7) Establishment of welfare resource systems. (8) Planning and implementation of shareholders' meetings, and shareholder services. (9) Establishment and implementation of management regulations.

II. Information about directors, supervisors, president, vice president, assistant managers, and supervisors of the branches and offices

(I) Directors and supervisors

April 1, 2019

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment		Current shares held		Current shares held by spouse or under-age children		Shares held in the name of others		Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship		
							Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Chairman and CSO	Republic of China	Austin Chen	5.30.2018	Male	3	4.30.2001	1,525,633	1.32%	1,525,633	1.51%	450,268	0.45%	-	0.00%	M.B.A., Department of Management Science, National Chiao Tung University Apacer Technology Inc., Chairman Acer Inc., Vice President	Apacer Technology Inc., Chairman and CSO Apacer Technology (BVI) Inc. Director Darwin Precisions Corp., Independent Director JoiiUp Technology Inc., Representative of Legal Person as Director OtO Photonics Inc., Director's Representative	None	None	None

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment		Current shares held		Current shares held by spouse or under-age children		Shares held in the name of others		Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship		
							Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Director	Republic of China	Teddy Lu	5.30.2018	Male	3	9.02.2008	5,699,906	5.65%	5,699,906	5.65%	-	0.00%	-	0.00%	M.S. of Electrical Engineering and M.B.A., University of California B.S., Department of Electrophysics, National Chiao Tung University Acer Inc., Operation and Investment Management Division, General Manager	iD SoftCapital Brand Consulting Inc., Chairman Dragon Investment Fund I Co., Ltd., Director Apacer Technology Inc., Director Cyber Power Systems, Inc., Director iD SoftCapital Inc., Director RDC Semiconductor Co., Ltd., Director Formosa21, Inc., Director Stans Foundation, Director JoiiUp Technology Inc., Director EcoLumina Technologies, Inc., Director's Representative	None	None	None

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment: Number of shares	Shares held at time of appointment: Shareholding ratio	Current shares held: Number of shares	Current shares held: Shareholding ratio	Current shares held by spouse or under-age children: Number of shares	Current shares held by spouse or under-age children: Shareholding ratio	Shares held in the name of others: Number of shares	Shares held in the name of others: Shareholding ratio	Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship: Title	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship: Name	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship: Relation
Director and General manager	Republic of China	Chang Chia-Kun	5.30.2018	Male	3	6.13.2012	196,825	0.20%	196,825	0.20%	81,740	0.08%	-	0.00%	M.B.A., Baruch College, City University of New York M.S. of Electrical Engineering, Polytechnic School of Engineering, New York University Apacer Technology Inc.,President Apacer Memory America Inc., General Manager	Apacer Technology Inc., Director/President Apacer Technology B.V., Director Apacer Technology Japan Corp., Director Apacer Electronic (Shanghai) Co., Ltd, Representative of Legal Person as Director	None	None	None

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment		Current shares held		Current shares held by spouse or under-age children		Shares held in the name of others		Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship		
							Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Director	Republic of China	Haydn Hsieh	5.30.2018	Male	3	6.15.2015	-	0.00%	-	0.00%	-	0.00%	-	0.00%	Wistron Corp., Senior Vice President Acer Inc., Portable Computer Business Group, General Manager, Senior Vice General Manager Entrepreneur Class, National Chengchi University Department of Electrical Engineering, Tatung University	Wistron NeWeb Corporation, Chairman and CEO Wistron Corporation, Director aEnrich Technology Corporation, Director Raydium Semiconductor Corporation, Independent Director Apacer Technology Inc., Director	None	None	None
Director	Republic of China	George Huang	5.30.2018	Male	3	5.24.2018	1,207,041	1.20%	1,207,041	1.20%	-	0.00%	-	0.00%	B.S., Department of Communications Engineering, National Chiao Tung University Acer Inc., Chairman Acer Inc., CFO Acer Inc., Co-founder	Acer Inc., Director Apacer Technology Inc., Director Les enphants Co. Ltd., Director Motech Industries Inc., Director PChome Online Inc., Independent Director BIONET Corp., Independent Director	None	None	None

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment		Current shares held		Current shares held by spouse or under-age children		Shares held in the name of others		Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship		
							Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Director	Republic of China	Phison Electronics Corp.	5.30.2018	NA	3	5.30.2018	10,505,000	9.96%	10,505,000	9.96%	-	0.00%	-	0.00%	NA	NA	NA	NA	NA
Director	Malaysia	Representative: Weng Wen-Jie	5.30.2018	Male	3	5.30.2018	-	0.00%		0.00%		0.00%		0.00%	Department of Accounting, National Cheng Kung University Innolux Corporation Operator	Phison Electronics Corp., Assistant Manager Apacer Technology Inc., Director	None	None	None
Independent Director	Republic of China	Max Wu	5.30.2018	Male	3	6.23.2003	68,325	0.07%	68,325	0.07%	-	0.00%	-	0.00%	B.S., Department of Electronics Engineering, National Chiao Tung University Acer Company Hua Nan Management Consulting Co., Chairman InveStar Capital, Inc., Partner Spring Foundation of NCTU, Chairman	Birch Venture Capital, Inc., Chairman Novatek Microelectronics Corp., Director YODN Lighting Corp., Director Wistron NeWeb Corp., Director Antec, Inc., Supervisor Gigastone Corp., Independent Director Gigastone Crop.,Independent Director. Apacer Technology Inc., Independent Director Harvatek Corporation, Independent Director	None	None	None

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment		Current shares held		Current shares held by spouse or under-age children		Shares held in the name of others		Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship		
							Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Independent Director	Republic of China	Philip Peng	5.30.2018	Male	3	5.30.2018	527	0.00%	527	0.00%	-	0.00%	-	0.00%	iD SoftCapital Inc., Director/General Manager Acer Inc., Director's Representative Wistron Corporation, Director Wistron NeWeb Corp., Supervisor Acer Inc., Senior vice President/CFO M.B.A., Department of Business Administration, National Chengchi University	AU Optronics Corp., Independent Director Apacer Technology Inc., Independent Director Acer Inc., Director's Representative AOPEN Inc., Director's Representative Wistron Corporation, Director Wistron NeWeb Corp., Director Wistron ITS Corp., Director iD SoftCapital Inc., Director/General Manager SmartStar Technology Inc., Chairman Zhihe Management Consulting Co., Chairman Dragon Investment Fund Co., Ltd., Director's Representative iD SoftCapital Innovation Consulting Inc., Supervisor's Representative	None	None	None

Title	Nationality or country of registration	Name	Appointment Date	Gender	Term	First Appointment Date	Shares held at time of appointment		Current shares held		Current shares held by spouse or under-age children		Shares held in the name of others		Educational background and experience	Concurrent posts in Apacer or other companies	Other supervisors, directors or supervisors in a spousal relationship or within the second degree of kinship		
							Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Independent Director	Republic of China	Hsieh Hui-Chuan	5.30.2018	Female	3	5.30.2018	-	0.00%	-	0.00%	-	0.00%	-	0.00%	Ph.D. in Finance, University of Houston Co-operative Assets Management Co., Ltd., President China Development Asset Management Corp., President China Development Industrial Bank, Department of Investment, Assistant Manager	AU Optronics Corp., Independent Director Darwin Precisions Corp., Independent Director Apacer Technology Inc., Independent Director	None	None	None

(II) Major shareholders of the corporate shareholders:

April 10, 2018

Name of corporate shareholders	Major shareholders of the corporate shareholders
Phison Electronics Corp.	Toshiba Memory Corporation Investment Accounts commissioned to First Commercial Bank (10.06%) Kingston Technology Corporation Investment Accounts commissioned to CTBC Bank (6.65%) The employee reserve fund outsourced to BNP Paribas Islamic Asset Management commissioned to Standard Chartered (4.08%) Pan Jian-Cheng (2.31%) Yang Jun-Yong (2.31%) Ouyang Zhi-Guang (1.7%) Wu He-Wei (1.68%) Norges Bank Investment Accounts commissioned to Citi Bank (1.51%) Vanguard Emerging Mar kets Stock Index Fund Accounts commissioned to Standard Chartered (1.34%) StichtingAPG new stock commissioned to Chase Bank (1.12%)

(III) Major shareholders of the corporate shareholders:

April 10, 2018

Name of corporate shareholders	Major shareholders of the corporate shareholders	Sharehold ing ratio
Toshiba Memory Corporation Investment Accounts commissioned to First Commercial Bank	Toshiba Memory Holdings Corporation	100%

(IV) Information on supervisors and directors

Qualifications Name	Experience of more than 5 years and following professional qualification			Independence (Note)										Number of other public companies where the member also serves on a remuneration committee
	Lecturer or higher position at a public or private university/college in the department of commerce, law, finance, accounting or any other fields related to our business	**Judge, public prosecutor, attorney, certified public accountant, or any other professional or technical specialists who have passed a national examination and received a certificate in a profession necessary for our business**	**Work experience in commerce, law, finance, accounting or any other field necessary for our business**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Austin Chen			✓				✓	✓		✓	✓	✓	✓	1
Teddy Lu			✓	✓			✓	✓		✓	✓	✓	✓	0
Chang Chia-Kun			✓			✓	✓	✓		✓	✓	✓	✓	0
Haydn Hsieh			✓	✓	✓	✓	✓	✓			✓	✓	✓	1
George Huang			✓	✓	✓		✓	✓		✓	✓	✓	✓	2
Phison Electronics Corp. Representative: Weng Wen-Jie			✓	✓	✓	✓	✓			✓	✓	✓	✓	0
Max Wu			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Philip Peng			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
Hsieh Hui-Chuan			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2

Note: Directors and supervisors are requested to mark "✓" in the space beside the number if any of the following requirements are satisfied during the two years before being elected or during the term of office.

(1) The member was or is not an employee of the company or any of its affiliates.

(2) The director or supervisor was not or is not a director or supervisor of the company or any of its affiliates (except for independent director of the company, its parent, or any subsidiary appointed pursuant to the Act or any local laws and regulations).

(3) The member was not or is not a natural-person shareholder who held or holds shares, together with those held by his/her spouse, minor children, or held by the director or supervisor in the name of another person, in an aggregate amount of one percent or more of the total issued shares of the company or was or is ranked as one of the top-ten shareholders.

(4) The director or supervisor was or is not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding three subparagraphs.

(5) The member was not or is not a director, supervisor, or employee of a corporate shareholder that directly holds five percent or more of the total issued shares of the company or of a corporate shareholder that ranks among the top-five in shareholdings.

(6) The member was not or is not a director, supervisor, managerial officer, or shareholder holding five percent or more of the shares of a specified company or institution that has a financial or business relationship with the company.

(7) The director or supervisor was not or is not a professional individual, or an owner, partner, director, supervisor, or managerial officer of a sole proprietorship, partnership, company, or institution that, provides commercial, legal, financial, accounting affairs or consultation to the company or to any affiliate of the company, or a spouse thereof. This does not apply to any member of the remuneration committee who performs his/her duties pursuant to Article 7 of the Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded Over the Counter.

(8) The director or supervisor was or is not in a spousal relationship nor a relative within the second degree of kinship.

(9) The member did or does not meet any of the requirements specified in Article 30 of the Company Act.

(10) The director or supervisor was not, as a government agency or a juristic person or a representative of any of them, elected pursuant to Article 27 of the Company Act.

(V) Information of the President, Vice President, Assistant Manager, and supervisors of departments and branches

April 1, 2019

Title	Nationality	Name	Gender	Inauguration Date	No. of shares held		Shares held by spouse or minor children		Shares held in the name of others		Educational background and experience	Concurrent posts in other companies	Managerial officers in a spousal relationship or within the second degree of kinship		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
Chairman and CSO	Republic of China	Austin Chen	Male	6.13.2013	1,525,633	1.51%	450,268	0.45%	-	0.00%	M.B.A., Department of Management Science, National Chiao Tung University Apacer Technology Inc., Chairman Acer Inc., Vice President	Apacer Technology Inc., Chairman and CSO Apacer Technology (BVI) Inc. Director Darwin Precisions Corp., Independent Director JoiiUp Technology Inc., Representative of Legal Person as Director OtO Photonics Inc., Director's Representativer	None	None	None
General manager	Republic of China	Chang Chia-Kun	Male	4.1.2014	196,825	0.20%	81,740	0.08%	-	0.00%	M.B.A., Baruch College, City University of New York M.S. of Electrical Engineering, Polytechnic School of Engineering, New York University Apacer Technology Inc.,President Apacer Memory America Inc., General Manager	Apacer Technology Inc., Director/President Apacer Technology B.V., Director Apacer Technology Japan Corp., Director Apacer Electronic (Shanghai) Co., Ltd, Representative of Legal Person as Director	None	None	None
Vice President	Republic of China	Victor Lin	Male	4.3.2006	102,599	0.10%	61,908	0.06%	-	0.00%	Department of Accounting, National Cheng Kung University Apacer Technology Inc Rear Support Unit Vice President Teapo Electronic Co., Ltd. , Head of the Central Infrastructure ACERTWP Information Co., Ltd., CFO	—	None	None	None

Title	Nationality	Name	Gender	Inauguration Date	No. of shares held		Shares held by spouse or minor children		Shares held in the name of others		Educational background and experience	Concurrent posts in other companies	Managerial officers in a spousal relationship or within the second degree of kinship		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Relation
CFO	Republic of China	Lai Zi-Wen	Female	7.14.2013	-	0.00%	-	0.00%	-	0.00%	MBA, National Cheng Kung University Apacer Technology Inc CFO Edison Opto Corp., Managerial Officer Taiwan Cement Co., Ltd., Project Leader Teapo Electronic Co., Ltd. , Assistant Manager	Apacer Technologies Pvt. Ltd. Director Apacer Electronic (Shanghai) Co., Ltd, Representative of Legal Person as Director Grand Scope Ltd., Director's Representative	None	None	None
Business unit head	Republic of China	Luo Xue-Ru	Female	8.1.2018	8,854	0.01%	3,738	0.01%		0.01%	National Chengchi University ENBA Apacer Technology Inc Consumer Product Application BU head Apacer Technology Inc Rear Support Uni head	Grand Scope Ltd., Director's Representative Shenzhen Qinjing Technology Director's Representative	None	None	None
Business unit head	Republic of China	Huang Mei-Hui	Female	8.1.2018	9,279	0.01%		0.01%		0.01%	Tunghai Department of Business Administration Apacer Technology Inc Vertical Market Application BU head Apacer Technology Inc Asia-Pacific & Taiwan Marketing Division	-	None	None	None

(VI) Remuneration for directors, supervisors, President and Vice President in the most recent year

1. Remuneration for directors (including independent directors)

Unit: New Taiwan Dollar

Title	Name	Remuneration								The total amount of A, B, C and D in net income after tax (%)		Remuneration for part-time employees								The total amount of A, B, C, D, E, F and G in net income after tax (%)		Remuneration from invested businesses other than subsidiaries (Y/N)
		Remuneration (A)		Retirement pension (B)		Director remuneration (C)		Business execution fee (D)				Salary, bonus and special allowance (E)		Retirement pension (F)		Employee remuneration (G)						
		Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer		All companies in financial report		Apacer	All companies in financial report	
																Cash dividend	Share dividend	Cash dividend	Share dividend			
Chairman	Austin Chen	3,416,667	3,416,667	-	-	5,743,337	5,743,337	402,400	402,400	2.66%	2.66%	14,180,000	14,180,000	108,000	108,000	3,560,000	-	3,560,000	-	7.64%	7.64%	-
Director	Teddy Lu																					
Director	Chang Chia-Kun																					
Director	Haydn Hsieh																					
Director	Yang Jun-Yong																					
Director	George Huang																					
Director	Phison																					
Independent director	Max Wu																					
Independent director	Hong Sing-Cheng																					
Independent director	Philip Peng																					
Independent director	Hsieh Hui-Chuan																					

Note 1: The current term of the Director Yang Jun-Yong, the independent Director Hong Sing-Cheng etc shall expire upon May 29, 2018.
Note 2: The current term of the Director George Huang and Phison, Independent Director Philip Peng and Hsieh Hui-Chuan become effective since May 30, 2018.

Salary Range Table

Salary range for directors of Apacer	Director name			
	The total amount of the first four remuneration items (A+B+C+D)		The total amount of the first seven remuneration items (A+B+C+D+E+F+G)	
	Apacer	All companies in financial report	Apacer	All companies in financial report
Less than 2,000,000 dollars	Teddy Lu, Chang Chia-Kun, Haydn Hsieh, Yang Jun-Yong, George Huang, Phison Electronics Corp, Max Wu, Hong Sing-Cheng, Philip Peng, Hsieh Hui-Chuan	Teddy Lu, Chang Chia-Kun, Xie Hongbo, Yang Jun-Yong, George Huang, Qun Lian, Max Wu, Hong Sing-Cheng, Philip Peng, Hsieh Hui-Chuan	Teddy Lu, Xie Hongbo, Yang Jun-Yong, George Huang, Qun Lian, Max Wu, Hong Sing-Cheng, Philip Peng, Hsieh Hui-Chuan	Teddy Lu, Xie Hongbo, Yang Jun-Yong, George Huang, Qun Lian, Max Wu, Hong Sing-Cheng, Philip Peng, Hsieh Hui-Chuan
2,000,000 dollars (incl.) ~ 5,000,000 dollars (not incl.)	Austin Chen	Austin Chen	-	-
5,000,000 dollars (incl.) ~ 10,000,000 dollars (not incl.)	-	-	Austin Chen	Austin Chen
10,000,000 dollars (incl.) ~ 15,000,000 dollars (not incl.)	-	-	Chang Chia-Kun	Chang Chia-Kun
15,000,000 dollars (incl.) ~ 30,000,000 dollars (not incl.)	-	-	-	-
30,000,000 dollars (incl.) ~ 50,000,000 dollars (not incl.)	-	-	-	-
50,000,000 dollars (incl.) ~ 100,000,000 dollars (not incl.)	-	-	-	-
More than 100,000,000 dollars	-	-	-	-
Total	11	11	11	11

2. Remuneration for supervisors

Unit: New Taiwan Dollar

Title	Name	Supervisor remuneration						The total amount of A, B and C in net income after tax (%)		Remuneration from invested businesses other than subsidiaries (Y/N)
		Remuneration (A)		Remuneration (B)		Business execution fee (C)				
		Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	
Supervisor	George Huang	-	-	1,108,442	1,108,442	26,000	26,000	0.23%	0.23%	-
Supervisor	Huang Ren-Hong									
Supervisor	Zheng Zhong-Ren									

Note : The current term of the Supervisor George Huang, Huang Ren-Hong and Zheng Zhong-Ren shall expire upon May 29, 2018.

Salary Range Table

Salary range for supervisors of Apacer	Supervisor name	
	Total amount of the first three remuneration items (A+B+C)	
	Apacer	All companies in financial report
Less than 2,000,000 dollars	George Huang, Huang Renhong, Zheng Zhong-Ren	George Huang, Huang Renhong, Zheng Zhong-Ren
2,000,000 dollars (incl.) ~ 5,000,000 dollars (not incl.)	-	-
5,000,000 dollars (incl.) ~ 10,000,000 dollars (not incl.)	-	-
10,000,000 dollars (incl.) ~ 15,000,000 dollars (not incl.)	-	-
15,000,000 dollars (incl.) ~ 30,000,000 dollars (not incl.)	-	-
30,000,000 dollars (incl.) ~ 50,000,000 dollars (not incl.)	-	-
50,000,000 dollars (incl.) ~ 100,000,000 dollars (not incl.)	-	-
More than 100,000,000 dollars	-	-
Total	3	3

3. Remuneration for President and Vice President

Unit: New Taiwan Dollar

Title	Name	Salary (A)		Retirement pension (B)		Bonus and special allowance (C)		Employee remuneration (D)				The total amount of A, B, C and D in net income after tax (%)		Remuneration from invested businesses other than subsidiaries (Y/N)
								Apacer		All companies in financial report				
		Apacer	All companies in financial report	Apacer	All companies in financial report	Apacer	All companies in financial report	Cash amount	Share amount	Cash amount	Share amount	Apacer	All companies in financial report	
General manager	Chang Chia-Kun	7,020,000	7,020,000	216,000	216,000	6,510,000	6,510,000	3,620,000	-	3,620,000	-	4.84%	4.84%	-
Vice President	Victor Lin													

Note: The percentage of each remuneration mentioned above in the net income after tax is determined based on the actually paid remuneration.

Salary Range Table

Salary range for the President and Vice President of Apacer	President and Vice President name	
	Apacer	All companies in financial report
Less than 2,000,000 dollars	-	-
2,000,000 dollars (incl.) ~ 5,000,000 dollars (not incl.)	-	-
5,000,000 dollars (incl.) ~ 10,000,000 dollars (not incl.)	Victor Lin	Victor Lin
10,000,000 dollars (incl.) ~ 15,000,000 dollars (not incl.)	Chang Chia-Kun	Chang Chia-Kun
15,000,000 dollars (incl.) ~ 30,000,000 dollars (not incl.)	-	-
30,000,000 dollars (incl.) ~ 50,000,000 dollars (not incl.)	-	-
50,000,000 dollars (incl.) ~ 100,000,000 dollars (not incl.)	-	-
More than 100,000,000 dollars	-	-
Total	2 (Independent) Directors	2 (Independent) Directors

4. Names of the managers distributing employee remunerations and the distributing status

Unit: New Taiwan Dollar

	Title	Name	Share amount	Cash amount	Total	The total amount in net income after tax (%)
General manager	Chairperson & CSO	Austin Chen	0	7,248,000	7,248,000	2.02%
	General manager	Chang Chia-Kun				
	Vice President	Victor Lin				
	CFO	Lai Zi-Wen				
	Business unit head	Luo Xue-Ru				
	Business unit head	Huang Mei-Hui				

Note 1: The term of the Business unit head Luo Xue-Ru and Huang Mei-Hui becomes effective since August 1, 2018.

Note 2: Since November 11, 2018,Chairman Austin Chen also served as the SCO.

5. Comparison and analysis of the total remuneration as a percentage of net income stated in the financial report of Apacer or individual financial reports and paid by Apacer and all the companies in the consolidated report to each of Apacer's directors, supervisors, President, and Vice President in the most recent 2 fiscal years, and description of the policies, standards, and portfolios for payment of the remuneration, the procedures for determining the remuneration, and the association with the operation performance and future risk exposure.

Title	The total amount of 2018 remuneration in net income after tax (%)	The total amount of remuneration of all the companies in 2018 consolidated report in net income after tax (%)	The total amount of 2017 remuneration in net income after tax (%)	The total amount of remuneration of all the companies in 2017 consolidated report in net income after tax (%)
Director	7.82%	7.82%	5.94%	5.94%
Supervisor				
President and Vice President				

Remuneration for the directors and supervisors is appropriated pursuant to our "Articles of Incorporation" and is paid according to such Articles of Incorporation when there are profits in our final account; the salary structure for the President and Vice President comprises a base salary, meal allowance, and transportation allowance. The salary is determined pursuant to the internal regulations based on the educational background, work experience, and performance.

III. Corporate governance

(I) Operation status of the Board of Directors

The board of directors held six meetings in 2018. The presence and attendance of the directors and supervisors are described below:

Title	Name	Actual number of persons present (attended)	Number of meetings attended by proxy	Actual Presence (attendance) rate (%)	Remarks
Chairman	Austin Chen	6	0	100	
Director	Teddy Lu	6	0	100	
Director	Chang Chia-Kun	6	0	100	
Director	Haydn Hsieh	6	0	100	
Director	George Huang	4	0	100	Inaugurated on May 30, 2018
Director	Phison Electronics Corp. Representative: Weng Wen-Jie	3	1	75	Inaugurated on May 30, 2018
Independent Director	Max Wu	6	0	100	
Independent director	Philip Peng	3	1	75	Inaugurated on May 30, 2018
Independent Director	Hsieh Hui-Chuan	4	0	100	Inaugurated on May 30, 2018
Director	Yang Jun-Yong	1	0	50	Resigned on May 30, 2018
Independent Director	Hong Sing-Cheng	2	0	100	Resigned on May 30, 2018
Supervisor	George Huang	2	0	100	Resigned on May 30, 2018
Supervisor	Huang Ren-Hong	1	0	50	Resigned on May 30, 2018
Supervisor	Zheng Zhong-Ren	2	0	100	Resigned on May 30, 2018

Other matters to be recorded:

I. Where any of the following circumstances occurs to the meeting of the Board of Directors, the date, term and proposal of the meeting as well as the opinions of all the independent directors and Apacer's action on these opinions shall be described:

(I) The matters referred to in Article 14-3 of the Securities and Exchange Act:

Date	Term	Proposal	Independent director opinions	Apacer's action on these opinions
2.23.2018	First meeting in 2018	Proposal for distribution of the 2018 remuneration for employee and managerial officers was adopted	None	None
2.23.2018	First meeting in 2018	Proposal for distribution of the 2018 remuneration for employee and managerial officers was adopted	None	None
2.23.2018	First meeting in 2018	Adoption of the proposal on matters related to the application for listing of the common stocks issued through initial private placement in 2015	None	None
2.23.2018	First meeting in 2018	Adoption of the proposal for salary adjustment (including managers) in FY 2018	None	None
2.23.2018	First meeting in 2018	Adoption of the proposal for the “Procedures for Directors remuneration distribution” of the Company	None	None
2.23.2018	First meeting in 2018	Adoption of the proposal for the “Procedures for Compensation committee remuneration” of the Company	None	None

Date	Term	Proposal	Independent director opinions	Apacer's action on these opinions
2.23.2018	First meeting in 2018	Proposal for Directors re-election was adopted	None	None
2.23.2018	First meeting in 2018	Proposal for nominating directors and independent directors was adopted	None	None
2.23.2018	First meeting in 2018	Proposal for dissolving the new director and its representative's competition restrictions was adopted	None	None
4.12.2018	Second meeting in 2018	Philip Tang and Grace Chen, certified public accountants of KPMG Taiwan, were commissioned to act as the CPAs of the Company's financial statements	None	None
4.12.2018	Second meeting in 2018	Proposal fo reviewing the nomination list of candidates for directors and independent directors re-elected was adopted	None	None
5.30.2018	Third meeting in 2018	Proposal fo passing the election of the chairman was adopted	None	None
7.23.2018	Fourth meeting in 2018	Adoption of the proposal for the "Internal Control System" and the "Internal audit system" of the Company	None	None
11.11.2018	Fifth meeting in 2018	Adoption of the proposal for adding an Company CSO	None	None
12.13.2018	Sixth meeting in 2018	Adoption of the proposal for distribution of the performance bonus for managers in FY 2018	None	None

(II) In addition to the matters mentioned above, any independent director expresses dissent or reservation with respect to a resolution of the Board of Directors, and such dissent or reservation is recorded in the minutes or a written statement: None

II. Where the implementation status of recusal bearing on the interest of a director is involved, the name of the director, proposal, reasons for the recusal, and participation in the voting shall be described:

Date	Term	Proposal	Resolution
2.23.2018	First meeting in 2018	Adoption of the proposal for salary adjustment (including managers) in FY 2018	The proposal was approved by a resolution of the directors, excluding Austin Chen and Chang Chia-Kun, who did not participate in the discussion and voting due to personal interests, present at the meeting of the Board of Directors after consultation with the independent directors.
11.11.2018	Fifth meeting in 2018	Adoption of the proposal for adding an Company CSO	The proposal was approved by a resolution of the directors, excluding Austin Chen and Chang Chia-Kun, who did not participate in the discussion and voting due to personal interests, present at the meeting of the Board of Directors after consultation with the independent directors.
12.13.2018	Sixth meeting in 2018	Adoption of the proposal for distribution of the performance bonus for managers in FY 2018	The proposal was approved by a resolution of the directors, excluding Austin Chen and Chang Chia-Kun, who did not participate in the discussion and voting due to personal interests, present at the meeting of the Board of Directors after consultation with the independent directors.
12.13.2018	Sixth meeting in 2018	Adoption of the proposal for distribution of the remuneration for managers in FY 2018	The proposal was approved by a resolution of the directors, excluding Austin Chen and Chang Chia-Kun, who did not participate in the discussion and voting due to personal interests, present at the meeting of the Board of Directors after consultation with the independent directors.

III. Evaluation of the goal and implementation status with respect to enhancement of the function of the Board of Directors in the current and most recent years:

We have established our "Rules of Procedures for Board of Directors Meeting" for compliance pursuant to the "Regulations Governing Procedure for Board of Directors Meetings of Public Companies", entered the presence of the directors at the meeting in the Market Observation Post System, and disclosed important resolution of the meeting on our website.

Our Remuneration Committee is composed of independent directors to regularly (at lease once a year) review the policies, systems, standards and structures of the performance evaluation of remuneration for directors and managers, and evaluation of the management team's performance and employee bonus policies.

The Company established the audit committee on May 30, 2018. The committee consisted of all the Independent Directors and complied with the articles of the Audit Committee. As for the operation status of the Audit Committee, please refer to page 27 of this annual report.

Our financial and non-financial information have been disclosed in the Market Observation Post System according to relevant regulations and set up special web pages for investors on our website to disclose information on our financial status and corporate governance in a timely manner.

(II) Operation status of the Audit Committee or participation of supervisors in the meeting of the Board of Directors

The Board of Directors held three meetings in 2018. The attendance is described below:

Title	Name	Actual number of persons attended	Actual attendance rate (%)	Remarks
Chairperson	Max Wu	3	100	
Member	Philip Peng	3	100	
Member	Hsieh Hui-Chuan	3	100	

Other matters to be recorded:

I. Where any of the following circumstances occur to the operation of the Audit Committee, the date, term and proposal of the Board of Directors meeting as well as the Audit Committee resolution and how the company manage the Committee's opinions shall be described:

(I) The matters referred to in Article 14-5 of the Securities and Exchange Act.

Date	Term	Proposal	Audit Committee Resolution	Apacer's action on the Committee's opinions
7.23.2018	Fourth meeting in 2018	Adoption of the proposal for the quarterly consolidated financial report in the second quarters in FY 2018	Approved by all of the Audit Committee members	Approved by all of the directors present
7.23.2018	Fourth meeting in 2018	Adoption of the proposal for the "Internal Control System" and the "Internal audit system" of the Company	Approved by all of the Audit Committee members	Approved by all of the directors present

(II) In addition to the matters mentioned above, any resolution approved by more than two-thirds of all the directors but not approved by the Audit Committee: None.

II. Where the implementation status of recusal bearing on the interest of an independent director is involved, the name of the independent director, proposal, reasons for the recusal, and participation in the voting shall be described: None.

III. Communication of independent directors with the chief internal auditor and CPA (including important matters, methods and results with respect to communication of the company finances and operation status):

(I) Communication between independent directors and internal audit

Date	Term	Communication issue
7.23.2018	First meeting in 2018	1. Review internal audit report 2. Review and revision of "internal control system" and "internal audit system" 3. Review and update the internal audit plan of 2018
11.11.2018	Second meeting in 2018	1. Internal audit report 2. Review the internal audit plan of 2019
12.13.2018	Third meeting in 2018	1. Review internal audit report

(II) Communication between independent directors and CPA

Date	Term	Communication issue
11.11.2018	Second meeting in 2018	1. Review the responsibility of the financial report in the period of review
11.11.2018	Second meeting in 2018	1. Independence 2. Review the scope and type of report issued 3. Review findings 4. Annual audit plan/Key Audit Matters 5. Important decree update

(III) Corporate governance and differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons:

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
I. Does Apacer establish and disclose corporate governance best practice principles pursuant to the "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies"?	V		We have established the "Corporate Governance Best Practice Principles" pursuant to the "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies" and disclosed these on our website.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
II. Shareholding structure and shareholder's equity				
(I) Does Apacer have an internal procedure and act accordingly for handling of the suggestions, doubts, disputes, and lawsuits?	V		(I) To protect the interests of the shareholders, we have designated personnel to deal with suggestions, doubts and disputes of the shareholders. We may accept suggestions and we deal with disputes depending on the type of the problem, and act according to the procedure.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
(II) Does Apacer have lists of the major shareholders who actually control the company and the persons who control the major shareholders?	V		(II) We have lists of the major shareholders who actually control the Company and the persons who control the major shareholders to ensure the stability of the business management rights.	
(III) Does Apacer have a firewall mechanism in place to control the risks between Apacer and its affiliates?	V		(III) We have established the internal "Regulations Governing the Transactions among Related Parties, Specific Companies, and Group Enterprises", "Subsidiary Management Regulations", "Procedures for Endorsements/Guarantees", "Procedures for Loaning Funds to Others", and "Procedures for Acquisition or Disposal of Assets" to establish appropriate risk control mechanism and firewall. The auditors supervise the implementation on a regular basis.	
(IV) Does Apacer have internal regulations to prohibit insiders of the company from using	V		(IV) We have established the internal control regulations of "Management Procedures for Handling Material Inside Information and Prevention of Insider Trading" and "Procedures for Ethical Management and	

<table>
<tr><th rowspan="2">Item</th><th colspan="3">Description</th><th rowspan="2">Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Summary</th></tr>
<tr><td>undisclosed information to the market to trade securities?</td><td></td><td></td><td>Guidelines for Conduct" to prohibit insiders of the company from using information not open to the market to trade securities. Promotions are executed to the insiders and employees of the company.</td><td></td></tr>
<tr><td>III. Responsibilities of the Board of Directors and its formation
(I) Does Apacer have a policy of diversity for the formation of the Board of Directors and does it implement that thoroughly?</td><td>V</td><td></td><td>(I) The policy of diversity for the formation of our Board of Directors is regulated in the “Corporate Governance Best Practice Principles.” The directors of the Company have professional backgrounds in of technology, business management and venture investment and practical experience in different industries. Their professional knowledge, educational background, and work experience meet the requirements of the Company.
<table>
<tr><th>Title</th><th>Name</th><th>Gender</th><th>Leadership and decision</th><th>Professional knowledge and skill</th><th>Professional legal knowledge and skill</th></tr>
<tr><td>Chairman</td><td>Austin Chen</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Director</td><td>Teddy Lu</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Director</td><td>Chang Chia-Kun</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Director</td><td>Haydn Hsieh</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Director</td><td>George Huang</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Director’s Representative</td><td>Weng Wen-Jie</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Independent Director</td><td>Max Wu</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Independent Director</td><td>Philip Peng</td><td>Male</td><td>V</td><td>V</td><td></td></tr>
<tr><td>Independent Director</td><td>Hsieh Hui-Chuan</td><td>Female</td><td>V</td><td>V</td><td></td></tr>
</table></td><td>(I) In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.</td></tr>
</table>

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
(II) Does Apacer voluntarily form other functional committees similar to the Remuneration Committee and Audit Committee set up pursuant to relevant laws and regulations?		V	(II) We have formed the Remuneration Committee and the Audit Committee and established the "Articles of Association of Special Committee on Mergers and Acquisitions" as a basis for the establishment of a special Merger and Acquisition Committee in the future. We have also formed the Corporate Social Responsibility Committee to reports its implementation status and result to the Board of Directors and President on a regular basis.	(II) Assessment of the necessity for additional functional committees with reference to the business operation status and scale in the future.
(III) Does Apacer have guidelines for evaluating the performance of the Board of Directors and conduct regular performance evaluation every year?		V	(III) Apacer has not yet established the guidelines for evaluating the performance of the Board of Directors.	(III) To be established.
(IV) Does Apacer assess the CPAs for their independence on a regular basis?	V		(IV) We assess CPAs for their independence every year pursuant to the Corporate Governance Principles for TWSE/TPEx Listed Companies and with reference to the The Norm of Professional Ethics for CPA of the Republic of China No. 10. assessment items are listed below: 1. There is no direct or material indirect financial interest or significant close business relationship 2. No member of the audit team is currently, or was within the recent two years, a director, supervisor, or managerial office of the Company, or in a position to exert significant influence on audit engagement 3. Non-audit service does not have direct influence on any important audit items 4. No promotion or brokerage of the stocks or other securities issued by the Company exists 5. No kinship exists between a member of the audit team and any director, supervisor, or managerial office of the Company, or any person of the Company who is in a position to exert significant influence on audit engagement	(IV) In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
			6. No former partner acts as a director, supervisor, or managerial office of the Company or is in a position to exert significant influence on audit engagement within one year after he/she left his/her office. We regularly submit self-evaluation results and independence statements of the CPAs to the Board of Directors for discussion every year. The replacement of our CPAs is conducted pursuant to relevant regulations	
IV. Do TWSE/TPEx Listed Companies set up designated (concurrent) corporate governance units or personnel responsible for related matters (including but not limited to providing information required for directors and supervisors to perform their duties, handling matters related to Board of Directors' and shareholders' meetings, dealing with company and change registration, and making minutes of Board of Directors' and shareholders' meetings)?	V		We established the "Corporate Social Responsibility Committee" in 2015, which has a subordinate Governance Working Group leaded by the CFO as the chief. The CFO possesses more than three years of management experience in units of financial, stock affairs and conference services in a public company. The Governance Working Group is responsible for planning and executing corporate governance matters, providing information required for directors to perform their duties, assisting the directors to observe laws and regulations and handling matters related to board of directors' and shareholders' meetings in accordance with the laws. The implementation status of business in FY 2018 contains the following matters: I. Dealing with the Company and change registration. II. Regular arrangement of further education for directors and provision of information required for directors to perform their duties and related to the latest legal development relevant to operation of the Company to help directors observe laws and regulations. III. Assisting with the meeting procedure of the Board of Directors and the shareholders and compliance matters of the resolutions. IV. Maintaining investor relations. V. Other matters referred to in the Articles of Incorporateion or contracts	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
V. Does Apacer establish channels for communication with stakeholders (including but not limited to shareholders, employees, customers, and suppliers), design special web pages for the stakeholders on the website, and appropriately respond to important CSR issues concerned about by the stakeholders?	V		We have set up appropriate channels for communication with upstream and downstream vendors, banks, investors, and other stakeholders. For investors, we set up a special shareholder service and investor relationship mailbox and designated personnel for dealing with related matters. We also disclose related information on our website; management-labor meetings, complaint systems, and internal information networks are set up for the employees; regular production and sales activities are held for vendors on a regular basis. The "Contact Us" page is available on our website for such information as customer relations, public relation/investor relations, supplier relations, and product development. This provides channels for stakeholders to communicate with us in different circumstances. Special web pages for stakeholders are available on our website.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
VI. Does Apacer commission a professional registrar to deal with the affairs of shareholders' meeting?	V		We have commissioned KGI Securities Co. Ltd., Stock Administration, to handle these affairs.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
VII. Disclosure of information (I) Does Apacer have a website to disclose the financial and corporate governance information of the Company? (II) Does Apacer adopt other information disclosing methods (such as building an English website, designating a person for collection and disclosure of information, implementing a spokesperson system, and publishing the process of investor conferences on the website)?	V V		(I) Apacer website: (http://www.apacer.com/). We disclose information about our business, financial status, and implementation of corporate governance on our website. (II) We have a website to provide relevant information in Chinese and English as a reference for shareholders and stakeholders, and our CFO, Ms. Lai Tzu-Min, to act as the spokesperson and our President, Mr. Chang Chia-Kun, to act as the deputy spokesperson. A business marketing division is set up to maintain communication with the media. At least one investor conference is held every year and the process is published on our website. All the important information that may affect the shareholders and stakeholders is disclosed appropriately in a timely manner.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
VIII. Does Apacer have additional important information that is helpful to understand the operation of the corporate governance (including but not limited to the interests and care of employees, investor relationship, supplier relationship, rights of stakeholders, further education of directors and supervisors, and implementation of risk management policies and measurement criteria)?	V V V V V		(I) Interests and care of employees: In addition to formation of the Supervisory Committee of Labor Retirement Reserve and arrangement of labor insurance, national health insurance and group insurance, we have an Employee Welfare Committee to complete employee welfare measurements and ensure the retirement system. Existing welfare measures include marriage allowance, maternity allowance, funeral allowance, consolatory hospitalization bonus, birthday bonus, and subvention for the clubs and recreational activities of the employees. (II) Investor relationship: We have a spokesperson, a deputy spokesperson, and a designated unit for investor relations. The contact information of the unit is made public and investors can give feedback at any time. The communication between us and our investors is enhanced and the transparency of our financial status and cooperate governance is improved to create a better image of the Company. (III) Supplier relationship: We always maintain good relations with our suppliers and protect the interests of both parties on a basis of mutual benefit and trust. (IV) Rights of stakeholders: Stakeholders can communicate with us and give us advices. (V) Further education of directors and supervisors To enhance the knowledge of corporate governance, we have our directors and supervisors (including independent directors and supervisors) take relevant courses in the continuing education systems or professional institutions recognized in the “Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEx Listed Companies”. They have received a certificate of further education for this.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
			The courses for advanced studies taken by the directors (including independent directors) are as follows: (see table below)	

Title	Name	Organizer	Course	Education hours	Does the course meet requirements?
Chairperson	Austin Chen	Securities and Futures Institute	The Business Merger and Acquisition Process: A Discussion on the Human Resource and Mergers and Acquisitions Integration	3	Yes
		Accounting Research and Development Foundation	The latest Amendment of the "Company Act" and the Corporate Response and Practice	3	Yes
Director	Teddy Lu	Taiwan Corporate Governance Association	A study on the Legal Issues of Instant Messaging	3	Yes
			The Enterprise Risk: From Product liability to Corporate Governance	3	Yes
Director	Chang Chia-Kun	Securities and Futures Institute	A Discussion on the Employee Reward Strategy and Tool Applications	3	Yes
			The Business Merger and Acquisition Process: A Discussion on the Human Resource and Mergers and Acquisitions Integration	3	Yes
Director	Haydn Hsieh	Taiwan Corporate Governance Association	The Impact and Response of the Sino-American trade friction on Taiwanese Businesses and Taiwan CRS on Large Shareholders	3	Yes
			The Impact and Response of the Latest Amendment of the Company Act on the Company, the Directors and Supervisors	3	Yes
			The Role of the Directors During the Business Merger and Acquisition Process	3	Yes

Title	Name	Organizer	Course	Education hours	Does the course meet requirements?
Director	George Huang	Taiwan Corporate Governance Association	The Development Trend of Current Corporate Governance and Prospect of Taiwan IPO Capital Market	3	Yes
			The Impact of the International Political and Economic Situation on Taiwan ICT Industry	3	Yes
			Important Update of Laws and Regulations	3	Yes
Director's Representative	Weng Wen-Jie	Securities and Futures Institute	Legal Compliance Session of The Corporate Insider Equity Transaction	3	Yes
			Analysis of business financial information and decision making	3	Yes
			The Latest Trend of Corporate Governance and Impact on the Responsibility of Directors and Supervisors Based on The Latest Amendment of the Company Act	3	Yes
		Accounting Research and Development Foundation	The Forms, Case Analysis and Related Legal Responsibilities of Breach of Trust in Economic Crimes	3	Yes
Independent Director	Max Wu	Taiwan Corporate Governance Association	The Impact and Response of the Sino-American trade friction on Taiwanese Businesses and Taiwan CRS on Large Shareholders	3	Yes
			The Impact and Response of the Latest Amendment of the Company Act on the Company, the Directors and Supervisors	3	Yes
			The Role of the Directors During the Business Merger and Acquisition Process	3	Yes
Independent Director	Philip Peng	Taiwan Corporate Governance Association	The Development Trend of Current Corporate Governance and Prospect of Taiwan IPO Capital Market	3	Yes
			The Impact of the International Political and Economic Situation on Taiwan ICT Industry	3	Yes
Independent Director	Hsieh Hui-Chuan	Taiwan Stock Exchange Corporation	New Version of Corporate Governance Blueprint for Listed Company Forum	3	Yes
		Taiwan Corporate Governance Association	Analysis of the Company Act Amendment	3	Yes

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
			(VI) Managers and their participation in continuing education and training related to corporate governance:	

Title	Name	Date	Organizer	Course	Education hours
General manager	Chang Chia-Kun	January 1, 2018	Securities and Futures Institute	A Discussion on the Employee Reward Strategy and Tool Applications	3
		August 2, 2018	Securities and Futures Institute	The Business Merger and Acquisition Process: A Discussion on the Human Resource and Mergers and Acquisitions Integration	3
CFO	Lai Zi-Wen	April 13, 2018~ April 16, 2018	Securities and Futures Institute	How to be A Competent Business Spokesperson	12
		May 11, 2018	Accounting Research and Development Foundation	The Book-Tax Impact and Practice of the Employee Reward System on the Enterprise	3
		June 21, 2018~ June 22, 2018	Accounting Research and Development Foundation	Continuing education program for accounting managers of issuers, securities firms, and securities exchanges	12

(VII) Implementation of risk management policies and risk assessment standards:

In accordance with relevant regulations and operational needs, internal management systems have been established. We provide education and training to employees for the development of appropriate concepts. We also actively promote and implement all kinds of risk management standards to decrease financial and business risks. On the other hand, internal auditors regularly conduct reviews on the implementation of our risk management regulations, and defects are corrected or improved to ensure effective oversight of the risk management systems.

Item	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
			(VIII) Implementation of customer policies: We and our subsidiaries greatly value the opinions of customers. Business review meetings are held with the customers to understand their opinions and questions regarding products so that stable and good relations can be maintained with the aim to generate profits for the Company. (IX) Liability insurance coverage for directors and supervisors & social responsibility: The company have our directors and supervisors ensured by the director liability insurance every year and report the insurance to the Board of the Directors.	
IX. On the basis of the result of corporate governance evaluation released by TWSE's Corporate Governance Center in the most recent year, please describe the matters to which improvements have been made. Regarding the matters to which improvements have yet to be made, please list those which have been selected as priorities and the measures to be taken.	V		The improved items in 2018 were as follows: 1. To voluntary establish an audit committee that meets the requirements. 2. A higher number of independent directors than that specified in relevant regulations. 3. To convene six BoD meetings. 4. Material information to be announced and reported simultaneously in both Chinese and English. 5. To convene a second investor conference. The items for improvement in 2019 were as follows: 1. To establish the guidelines for evaluating the performance of the Board of Directors. 2. We will continue to strengthen the corporate governance and establish and perfect the related regulations of the corporate governance.	We continued to conduct assessments and make improvements in accordance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.

(IV) If the company has a remuneration committee, the composition, responsibilities and operation of the committee shall be disclosed:

Our Remuneration Committee is composed of independent directors and external members. The Committee's responsibilities include formulation and regular review of the policies, systems, standards and structures of the performance evaluation of remuneration for directors, supervisors and managers, and evaluation of the management team's performance and employee bonus policies.

1. Information of the members of the Remuneration Committee

Member type	Qualifications / Name	Experience of more than 5 years and following professional qualification			Independence (Note)								Number of other public companies where the member also serves in a remuneration committee	Remarks
		Lecturer or higher position at a public or private university/college in the department of commerce, law, finance, accounting or any other fields related to our business	Judge, public prosecutor, attorney, certified public accountant, or any other professional or technical specialists who have passed a national examination andreceived a certificate in a profession necessary for our business	Work experience in commerce, law, finance, accounting or any other fields necessary for our business	1	2	3	4	5	6	7	8		
Independent director	Max Wu			✓	✓	✓	✓	✓	✓	✓	✓	✓	2	
Independent director	Philip Peng			✓	✓	✓	✓	✓	✓	✓	✓	✓	1	
Independent director	Hsieh Hui-Chuan			✓	✓	✓	✓	✓	✓	✓	✓	✓	2	

Note: Members are requested to mark "✓" in the space beside the number if any of the following requirements are satisfied during the two years before being elected or during the term of office.

(1) The member was or is not an employee of the company or any of its affiliates.

(2) The member was or is not a director or supervisor of the company or any of its affiliates (except for the independent director of the company, its parent, or any subsidiary appointed pursuant to the Act or any local laws and regulations)

(3) The member was or is not a natural-person shareholder who held or holds shares, together with those held by his/her spouse, minor children, or held by the director or supervisor in the name of another person, in an aggregate amount of one percent or more of the total issued shares of the company or was or is ranked as one of the top-ten shareholders.

(4) The member was or is not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding three subparagraphs.

(5) The member was or is not a director, supervisor, or employee of a corporate shareholder that directly holds five percent or more of the total issued shares of the company or of a corporate shareholder that ranks among the top-five in shareholdings.

(6) The member was or is not a director, supervisor, managerial officer, or shareholder holding five percent or more of the shares of a specified company or institution that has a financial or business relationship with the company.

(7) The member was or is not a professional individual who, or an owner, partner, director, supervisor, or managerial officer of a sole proprietorship, partnership, company, or institution that, provides commercial, legal, financial, accounting affairs or consultation to the company or to any affiliate of the company, or a spouse thereof;

(8) The member did or does not meet any of the requirements specified in Article 30 of the Company Act.

2. Information of the operation of the Remuneration Committee
   (1) Our Remuneration Committee is composed of three members.
   (2) The term of the current members: May 30, 2018-May 29, 2111.
   (3) Meetings of the Committee have been convened 4 times in the most recent year, and the titles of the members and their attendance records are as follows:

Title	Name	Number of meetings attended (B)	Number of meetings attended by proxy	Attendance rate (B/A)	Remarks
Convener	Max Wu	4	0	100	
Member	Hong Sing-Cheng	1	0	100	Resigned on May 30, 2018
Member	Michael Lee	1	0	100	Resigned on May 30, 2018
Member	Philip Peng	3	0	100	Resigned on May 30, 2018
Member	Hsieh Hui-Chuan	3	0	100	Resigned on May 30, 2018
Other matters to be recorded: I. If the BoD does not adopt or revise the suggestions of the Remuneration Committee, the decision must indicate the date of BoD meeting, term, contents of the proposal, BoD resolution and how we handle the Committee's opinions (if the amount of remuneration adopted by the BoD is higher than that suggested by the Committee, the differences and reasons must be indicated): None. II. In the event that any member of the Remuneration Committee has expressed dissent or reservation over the Committee's decisions, and that the dissent or reservation has been recorded or delivered in writing, the decision shall indicate the date of the Committee's meeting, term, contents of the proposal, opinions of all the members, and how the opinions of a member is handled: None.					

(4) The results of the recent annual Compensation Committee discussion and resolution are as follows:

Date	Term	Proposal	Compensation Committee resolution	The opinions of the Compensation Committee
2.23.2018	First meeting in 2018	Distribution of the 2018 remuneration for employee and managerial officers	All the attending members passed the resolution	All the attending directors passed the resolution
2.23.2018	First meeting in 2018	Salary adjustment (including managers) in FY 2018	All the attending members passed the resolution	All the attending directors passed the resolution
2.23.2018	First meeting in 2018	Revision of the Company's "Procedures for Directors remuneration distribution"	All the attending members passed the resolution	All the attending directors passed the resolution
2.23.2018	First meeting in 2018	Revision of the Company's "Procedures for Compensation committee remuneration"	All the attending members passed the resolution	All the attending directors passed the resolution

Date	Term	Proposal	Compensation Committee resolution	The opinions of the Compensation Committee
2.23.2018	First meeting in 2018	Revision of the Company's "Employees' Annual Performance Bonus Procedures "	All the attending members passed the resolution	All the attending directors passed the resolution
11.11.2018	Third meeting in 2018	Adding an Company CSO	All the attending members passed the resolution	In addition to the Chairman Austin Chen and the director Chang Chia-Kun didn't participate in the discussion and vote because of interest conflicts, the other directors passed the resolution.
12.13.2018	Fourth meeting in 2018	Distribution of the performance bonus for managers in FY 2018	All the attending members passed the resolution	In addition to the Chairman Austin Chen and the director Chang Chia-Kun didn't participate in the discussion and vote because of interest conflicts, the other directors passed the resolution.
12.13.2018	Fourth meeting in 2018	Distribution of the compensation for managers in FY 2018	All the attending members passed the resolution	In addition to the Chairman Austin Chen and the director Chang Chia-Kun didn't participate in the discussion and vote because of interest conflicts, the other directors passed the resolution.

(V) Fulfillment of social responsibility:

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
I. Implementation of corporate governance (I) Does Apacer develop CSR policies or systems, and review their implementation? (II) Does Apacer regularly hold education and training sessions regarding CSR? (III) Does Apacer have a special unit or designate an existing unit for the task of CSR promotion? Does Apacer's BoD authorize the management to handle relevant matters and report to the BoD?	V V V		(I) Since 2012, we have published the "Apacer CSR Report" annually to show that we attach importance to CSR and our implementation in the work environment. (II) We have promoted and conducted training courses on CSR. We also established the CSR Committee, which consists of five task groups for the purpose of promoting CSR in the economic, environmental and social aspects. (III) We have a Corporate Social Responsibility Committee, and our Chairman and President act respectively as the head and executive secretary. The Committee has five working groups of "Governance," "Employee Care," "Customer & Supplier Care," "Environmental Care" and "Community Care," while the chiefs of related departments served as the leader for implementation. The business marketing division is designated as the Committee's secretariat to promote and supervise the implementation of CSR, communicate and coordinate with different divisions and regularly follow up on the conditions of the working groups and report them to the corporate senior management personnel(once every quarter) and the BoD (regularly once every year). The implementation resultsin 2018: 1. Employee Care Working Group: Received the Work -Life Balance Award- Parenting Friendliness Award of the Ministry of Labor and the bronze medal of TTQSTalent Quality Management System-Enterprise Version of the Workforce Development Agency, Ministry of Labor, and held family day to promote the leisure quality of the employee families. 2. Customer & Supplier Care Working Group: Held the annual supplier conference and was awarded the RBA silver recognition.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
			3. Community Care Working Group: Held a one-day mountain clean-up volunteer activity and sponsored the education development of local schools of Yulin Junior High School and Tainan Municipal Daguang Elementary School. The 2017 CSR Report won the “Golden Award” for the electronic information manufacturing industry in the Corporate Sustainability Report Category of the Taiwan Corporate Sustainability Award (TCSA).	
(IV) Does Apacer develop reasonable remuneration policies? Does Apacer integrate CSR policies into the employee performance assessment systems, and establish clear and effective systems of reward and punishment?	V		(IV) Our remuneration policies are implemented after the “Remuneration Committee” submits relevant decisions to the BoD. The Committee is composed of independent directors and external professionals, who are able to offer suggestions at a level in line with the market and industry average. In addition, we rely on the directions of performance assessment for strict implementation of our policies and the review of employee KPIs, which are the basis of reward and punishment.	
II. Development of environmental sustainability				
(I) Does Apacer put effort into enhancing the efficiency of resource usage? Does Apacer use recycled materials which have a low impact on the environmental load?	V		(I) We have put effort into improving the sources and enhancing the efficiency of resource usage, in order to achieve the objectives of waste reduction and lower the environmental impact.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
(II) Does Apacer have environmental management systems which fit the industrial characteristics of the company?	V		(II) We have established an environmental management system which has received ISO 14001 certification. We regularly conduct internal audits and management reviews to ensure the operations are conforming to relevant environmental regulations and international standards. The aim is to achieve environmental sustainability.	
(III) Does Apacer pay attention to the effects of climate change on its operations? Does Apacer maintain a greenhouse gas	V		(III) We listed natural disasters as an important risk assessment aspect and established a business operation maintenance plan to fully assess the risk of business interruptions due to natural disasters. We also established backup steps and principles to increase response efficiency	

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
inventory and develop policies regarding energy saving and carbon/greenhouse gas reduction?			and decrease possible losses in the case of emergencies. We regularly maintain the greenhouse gas inventory and strictly implement measures for energy conservation and CO2 emission reduction. We use power-saving lights with high efficiency, replace energy-consuming office automation equipment in the production line, introduce compact computers which are low energy-consuming, promote a paperless office through digitization, and set air conditioners to automatically shut down during non-office hours. With these measures, we seek to reduce energy waste and usage. We also have formulated short-term, medium-term and long-term strategies for energy conservation, CO2 emission reduction and advanced process, with having a "green factory" as the ultimate goal.	
III. Protection of public interests (I) Does Apacer have management policies and procedures in accordance with relevant regulations and international human rights conventions?	V		(I) According to the Labor Standards Act, an employer must not employ any person under the age of 16, and any such person will be prohibited from performing heavy and dangerous work. We are in continuous compliance with government regulations and have never illegally employed any worker under 16. Also, the Company prohibits forced labor and does not allow any minor to perform dangerous work. In our supply chain management, every contractor has been asked to prohibit child labor in accordance with the Electronic Industry Code of Conduct (EICC), and follow the labor laws and worker safety regulations of different regions. Due to wide-scale changes of labor law in recent years, the Company has regularly reviewed all of the systems and regulations and revised relevant provisions in accordance with the latest laws. Also, the related work rules were published on the internal website for employees to read at any time.	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
(II) Does Apacer have mechanisms and channels for employee complaints, and does it properly handle any such complaints?	V		(II) In accordance with the Act of Gender Equality in Employment, we have established mechanisms for employee complaints. The human resources (HR) manager has been designated as the person in charge of receiving complaints from employees through e-mail, by telephone, in writing or in person.	

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
(III) Does Apacer provide a safe and healthy work environment to its employees? Does Apacer regularly provide its employees with safety and health education?	V		(III) We regularly conduct employee health examinations every year, clean the work environment and hold disaster prevention exercises. We promote education and training on worker safety and health, and relevant materials are provided from time to time through the internal website to employees for reference. Since 2015, We have developed the “Plan for Prevention of Diseases Induced by Exceptional Workload” in accordance with the “Occupational Safety and Health Act” to comprehensively expand the employee health promotion program.	
(IV) Does Apacer have mechanisms for regular employee communication? Does Apacer, through appropriate ways, notify its employees of any changes in operations that may have major impact on them?	V		(IV) We promptly communicated to all employees about major operation changes via the internal website that every employee can clearly understand our operation strategy. We also have communication channels for employees to share their opinions and enable all employees to use the opinion exchange function of the internal website to achieve the two-way communication mechanism. We regularly hold management-labor meetings, attended by representatives of the employees and the management, to facilitate two-way communication regarding our systems and employees’ questions about the policies, work environment, safety and health. Through adequate communication and exchange of opinions, such meetings aim to achieve consensus and enhance trust between the employees and the management. By accepting suggestions and making improvements in multiple aspects, we seek to build a dynamic, safe and comfortable work environment. We respect the rights of employees and encourage the voluntary formation of all kinds of employee associations in order to strengthen coherence among the employees. An employee benefits committee composed of employee representatives is formed to handle matters related to employee benefits, establish regulations governing the management of employee associations, and organize large events. The purpose is to make employees identify with the Company’s values more through the influence of "soft" events and interaction between the employees.	

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
(V) Does Apacer have effective programs for development and training regarding employees' career skills?	V		(V) In 2014, we began to comprehensively implement HR operations with position and competency as the core concerns. Education and training courses have been designed for employees in different positions to enhance their competencies. Since 2015, the Company has implemented the "Directions on Talent Supply Chain Management for Essential Positions" in all aspects with the expectation that the potential of employees can be effectively increased.	
(VI) Does Apacer have policies for consumer rights protection regarding the R&D, procurement, production, operation and service processes? Does Apacer have transparent and effective procedures for consumer complaints regarding its products and services?	V		(VI) We have established operational standards in place for customer complaints and procedures for customer feedback. A customer-oriented quality system has been developed to conduct objective and comprehensive assessment of customer satisfaction regarding the Company's products or services. The purpose is to understand the difference between a customer's need and expectation, and use it as the basis of quality system improvements with the aim to achieve sustainable business management. For the purpose of protecting the global environment and lowering damage to the ecosystem, each of the Company's suppliers of raw materials has signed a declaration on the non-use of hazardous substances to ensure the Company's products meet the requirements of RoHS and other EU directives related to the environment. In the declaration, suppliers agreed that the design and manufacturing of products must be in strict compliance with regulations and standards of environmental protection. Suppliers also agreed to work with the Company to reach the world standards for environmental protection policies, through effective control of raw materials and processes and ensuring that the products meet the RoHS standards. Regarding the procurement of raw materials, to ensure that metals like gold (Au), tantalum (Ta), tin (Sn) and tungsten (W) do not originate from mines in the conflict areas of the Democratic Republic of the Congo, the Company and its suppliers worked together to check the sources and prohibit the use of conflict minerals, as part of the Company's CSR for the environment.	

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
(VII) Do the marketing and labeling of the company's products and services conform to relevant regulations and international standards?	V		(VII) The Company ensures the quality of its products and services are in accordance with government regulations and industrial standards. Regarding the marketing and labeling of products and services, the Company follows relevant regulations and international standards and strictly prohibits deceit, misguidance, fraud or any other act that damages the trust or rights of customers.	
(VIII) Does Apacer assess the past records of a supplier regarding its environmental and social impacts before conducting business with such supplier?	V		(VIII) Before conducting business with a supplier, the Company collects relevant information and inspects the supplier's factory. The company conducts an assessment and acquires relevant documents regarding the quality, process, warehousing and environmental management of any products in order to learn whether there are any records of hazards. The Company takes this into account when considering cooperation with the supplier. To further assess a supplier's capability for the management of hazardous substances, the Company established the "System for Rating of Supplier Greenness" on the basis of existing supplier management processes. The score is calculated using the "review success rate" and "overdue update completion time" from the supplier's RoHS test report. The procurement staff may use the criteria to assess the supplier's capability for hazardous substance free (HSF) management and demand improvements. Or the procurement staff may use the rating of suppliers to calculate the scores during annual audits to find suppliers that meet the latest requirements and standards of the world and customers.	

Item for evaluation	Description			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies and reasons
	Yes	No	Summary	
(IX) Does the contract between the company and any of its main suppliers include any clause stipulating that if the supplier violates its CSR policies and the violation has a significant impact on the environment and society, the company may terminate or cancel the contract?	V		(IX) In accordance with the Electronic Industry Code of Conduct (EICC, currently as the RBA Responsible Business Alliance), all component specifications and procurement procedures of Apacer comply with standard written or fair contracts so that suppliers can focus on ethical management and offer the best quality and reasonable prices. Through influence on suppliers and cooperative relationships, Apacer promotes certain issues in its upstream supply chain, including RoHS, process and quality control, workers' rights, health and safety, and prohibition of child labor. Apacer also has communication channels in place with suppliers to ensure they also follow the EICC (RBA) to reduce risks of non-conformity with relevant regulations. This shows that Apacer does put emphasis on CSR.	
IV. Increasing disclosure of information Does Apacer disclose relevant and reliable CSR information on its website and the Market Observation Post System?	V		Apacer discloses relevant and reliable CSR information on its website and annual reports. For relevant information, please visit Apacer's website: (http://www.apacer.com/)	In compliance with the Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies.
V. In the event the company has established its own CSR principles in accordance with the Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies, please describe the differences between the actual implementation of CSR and the company's own CSR principles: The actual implementation of CSR in Apacer has been completely in line with its "CSR Best Practice Principles", and there have been no differences.				
VI. Other important information helpful for understanding the actual implementation of CSR: For detailed information, please see Apacer's annual CSR reports which have been published on its website: (http://www.apacer.com/)				
VII. If the company's CSR reports have been verified by relevant validating agencies, please describe: Apacer's 2017 CSR report has been certified by British Standards Institution(BSI). However, as of the date on which the annual report was printed, the 2018 CSR report was still in the review process of the BSI. In addition, Apacer has implemented an ISO 14001 environmental management system to reduce the consumption of resources and also received validation under the OHSAS 18001 occupational safety and health system to provide a healthy and safe workplace environment. Regarding quality control, Apacer has received the certifications of ISO 9001 quality management system and a QC080000 hazardous substances process management (HSPM) system for electronic and electrical products. Apacer has not only committed to product quality assurance but also implemented green production processes and followed the international RoHS standards.				

(VI) Implementation of corporate ethical management and measures taken:

Item for evaluation	Description			Differences with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and reasons
	Yes	No	Summary	
I. Development of ethical management policies and programs				
(I) Does Apacer clearly specify, in its regulations and external documents, the ethical management policies and practice and the commitment of the BoD and the management to rigorous and thorough implementation of those policies?	V		(I) Apacer has a “Code of Ethical Conduct”, “Ethical Corporate Management Best Practice Principles” and “Procedures for Ethical Management and Guidelines for Conduct”. The HR unit is responsible for the supervision and implementation of ethical management policies and preventive programs. This was included in the routine audit operation and the report is regularly submitted to the BoD once a year and published on Apacer’s internal website for employees to read. So far, Apacer has not found any material violation.	In compliance with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies.
(II) Does Apacer have programs in place for the prevention of unethical conduct, and specify in such programs the operational procedures, code of conduct, punishment for violations and complaint systems? Have such programs been implemented?	V		(II) Apacer has a "Code of Ethical Conduct", "Ethical Corporate Management Best Practice Principles", "Ethical Management Procedures and Conduct Guidelines" and "Rules Governing the Whistleblowing System" to regulate unethical conduct and preventive measures. It is stipulated in Apacer’s work rules that in the event of conclusive evidence shows an employee has "engaged in jobbery, embezzlement of public funds, or acceptance of bribes/commissions" or "concurrently conducted any external business that is in conflict with Apacer’s operations and affects its interests, with the circumstances deemed grave", the employee must be dismissed. Apacer promotes these rules during education and training sessions to ensure its employees understand the regulations they are required to follow during work.	
(III) Does Apacer take preventive measures against all types of unethical conduct specified in Article 7, Paragraph 2 of the Ethical Corporate Management	V		(III) To ensure implementation of ethical management, Apacer has established effective systems for accounting and internal control. Auditors regularly examine the extent of compliance with these systems.	

Item for evaluation	Description			Differences with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and reasons
	Yes	No	Summary	
Best Practice Principles for TWSE/GTSM Listed Companies, or against any business activity within the company's business scope with a higher risk of involving unethical conduct?				
II. Implementation of ethical management (I) Does Apacer assess the past records of the counterparties regarding ethics? Do contracts between the company and the counterparties include clear clauses governing ethical conduct?	V		(I) All contracts between Apacer and its suppliers include clauses on ethical management.	In compliance with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies.
(II) Does Apacer has a special unit or has it designated an existing unit as subordinate to the BoD for the implementation of corporate ethical management? Does the unit regularly report to the BoD regarding the implementation?	V		(II) Apacer has the "Procedures for Ethical Management and Guidelines for Conduct". The HR unit has been designated as responsible for the implementation of corporate ethical management. The unit coordinates with each division on implementing ethical management within the scope of the division's functions and carrying out related matters in accordance with the "Procedures for Ethical Management and Guidelines for Conduct".	
(III) Does Apacer have policies against conflicts of interest and provide proper channels through which explanations may be given? Has the company implemented them?	V		(III) In the case of a conflict of interest in business, the relevant person notifies his/her manager and recuses himself/herself in accordance with the employment contract. The circumstances and standards are clearly specified in Apacer's Code of Ethical Conduct. People are required to recuse themselves and, in the event that they have learned or are facing similar circumstances, to report to their immediate superiors, managers of the HR unit and Administrative Service Division, or the BoD in an adequate manner. So far, Apacer has not found any material violation.	

Item for evaluation	Description			Differences with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and reasons
	Yes	No	Summary	
(IV) Does Apacer have effective systems for accounting and internal control to ensure the implementation of ethical management? Have audits been regularly conducted by internal auditing units or entrusted CPAs? (V) Does Apacer regularly hold internal and external education and training regarding ethical management?	V V		(IV) In accordance with the competent authority’s regulatory updates, letters and directives, Apacer revises its internal control and accounting systems on a regular or if needed ad hoc basis to meet operational requirements, and audits are conducted by auditors accordingly to check the implementation of the systems. (V) Apacer’s regulations governing ethical management have been included as part of the internal education and training for employees.	
III. Functioning of whistleblowing systems (I) Does Apacer have concrete systems for whistleblowing and rewards? Does Apacer have convenient channels in place for whistleblowing and has it appointed appropriate personnel to deal with the persons who are the subject of whistleblowing? (II) Does Apacer have standard operating procedures (SOPs) for investigation of matters reported by whistleblowers and relevant mechanisms for confidentiality?	V V		(I) Apacer has the "Rules Governing the Whistleblowing System", which clearly include whistleblowing and reward systems and stipulate that the managers of the auditing and HR units are designated as the persons responsible for these matters. (II) The "Rules Governing the Whistleblowing System" include relevant operating procedures and mechanisms for confidentiality.	In compliance with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies.

Item for evaluation	Description			Differences with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and reasons
	Yes	No	Summary	
(III) Does Apacer take any measures to protect whistleblowers from improper treatment as a result of their whistleblowing?	V		(III) The "Rules Governing the Whistleblowing System" include a clear list of whistleblower protection measures to prevent whistleblowers from being treated improperly as a result of whistleblowing. Any whistleblowing report is handled in accordance with the rules governing the system.	
IV. Increasing disclosure of information Does Apacer disclose the contents of its ethical management principles and outcome of implementation on its website and the Market Observation Post System?	V		Apacer has disclosed the "Ethical Corporate Management Best Practice Principles" and "Procedures for Ethical Management and Guidelines for Conduct" on its website, and monitors the development of domestic and international regulations concerning ethical management. Apacer encourages its directors, supervisors, managers, and employees to make suggestions, which inform the review and improvement of the Ethical Management Best Practice Principles with the aim to achieve better outcomes of ethical management.	In compliance with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies.
V. In the event the company has established its own ethical management best practice principles in accordance with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies, please describe the differences between the implementation of ethical management and the company's own ethical management best practice principles: None.				
VI. Other important information helpful for understanding the implementation of the company's ethical management: (such as review and amendment of the company's own ethical management best practice principles) To meet the requirements of corporate governance and ethical management, Apacer established the audit committee in 2018 to achieve the goal of corporate governance and ethical management. Besides, Apacer holds a supplier conference every year to clarify our policy of corporate ethical management to our suppliersand get their commitment to it.				

(VII) If the company has established corporate governance best practice principles and relevant regulations, the ways through which they can be searched for must be disclosed:

For Apacer's Corporate Governance Best Practice Principles and relevant regulations, please visit Apacer's website (http://www.apacer.com/)

(VIII) Other important information helpful for increasing understanding of the company's corporate governance may be disclosed along with the above information:

1. As Apacer's business scale grows and the need for control and management of foreign subsidiaries arises, we have continued to review and establish relevant regulations, procedures and internal implementation rules to enhance operational performance and strengthen risk control, with the aim to achieve better implementation of corporate governance. In recent years, following the establishment or amendment of relevant laws and standards by the competent authority in charge of securities, and taking into account practical business needs, Apacer has established the following regulations:
    - "Articles of Incorporation",
    - "Rules of Procedure for Shareholders' Meetings",
    - "Director Election Regulations",
    - "Rules of Procedure for Board of Directors",
    - "Procedures for Acquisition or Disposal of Assets",
    - "Procedures for Endorsements/Guarantees",
    - "Procedures for Loaning Funds to Others",
    - "Regulations on Engaging in Commercial Foreign Exchange Risk Management Related Financial Products",
    - "Regulations Governing the Transactions among Related Parties, Specific Companies, and Group Enterprises".

    The following implementation rules have also been established as basis of all internal operations:
    - "Rules Governing the Scope of Responsibilities of Independent Directors",
    - "Regulations Governing the Management of Financial and Non-financial Information",
    - "Regulations Governing the Management of Liabilities, Commitments and Contingencies",
    - "Code of Ethical Conduct",
    - "Ethical Corporate Management Best Practice Principles",
    - "Procedures for Ethical Management and Guidelines for Conduct",
    - "Management Procedures for Handling Material Insider Information and Prevention of Insider Trading",
    - "Subsidiary Management Regulations",
    - "Corporate Governance Best Practice Principles",
    - "CSR Best Practice Principles",
    - "Rules Governing the Whistleblowing System",
    - "Regulations Governing the Management of Seals".

Internally, Apacer notifies all employees of the latest regulations and rules through announcement and publishes them on the internal website. They are simultaneously posted on Apacer's official website and can be searched for. The training of new employees also includes courses for the promotion of these regulations and rules.

2. Apacer's personnel responsible for financial information transparency have received certificates designated by the competent authority, as follows:

Certificate	No. of person(s)	
	Internal audit	Finance
Certified Public Accountant (CPA) of the Republic of China (Taiwan)	1	0
Certified Internal Auditor (CIA)	2	0

(IX) The status of the implementation of internal control systems shall include the disclosure of the following matter(s):

1. Declaration on the Internal Control System

Apacer Technology Inc.

Declaration on the Internal Control System

Date: February 21, 2019

Based on the result of self-inspection of Apacer's internal control system in 2018, we hereby declare the following:

I. We acknowledge that the BoD and managers are responsible for the establishment, implementation and maintenance of the internal control system. We have established such a system, with the aim to provide reasonable assurance concerning the effectiveness and efficiency of operations (including profits, performance and protection of asset safety), reliability of financial reporting, and compliance with relevant regulations.

II. Any internal control system has its inherent limitations. No matter how well an internal control system is designed, it can only provide reasonable assurance regarding the achievement of the above three objectives. Moreover, the effectiveness of an internal control system may be altered as a result of changes in the environment and circumstances. Our internal control system however includes a self-monitoring mechanism. Once a defect has been identified, corrective actions are immediately taken.

III. We determine the effectiveness of the design and implementation of our internal control system by using the items specified in the Regulations Governing Establishment of Internal Control Systems by Public Companies (hereinafter "the Regulations"). The aforementioned items in “the Regulations” divide an internal control system into five components based on the processes of management and control: a. control environment, b. risk assessment, c. control activities, d. information and communication, and e. monitoring. Each component includes several elements. Please see the Regulations for the aforementioned items.

IV. We have used the aforementioned items to examine the effectiveness of the design and implementation of our internal control system.

V. Based on the result of the examination, we determined that until 31 Decem. ber, 2018, the design and implementation of our internal control system (including supervision and management of subsidiaries) have worked well regarding the effectiveness and efficiency of operations, reliability of financial reporting and compliance with relevant regulations, providing reasonable assurance that the above objectives have been achieved.

VI. This Declaration is to be part of the main contents of our annual reports and prospectuses, and released to the public. In the event that the above public content includes false information or concealed certain information, the legal responsibilities under Articles 20, 32, 171 and 174 of the Securities and Exchange Act will be invoked.

VII. This Declaration was adopted by the BoD meeting on 21 Febuary 2019. All nine Directors present approved the content of this Declaration, and noneof them expressed dissent. This information is declared as an addition.

Apacer Technology Inc.

Chairman of the board:
Austin Chen signature

President:
Chang Chia-Kun signature

2. If review of the internal control system has been conducted by entrusted CPAs, the CPAs' review report must be disclosed: None.

(X) During the most recent FY as of the date on which the annual report was printed, did the company or its internal personnel receive punishment in accordance with the law? Did the company's internal personnel receive punishment for violating the requirements of the internal control system? Please describe any defect found during the same period and its status of improvement: None.

(XI) Important resolutions of the Shareholders' Meeting and BoD meetings during the most recent FY as of the date on which the annual report was printed:

1. Important resolutions of the Shareholders' Meeting

Date of meeting	Resolution(s) and status of implementation
5.30.2018 The regular shareholders' meeting	I. Adoption of the proposal to ratify the business and financial reports of FY 2017 Status of implementation: Proposal was adopted without revision. II. Adoption of the proposal to discuss the profit distribution for FY 2017 Status of implementation: Proposal was adopted without revision. July 3, 2018 was set as the record date, and 27 July 2018 was set as the pay date. (The distributed amount of cash dividend was TWD 2.6 per share). III. Adoption of the proposal to amend the "Articles of Incorporation" Status of implementation: Status of implementation: Proposal was adopted without any revision. The amendments to the Articles of Incorporation were approved by the MOEA for registration on June 27, 2018. IV. Proposal for amendment of the "Procedures for Acquisition or Disposal of Assets" was adopted Status of implementation: Proposal was adopted without revision. The amended "Procedures for Acquisition or Disposal of Assets" was reported to the Market Observation Post System on June 13, 2018.

Date of meeting	Resolution(s) and status of implementation
	V. Proposal for amendment of the “Regulations on Engaging in Commercial Foreign Exchange Risk Management Related Financial Products” was adopted Status of implementation: Proposal was adopted without revision. VI. Proposal for amendment of the “Procedures for Loaning Funds to Others” Status of implementation: Proposal was adopted without revision. The amended “Procedures for Loaning Funds to Others” was reported to the Market Observation Post System on June 13, 2018. VII. Proposal for amendment of the “Procedures for Endorsements/Guarantees” was adopted Status of implementation: Proposal was adopted without revision. The amended “Procedures for Endorsements/Guarantees” was reported to the Market Observation Post System on June 13, 2018. VIII. Adoption of proposal to hold a new election of the directors due to expiration of the current term Directors : Austin Chen, Teddy Lu , Chang Chia-Kun, Geoger Huang, Haydn Hsieh, Phison Electronics Crop. Independent Directors : Max Wu, Philip Peng, Hsieh Hui-Chuan Status of implementation: The registration were approved by the MOEA on June 27, 2018, and announced on the company's website. IX. Adoption of the proposal to exempt newly elected directors and their representatives from non-compete restrictions Status of implementation: Proposal was adopted without revision.

2. Important resolutions of the BoD meetings

Term of BoD	Date of meeting	Important resolutions
First meeting in 2018	2.23.2018	(I) Adoption of the proposal for distribution of the remuneration for employees, directors and supervisors in FY 2017. (II) Adoption of the business report and self-prepared financial statements of FY 2017. (III) Adoption of the proposal for the profit distribution for FY 2017. (IV) Adoption of the proposal on matters related to the application for listing of the common stocks issued through initial private placement in 2015. (V) Adoption of the proposal to amend the “Articles of Incorporation”. (VI) Adoption of the proposal to submit the “Declaration on the Internal Control System” for FY 2017. (VII) Adoption of the proposal for salary adjustment (including managers) in FY 2018. (VIII) Adoption of the proposal to amend the “Regulations Governing the Distribution of Remuneration for Directors.” (IX) Adoption of the proposal to amend the “Regulations Governing the Payment of Remuneration to Members of the Remuneration Committee.” (X) Adoption of the proposal to amend the “Regulations Governing Performance Bonuses for Employees.” (XI) Adoption of proposal to hold a new election of the directors due to expiration of the current term. (XII) Adoption of the proposal for the nomination of candidates for directors and independent directors. (XIII) Adoption of the proposal to exempt newly elected directors and their representatives from non-compete restrictions. (XIV) Adoption of the proposal to convene the regular Shareholders’ Meeting in 2018.
Second meeting in 2018	4.12.2018	(I) Philip Tang and Grace Chen, certified public accountants of KPMG Taiwan, were commissioned to act as the CPAs of the company’s financial statements. (II) Approval of the review of the candidate nomination list for the Company directors and independent directors re-election.
Third meeting in 2018	5.30.2018	(I) Adoption of a proposal for Chairman elections. (II) Adoption of a proposal for appointing the fourth session of the Remuneration Committee. (III) Adoption of a proposal for an Audit Committee and statues for the committee.
Fourth meeting in 2018	7.23.2018	(I) Adoption of the proposal for the “Internal Control System” and the “Internal audit system” of the Company. (II) Adoption of the internal audit plan for FY 2018.
Fifth meeting in 2018	11.11.2018	(I) Adoption of the proposal for adding an Company CSO. (II) Adoption of the internal audit plan for FY 2019.
Sixth meeting in 2018	12.13.2018	(I) Adoption of the operational plan for 2019. (II) Adoption of the proposal for distribution of the performance bonus for managers in FY 2018. (III) Adoption of the proposal for distribution of the remuneration for managers in FY 2018.

Term of BoD	Date of meeting	Important resolutions
		(IV) The proposal to extend contracts with financial institutions concerning the credit line and transaction limit for financial products in FY 2019. (V) The proposal of the independence assessment for the CPAs of the company's financial statements.
First meeting in 2019	2.21.2019	(I) Adoption of the proposal for distribution of the remuneration for employees, directors and supervisors in FY 2018. (II) Adoption of the business report and self-prepared financial statements of FY 2018. (III) Adoption of the proposal for the profit distribution for FY 2018. (IV) Adoption of the proposal to submit the "Declaration on the Internal Control System" for FY 2018. (V) Adoption of the proposal for managers salary adjustment in FY 2019. (VI) Proposal for amendment of the "Procedures for Acquisition or Disposal of Assets" was adopted. (VII) Proposal for amendment of the "Procedure of corporate governance". (VIII) Adoption of the proposal to convene the regular Shareholders' Meeting in 2018".
First meeting in 2019	2.21.2019	(I) The proposal of the independence assessment for the CPAs of the company's financial statements. (II) Philip Tang and Grace Chen, certified public accountants of KPMG Taiwan, were commissioned to act as the CPAs of the company's financial statements. (III) Proposal for amendment of the "Handing standard procedures required by Directors" was adopted

(XII) In the event that any director or supervisor expressed a dissenting opinion regarding any of the important resolutions adopted by the BoD during the most recent FY as of the date on which the annual report was printed, and that the opinion was recorded or delivered in writing, please describe its main content: None.

(XIII) Summary of resignation or dismissal of the company's chairman, president, accounting manager(s), financial manager(s), internal audit manager(s) and R&D manager(s) during the most recent FY as of the date on which the annual report was printed: None.

IV. Information on CPA's professional fees

Unit: TWD 1,000

<table>
<tr><th rowspan="2">Accounting firm</th><th rowspan="2">Type of service</th><th rowspan="2">Name of CPA</th><th rowspan="2">Professional fee</th><th colspan="2">Does the audit period cover the whole FY?</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td rowspan="3">KPMG Taiwan</td><td rowspan="2">Audit service</td><td>Philip Tang</td><td rowspan="2">3,305</td><td rowspan="3">V</td><td rowspan="3"></td></tr>
<tr><td>Grace Chen</td></tr>
<tr><td>Non-audit service</td><td>Willis Yeh</td><td>300(Note)</td></tr>
</table>

Note : All non-audit services are transfer pricing reporting services.

(I) In the event the amount of non-audit professional fees paid to a CPA, the CPA's firm and any of its affiliates is at least 25% of that of audit professional fees, the amounts of audit and non-audit professional fees and the contents of non-audit service must be disclosed: N/A

(II) In the event that the accounting firm has been changed and that the amount of audit professional fees paid during the FY when the change occurs is lower than that paid during the previous FY, the amounts before and after the change and the reasons must be disclosed: N/A

(III) In the event the amount of audit professional fees is reduced by at least 15% in comparison with the previous FY, the amount, percentage and reasons of reduction must be disclosed: N/A

V. Information on change of CPAs (If the company changed the CPAs during the most recent two FYs and their subsequent periods, the following information must be disclosed)

(I) On the predecessor CPAs:

<table>
<tr><td>Date of change</td><td colspan="4">21 February 2017</td></tr>
<tr><td>Reasons and description of change</td><td colspan="4">In line with the needs for adjusting the positions of the CPAs at KPMG Taiwan, and starting from Q1 of FY 2017, the original CPA team consisting of Grace Chen and Wu Lin was replaced by the team consisting of Philip Tang and Grace Chen.</td></tr>
<tr><td rowspan="3">The commissioner or CPA terminates or declines the commission</td><td colspan="2">Parties / Circumstance</td><td>CPA</td><td>Commissioner</td></tr>
<tr><td colspan="2">Commission was terminated on his/her initiative</td><td>V</td><td></td></tr>
<tr><td colspan="2">(Extension of) Commission was declined</td><td></td><td></td></tr>
<tr><td>Opinions and reasons for audit reports issued during the most recent two years, excluding those issued without reservations</td><td colspan="4">None</td></tr>
<tr><td rowspan="6">Any differences in opinions with the issuers?</td><td rowspan="4">Yes</td><td></td><td colspan="2">Accounting principles or practice</td></tr>
<tr><td></td><td colspan="2">Disclosure of financial reports</td></tr>
<tr><td></td><td colspan="2">Scope or steps of audits</td></tr>
<tr><td></td><td colspan="2">Other matters</td></tr>
<tr><td>None</td><td colspan="3">V</td></tr>
<tr><td colspan="4">Description</td></tr>
<tr><td>Other matters for disclosure</td><td colspan="4">None</td></tr>
</table>

(II) On the successor CPAs:

Accounting firm	KPMG Taiwan
Name of CPA	Philip Tang, Grace Chen
Date of commissioning	21 February 2017
Matters regarding which the successor CPAs were consulted, and which were related to the accounting treatment or accounting principles of specific transactions; matters regarding which the successor CPAs were consulted, and which were related to the opinions that might be issued on financial reports; results of these matters	None
Written opinions of the successor CPAs on matters regarding which the predecessor CPAs have expressed dissenting opinions	None

(III) Letters of reply from the predecessor CPAs: N/A

VI. The company's chairman, president, or financial/accounting manager served in the CPAs' firm(s) or any affiliate during the most recent year: None.

VII. Change of shares transferred and pledged for directors, supervisors, managers and any shareholder holding more than 10% of the company's shares during the most recent FY as of the date on which the annual report was printed

1. Change of shares for directors, supervisors, managers and major shareholders

Unit: Share

Title	Name	2018		2019, until April 1	
		No. of increase (decrease) of shares held	No. of increase (decrease) of shares pledged	No. of increase (decrease) of shares held	No. of increase (decrease) of shares pledged
Chairman	Austin Chen	-	-	-	-
Director	Teddy Lu	-	-	-	-
Director	Yang Jun-Yong	-	-	-	-
Director and General manager	Chang Chia-Kun	-	-	-	-
Director	Haydn Hsieh	-	-	-	-
Independent director	Hong Sing-Cheng	-	-	-	-
Independent director	Max Wu	-	-	-	-
Supervisor	George Huang	-	-	-	-
Supervisor	Zheng Zhong-Ren	-	-	-	-
Supervisor	Huang Ren-Hong	-	-	-	-
Vice President and CFO	Victor Lin	-	-	-	-
Accounting Manager and Concurrent Finance Manager	Lai Zi-Wen	-	-	-	-
Business unit head	Luo Xue-Ru	-	-		
Business unit head	Huang Mei-Hui	-	-		

2. Information on share transfer: None.

3. Information on share pledge: None.

VIII. Information on the top-10 shareholders who are related parties to each other, in a spousal relationship or within the second degree of kinship:

April 1, 2019 Unit: Share; %

TOP 10 SHAREHOLDERS	NO. OF SHARES HELD		SHARES HELD BY SPOUSE OR MINOR CHILDREN		SHARES HELD IN THE NAME OF OTHERS		THE TITLE OR NAME AND RELATION IN CASE OF THE TOP-10 SHAREHOLDERS WHO ARE RELATED PARTIES TO EACH OTHER, IN A SPOUSAL RELATIONSHIP OR WITHIN THE SECOND DEGREE OF KINSHIP		REMARKS
	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Title (or name)	Relation	
Phison Electronics Corp.	10,050,000	9.96%	-	-	-	-	Yang Jun-Yong	Supervisor of Phison Electronics Corp.	-
Teddy Lu	5,699,906	5.65%	-	-	-	-	-	-	-
Austin Chen	1,525,633	1.51%	450,268	0.45%	-	-	-	-	-
George Huang	1,207,041	1.20%	-	-	-	-	-	-	-
Masa Chang	985,000	0.98%	-	-	-	-	-	-	-
Zhang Qingrui	956,000	0.95%	-	-	-	-	-	-	-
DFA Emerging Market Core Securities Investment Accounts commissioned to Citibank	870,005	0.86%	-	-	-	-	-	-	-
DFA Emerging Market small Securities fund to Citibank	708,325	0.70%	-	-	-	-	-	-	-
Yang Jun-Yong	580,699	0.58%	-	-	-	-	Phison Electronics Corp.	Supervisor of Phison Electronics Corp.	-
Bank of Taiwan Safeguards LSV Emerging Markets Small Business Fund Account	494,000	0.49%	-	-	-	-	-	-	-

IX. Shares held by the Company and the directors, supervisors, managerial officers, and business that the Company directly or indirectly controls in the same invested business and their shareholding ratio

April 26, 2019 Unit: Share; %

Invested business	Company's investment		Investments of directors, supervisors, managers and directly or indirectly controlled business		Total investment	
	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio
Apacer Memory America Inc.	20,000	100%	-	-	20,000	100%
Apacer Technology B.V.	79,513	100%	-	-	79,513	100%
Apacer Technology Japan Corp.	200	100%	-	-	200	100%
Apacer Technology (BVI) Inc.	2,635,775	100%	-	-	2,635,775	100%
HONG YU Technology Co., Ltd.	5,000,000	100%	-	-	5,000,000	100%
Apacer Technologics Private Limited.	28,799	99.65%	100	0.35%	28,899	100%
Apacer Electronics (Shanghai) Co., Ltd.	Note 1	100%	-	-	Note 1	100%
Shenzhen Qinjing Technology Co., Ltd.	Note 2	99%	-	-	Note 2	99%
JoiiUp Technology Inc.	1,500,000	16.15%	-	-	1,500,000	16.15%

Note 1: Amount of contribution USD 500,000.
Note 2: Amount of contribution RMB 4,985,714.

Financing

I. Capital and share

(I) Sources of capital stock

1. Capital formation process

As of 26 April 2019
Unit: Share/TWD thousand

M/Y	price (dollar)	Authorized capital stock		Paid-in capital stock		Remarks		
		Number of shares	Amount	Number of shares	Amount	Capital sources	Property other than cash as substitute for share price	Approval date and document no.
7/2016	10	200,000,000	2,000,000	100,897,807	1,008,978	Note	None	None

Note: The capital of the Company was not changed in 2018 and as of the date on which the annual report was printed.

2. Type of shares

Unit: Share

Type	Authorized capital stock			Remarks
	Outstanding shares	Unissued shares	Total	
Common stock	100,897,807 (issued)	99,102,193	200,000,000	

3. Information on general declaration systems: None

(II) Structure of shareholders

April 1, 2019

Structure / Number	Government agency	Financial institution	Other corporate bodies	Individual	Foreign institutions and foreign persons	Total
Shareholders (unit)	-	-	169	31,381	86	31,636
Shares held (share)	-	-	11,460,525	80,136,782	9,300,500	100,897,807
Shareholding ratio (%)	0.00%	0.00%	11.36%	79.42%	9.22%	100%

(III) Ownership distribution

April 1, 2019

Share	Shareholders	Shares held (share)	Shareholding ratio (%)
1 to 999	19,990	1,267,330	1.26
1,000 to 5,000	8,952	18,423,372	18.26
5,001 to 10,000	1,444	11,154,686	11.06
10,001 to 15,000	436	5,481,833	5.43
15,001 to 20,000	230	4,267,444	4.23
20,001 to 30,000	199	4,951,070	4.91
30,001 to 40,000	99	3,475,357	3.44
40,001 to 50,000	67	3,041,473	3.01
50,001 to 100,000	131	9,223,182	9.14
100,001 to 200,000	43	5,789,852	5.74
200,001 to 400,000	31	8,921,121	8.84
400,001 to 600,000	6	2,899,177	2.87
600,001 to 800,000	1	708,235	0.70
800,001 to 1,000,000	3	2,811,005	2.79
1,000,001 or more	4	18,482,580	18.32
Total	31,636	100,897,807	100.00

(IV) Major shareholders

April 1, 2019

Share / Major shareholder	Shares held (share)	Shareholding ratio (%)
Phison Electronics Corp.	10,050,000	9.96%
Teddy Lu	5,699,906	5.65%
Austin Chen	1,525,633	1.51%
George Huang	1,207,041	1.20%
Masa Chang	985,000	0.98%
Zhang Qingrui	956,000	0.95%
DFA Emerging Market Core Securities Investment Accounts commissioned to Citibank	870,005	0.86%
DFA Emerging Market small Securities fund to Citibank	708,325	0.70%
Yang Jun-Yong	580,699	0.58%
Bank of Taiwan Safeguards LSV Emerging Markets Small Business Fund Account	494,000	0.49%

(V) Information on the market price, net value, earnings, and dividend per share in the recent two years

Unit: TWD/1,000 shares

Item		Year 2017	2018	2018 through March 31
Market price per share (Note 1)	Maximum	44.80	41.80	36.60
	Minimum	32.25	24.65	27.75
	Average	38.90	35.72	31.67
Net value per share	Before allocation	25.45	26.71	27.41
	After allocation	22.85	(Note 2)	-
Earnings per share	Weighted average shares	100,898	100,898	100,898
	EPS (before adjustment)	4.02	3.56	0.67
	EPS (after adjustment)	4.02	(Note 2)	-
DPS	Cash dividend	2.60	(Note 2)	-
	Stock grants -	-	-	-
	Stock grants -	-	-	-
	Accumulated unpaid dividend	-	-	-
ROI analysis	PE (Note 3)	9.68	(Note 2)	-
	PD (Note 4)	14.96	(Note 2)	-
	Cash dividend yield % (Note 5)	6.68	(Note 2)	-

Note 1: Source: TWSE website

Note 2: To be approved at the 2019 regular shareholders' meeting.

Note 3: PE = Average closing price per share of the current year / EPS

Note 4: PD = Average closing price per share of the current year / cash dividend per share

Note 5: Cash dividend yield = (Cash dividend per share / average closing price per share of the current year)×100%.

(VI) Dividend policy and implementation status

1. Apscer's dividend policy

Our earnings, if any, shown on the final annual account are distributed as follows:

(1) Pay taxes.

(2) Make up losses of previous years.

(3) Appropriate 10% as legal reserve, except when the legal reserve of the Company has already reached the total capital.

(4) Provide or reserve as a special reserve pursuant to laws and regulations.

(5) If there is any surplus left, a provision of retained earnings is made depending on the long-term development plans and the stability of the financial structure of the Company. The Board of Directors then discusses the distribution of the surplus left in the current year in combination with the unpaid earnings of the previous years, and reports to the shareholders' meeting for approval.

The dividend policy of the Company must be established in consideration of the overall environment of the industry, development phase, demand for funds and financial supports in the future, and relevant plans. Earnings to be distributed may be paid using cash of stocks. The payment ratio is about 60%~90% of the earnings after tax if there are no important investment plans or any special circumstances. The cash dividend must not be less than 10% of the total amount of the dividend.

2. Dividend distribution proposed at the current shareholders' meeting: The distribution of earnings in 2018 was approved by the board of directors on February 21, 2019. A cash dividend of TWD 252,244,518 will be distributed to the shareholders.

(VII) The influence of the stock grants proposed at the current shareholders' meeting on the operation performance and EPS of the Company:

Unit: New Taiwan Dollar

Item \ Year			2018 (Estimated)
Initial paid-in capital			1,008,978,070
Dividend distribution	Cash dividend per share (dollar) (Note 1)		2.50
	Allotment per share in surplus to capital increase (Note 1)		-
	Allotment per share in additional paid-in capital (Note 1)		-
Changes in operation performance	Operating income		N/A (Note 2)
	Operating profit increase (decrease) compared to same period last year		
	Net income after tax		
	Net income after tax increase (decrease) compared to same period last year		
	Earnings per share		
	EPS increase (decrease) compared to same period last year		
Pro forma EPS and PE	Annual average ROI (annual average PE ratio)	Pro forma EPS	N/A (Note 2)
		Pro forma annual average ROI	
	All cash dividends in case of earnings to capital increase	Pro forma EPS	
		Pro forma annual average ROI	
	If no additional paid-in capital to capital increase	Pro forma EPS	
		Pro forma annual average ROI	
	If no additional paid-in capital and all cash dividends in case of earnings to capital increase	Pro forma EPS	
		Pro forma annual average ROI	

Note 1: Allotment in 2019 is an estimate based on the resolution at the Board of Directors meeting on February 21, 2019. It will be handled pursuant to relevant regulations after approved at the 2019 regular shareholders' meeting.

Note 2: The Company is not required to make the 2019 financial prediction information public according to the Regulations Governing the Publication of Financial Forecasts of Public Companies.

(VIII) Remuneration for employees, directors and supervisors

1. Percentage or scope of the remuneration for employees, directors and supervisors according to the Articles of Incorporation:

Where there is profit in any fiscal year, four percent (4%) or more of the profit must be appropriated as remuneration for employees. Where the Company has any accumulated loss, the remuneration must be appropriated from the balance after such accumulated loss has been covered. The employees' remuneration referred to in the previous paragraph may be distributed in the form of cash or stock. The employees eligible for the distribution may include the employees of the affiliated companies who meet the requirements specified by the Board of Directors.

For the remuneration for directors and supervisors, the Board of Directors is authorized to determine the compensation recommended by the Remuneration Committee for the director with reference to the extent of his/her involvement in and value of his/her contribution to the operation of the Company and the standards of the industry in Taiwan and overseas regardless of whether the Company has profits or losses. Where there is profit in any fiscal year, not more than forteen thousandths (14‰) of the profit must be appropriated as remuneration for directors and supervisors. Where the Company has any accumulated loss, the remuneration must be appropriated from the balance after such accumulated loss has been covered. The criteria for allocation of the remuneration must be recommended by the Remuneration Committee to the Board of Directors for approval.

2. The current estimation base of remuneration for employees and directors, calculation base for distribution of dividends, and methods for handling the difference between actually distributed and estimated amounts:

   Remunerations for employees and directors are recognized as expenses of the current year. The difference, if any, between the actually distributed and estimated amounts is recognized as the loss/profit of the next year.

3. Information on the proposed distribution of remuneration for employees, directors and supervisors approved at the Board of Directors meeting

Unit: New Taiwan Dollar

Disclosed Information	Amount
Dividends to be distributed to employees - Cash (Note)	$44,047,000
Dividends to be distributed to employees - Stock	-
Remuneration to be distributed to directors and supervisors (Note)	$6,851,779
Number of shares to be distributed to employees as dividends and the percentage it occupies in surplus to capital increase	None
Imputation after proposed distribution of dividends to employees and remunerations to directors and supervisors Earnings per share	3.56 (basic) 3.50 (diluted)

Note: Distribution of profit in 2018 is to be approved at the shareholders' meeting. Relevant information can be accessed through the Market Observation Post System after the meeting. Distribution of the dividends for employees and remunerations for directors and supervisor is not different from the estimated amount of recognized expenses in the year concerned.

4. Actually distributed dividends for employees and remunerations for directors and superiors in the previous year:
Distribution of the dividends for employees and remunerations for directors and supervisor in 2017 was adopted at the shareholders' meeting on May 30, 2018. The approved distribution is not different from the estimated shares in 2017. Details are described below:

Unit: New Taiwan Dollar

<table>
<tr><th>Profit Distribution for FY 2017</th><th>Actual distribution</th><th>Book estimation</th><th>Difference</th></tr>
<tr><td>Dividends distributed to employees - Cash</td><td>44,817,749</td><td rowspan="2">44,817,749</td><td rowspan="2">-</td></tr>
<tr><td>Dividends distributed to employees - Stock</td><td>-</td></tr>
<tr><td>Remuneration distributed to directors and supervisors</td><td>7,130,096</td><td>7,130,096</td><td>-</td></tr>
</table>

5. Names of the top-10 employees acquiring the highest remuneration from the earnings of last year and its distribution:

Unit: New Taiwan Dollar

<table>
<tr><th>Title</th><th>Name</th><th>Share amount</th><th>Cash amount</th><th>Total</th><th>The total amount in net income after tax (%)</th></tr>
<tr><td>General manager</td><td>Chang Chia-Kun</td><td rowspan="10">-</td><td rowspan="10">9,800,000</td><td rowspan="10">9,800,000</td><td rowspan="10">2.73%</td></tr>
<tr><td>Vice President</td><td>Victor Lin</td></tr>
<tr><td>Business unit head</td><td>Huang Mei-Hui</td></tr>
<tr><td>Business unit head</td><td>Luo Xue-Ru</td></tr>
<tr><td>Senior manager</td><td>Li Jun-Chang</td></tr>
<tr><td>Senior manager</td><td>Yin Hua-Jun</td></tr>
<tr><td>Special assistant</td><td>Luo Rong-Fa</td></tr>
<tr><td>Senior manager</td><td>Zheng Cui-Wen</td></tr>
<tr><td>Business unit head</td><td>Xu Qin-Yi</td></tr>
<tr><td>Senior manager</td><td>Guo Mei-Dai</td></tr>
</table>

Note: The above table shows the actual distribution information of the previous year.

(IX) Status of stock buyback: None.

II. Status of corporate bonds
N/A

III. Status of preferred stock
N/A

IV. Status of overseas depositary receipts
N/A

V. Status of employee stock option certificates

(I) Status of the employee stock option certificates that have not fallen due and their effect on shareholders' equity must be disclosed as of the date on which the annual report was printed: None.

(II) Status of employee stock option certificates acquired by management team and top-10 employees, acquisition and subscription as of the date on which the annual report was printed: None.

VI. Status of employee restricted stock

(I) Status of the employee restricted stock that has not met all the conditions and its effect on shareholders' equity must be disclosed as of the date on which the annual report was printed: None.

(II) Status of the employee restricted stock acquired by management team and top-10 employees and the acquisition as of the date on which the annual report was printed: None.

VII. Status of new share issuance in connection with mergers and acquisitions: N/A.

VIII. Status of financing plans and implementation: N/A.

Overview of business operation

I. Business activities

(I) Business scope

1. Major business
   (1) DRAM module
   (2) NAND flash memory
   (3) Others

2. Operating proportion

Unit: TWD 1,000

Product	2018	
	Sales amount	Sales percentage
Flash memory	4,793,379	50.77%
Memory module	4,644,680	49.19%
Other	3,559	0.04%
Total	9,441,618	100.00%

3. Current product categories
   A. The RAM module covers the desktop, laptop and overclocking memory modules.
   B. Special memory modules for IPCs, servers, printers, network products, and routers.
   C. USB Disk Module (UDM)
   D. Industrial USB2.0 & USB3.1
   E. SATA/ATA Disk Module (SDM/ADM/mSATA/M.2)
   F. SATA/ATA Disk Chip (SDC/ADC)
   G. SATA3.0 2.5"/1.8" SSD
   H. PCIe SSD (M.2 / CFx)
   I. Combo SSD (Solid State Drive)
   J. CorePower^{TM} SSD: Abnormal power failure protection SSD
   K. SLC-lite product line
   L. SSDWidget real-time monitoring hardware
   M. IP57 waterproof and anti-dust SSD (Solid State Drive)
   N. Industrial CF Card / CFast card / Embedded SD Card
   O. SD Card, SDHC Card, SDHC UHS-1, SDXC UHS-1 Card, High Speed 95/85 U3 SDHC/SDXC, High Speed 95/45 U3 SDHC/SDXC
   P. micro SD Card, microSDHC Card, microSDHC UHS-1, High Speed 95/85 U3 microSDHC/SDXC, High Speed 95/45 U3 microSDHC/SDXC, microSDHC UHS-I U1 V10 & V30 Card
   Q. CompactFlash memory card
   R. USB3.1 fingerprint protection USB
   S. USB2.0 & USB3.1
   T. 2.5" SATAIII, mSATA, M.2 and PCIe interface SSD
   U. USB2.0 & USB3.1 Card Reader
   V. USB3.1 Portable HD

W. USB3.1 drop-resitant portable HD of military specifications
X. USB3.1 Type-C Portable HD
Y. USB 3.1 Type-C Multi-function Hub
Z. OTG USB
AA. OTG Portable Card Reader and Adaptor
BB. USB 2.0 & USB 3.1 Type-C charging cable
CC. Apple certificated Lightning charging cable
DD. Apple certificated Lightning dual-purpose USB
EE. Portable power source
FF. Military PCIe U.2 SSD
GG. Enterprise SATA3.0/PCIe 2.5” SSD
HH. CANbus Module/Dongle
II. CANbus + GPS Module/Dongle
JJ. CAN OPEN Module
KK. Luminance meter
LL. USB3.0 SSD Module
MM. Anti-vulcanization DDR4 Module
(Server DIMM / Ultra DIMM / Rugged SODIMM)
NN. Light meter
OO. CUBE colorimeter
PP. GNSS Module
QQ. IIoT solution
RR. Smart IoT Smart environmental monitoring system

4. New products to be developed
(1) Rugged DDR4 XR-DIMM Module
(2) High Speed DDR4 2666 Module
(3) 32-Bits DDR4 SODIMM Module
(4) Bullet-Proof Mini SSD External
(5) Super-charging portable power source
(6) All-in-one charging cable
(7) SED (Self-Encrypting Drives) SSD: Encrypted SSD
(8) PCIe U.2 SSD / BGA SSD
(9) Flicker (stroboscope)
(10) Edge Computing Server

(II) Overview of the industry

1. Status quo and development of the industry

Our major business includes manufacture and sale of DRAM modules, NAND flash products.

In the process of the memory modules, DRAM (Dynamic Random Access Memory) is bound onto a PCB according to a layout design. The PCB is then embedded in a motherboard for connection with other compatible functions to increase the processing speed and memory capacity of the computer. Regarding the cost structure, the price of DRAM occupies 80%~90% of the product on average (calculation based on 4GB PC standard module). Hence, the fluctuation of the DRAM market is in close relationship with the prosperity and recession of the memory module industry. The development trend of the DRAM market is the first factor to be understood for analyzing the status quo and feature of the memory module industry.

The flash memory is used in digital products for storage of information. Thanks to the non-volatile semi-conductor technology, flash memory can be used as a storage media for the information that needs permanent retention and amendment. For example, the programed instruction storage of the Set-top-box and EDRs as well as the applications for the storage of mass data for the digital cameras, smart phones, tablet PCs, SSDs, industrial computers and POSs, are all in close relation with the flash memory.

Hence, the development trends in the DRAM and flash memory industries have an interlocking relationship with our DRAM module and flash memory products. The DRAM and memory module markets as well as the status quo of the flash memory industry are described below.

(1) Overview of the DRAM market

A. Market scale

According to the estimation of global research and advisory firm Gartner, the production value of the global semi-conductor industry in 2018 was about USD 476.7 billion with a growth rate of 13.4%. Samsung benefited from the growth of the DRAM market and remained the first in the industry.Driven by the average price growth of the DRAM products, the 2018 revenue growth of the memory market was 27.2%, accounting for 34.8% of the total income of the semi-conductor industry. This is not only the largest market in the semi-conductor products but also the highest growth in the fields.

However, after nine months of growth, global DRAM prices began to slip in Q4, 2018. Also, the inventory level at the demand side was relatively high, causing the decrease of the market demand and making the revenue of the DRAM suppliers to be lower than expected. The revenues of most suppliers presented a large recession. Under the pressure of the decreasing price and quantity, the total revenue from DRAM in Q4 declined 18.3% compared to Q3 in 2018 worldwide.

Regarding the Q4 global market share of DRAM in 2018, the market share of Samsung and SK Hynix from Korea and Micron from the US was respectively 41.3%, 31.2% and 23.5% with atotal share of 96.0%.The joint market share ofNanya, Winbond, and Powerchip from Taiwan was 3.5% (See Fig. 1).

In 2017 and 2018, DRAM sales was a market of rapid growth. During these two years of high speed development, the DRAM Big Three (Samsung, SK Hynik, and Micron) expanded their production capacity to fill up the gap of market demand. Nevertheless, the demand for large-scale data center server began to decrease slowly in the second half of 2018. Factors like the weak PC market and the uncertainty of the Sino-American trade war resulted in the decrease tendency of the Q4 DRAM market in 2018. It is estimated that the DRAM market will become stagnant even decline in the beginning of 2019. According to the information of the IC Insights, the DRAM market scale had a significant growth rate of 77% after 2017 and was estimated to have a 39% growth in 2018. However, due to the decrease of the DRAM price in Q4 2018, it is estimated that the DRAM market scale in 2019 will reverse and decline by 1%.

Unit: USD 1 million

Ranking	Company	Revenue			Market Share	
		2018Q4	2018Q3	QoQ (%)	2018Q4	2018Q3
1	Samsung	9,452	12,728	-25.7%	41.3%	45.5%
2	SK Hynix	7,144	8,149	-12.3%	31.2%	29.1%
3	Micron	5,373	5,916	-9.2%	23.5%	21.1%
4	Nanya	550	795	-30.8%	2.4%	2.8%
5	Winbond	157	188	-16.5%	0.7%	0.7%
6	Powerchip	93	84	10.7%	0.4%	0.3%
	Other	116	142	-17.7%	0.5%	0.5%
Total		**22,885**	**28,002**	**-18.3%**	**100.0%**	**100.0%**

Note1: 2018Q4 – USD 1 = KOW 1,121; USD 1 = TWD 30.7
Note1: 2018Q3 – USD 1 = KOW 1,127; USD 1 = TWD 30.8
Source: TrendForce Corp., February 2019

(Fig. 1 2018Q4 DRAM brand ranking by operation income)

B. Development of products

DRAM is an assistant of the processor chip, and is a temporary storage location for data that the processor is processing. It is mainly used in electronic products. DRAM is classified into different categories including

Commodity DRAM, Server DRAM, Specialty DRAM and Mobile DRAM.

Commodity DRAM is the standard DRAM with PC related products as the major applications, such as DTs and NBs. Some low-end tablet PCs also use Commodity DRAM for price considerations.

Server DRAM is usually used in server products. Thanks to the Cloud and Big Data applications, the demand for DRAM in a standalone server is growing every year. The demand for Server DRAM is greater than the standard Commodity DRAM due to the growth of the shipping amount and standalone application at the same time.

Specialty DRAM is a special niche product and has the widest application range especially in the electronic consumer goods including smart TVs, digital set-top boxes, game consoles, and digital cameras. In-vehicle and industrial DRAMs are also the application territories of Specialty DRAM. Thanks to the gradually maturing technologies and equipment for IoT, market demand for niche memory products with a small capacity will continue to increase.

Mobile DRAM is a mobile application especially in portable products. Most of the Mobile DRAM series use LPDDR3 and LPDDR4 to meet the low power requirements of the portable products. Smart phones and middle to high end tablets are the major applications of the Mobile DRAM. Some notebooks use this memory to meet their low power requirements, for instance, most of the Apple MacBook series use Mobile DRAM.

Portable devices have played a role that drives the growth of the global semi-conductor market in recent years. In addition to the more diversified built-in functions, the low-power feature has become a trend of the end products. Hence, the demand for Mobile DRAM, with portable devices as the major application, has increased substantially and surpassed the demand of the Commodity DRAM used in the past PC era. Mobile DRAM has become the mainstream of the DRAM applications.

5G communication is a noteworthy application field in the future. With the 5G communication structure, the products of communication apparatus or personal mobile devices as well as smart cars, smart homes, smart cities and various forms of smart devices can benefit from a broader and more intense network service provided by 5G communication. Edge computing is to add a computing layer between the traditional cloud and the terminal devices to assist with capture, filtration and collection of data and facilitate real-time analysis. It can also respond immediately to the device to omit the complicate procedure of uploading all the data to the cloud and decrease latency and storage cost for data transmission. Besides application sin 5G communications, edge computing technology can execute data processing right at the terminal using the computation learning technology of AI to provide consumers with a high-quality experience. Edge computing technology is expected to produce a certain impact on the Server DRAM market. For example, the demand of the Server DRAM for small business servers and small data centers will increase greatly. It is estimated that the Server DRAM will suppress the Mobile DRAM to become the mainstream of supply and demand within 2 or 3 years in the future.

C. Overview of major DRAM suppliers

(A) The weak demand in 2019 resulted in the capital expenditure slowdown of the leading DRAM manufacturers.

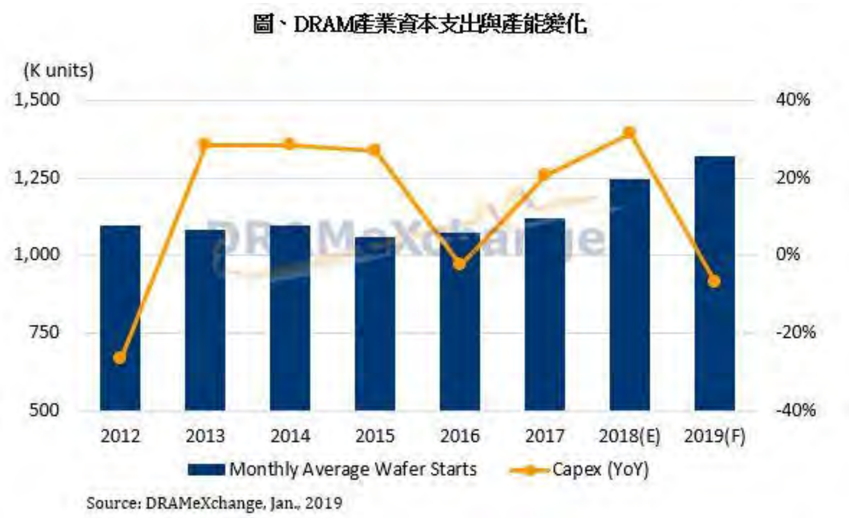
Since the decline trend of the DRAM market starting in Q4, 2018, all the leading DRAM manufacturers began to slow down the capital expenditure plans.The amount of the global DRAM capital expenditure in 2019 is estimated to be USD 18 billion, with a yearly decrease of 10% (See Fig. 2).

According to the information of the DRAMeXchange market, Samsung determined to terminate the expansion project of the Pyeongtaek plant (Line18). Samsung’s total investment amount on DRAM is about USD 8 billion, mainly focusing on the continuing advanced process (1Ynm) transition and new product development. Due to the suspension of the Pyeongtaek plant expansion, the DRAM growth rate by bit will merely be 20% in 2019, which is the lowest in recent years.

The investment amount of SK-Hynik in DRAM also decreased to about USD 5.5billion in 2019, mainly focusing on the continuing transition of the new production processes and the yield rate promotion. The launch of the Wuxi plant in China will increase the production capacity for SK-Hynik in 2019. DRAMeXchange estimated that the DRAM growth rate by bit of SK Hynik in 2019 will be 21%.

Micron announced to revise down the capital expenditure in 2019 to USD 3billion and the goal of the growth rate by bit in 2019 to 15% to improve the high inventory. DRAMeXchange estimated that compared to the two major manufacturers from Korea, the cost structure of Micron seems relatively weak, resulting in a minor space for Micron to sustain the price falling. For two consecutive years, Micron had a growth rate of merely 15% that may lead to compression of its market share.

Nanya began to decrease its capital expenditure for DRAM since Q4, 2018. The goal of the memory investment at the beginning of 2018 was decreased from TWD 24 billion to TWD 20.4 billion and would be reduced to TWD 10 billion in 2019, presenting a significant decrease.



(Fig. 2 Changes in the capital expenditure and the production capacity of the DRAM industry)

(B) DRAM process transition schedule

Samsung remained the leading DRAM manufacturer in the process transition. Currently, the 1xnm capacity share of Samsung has exceeded 50% and the official delivery of 1ynm also began in Q3, 2018. The total capacity share of the two process products has reached 70% in 2018.

SK Hynik's capacity share of 21nm process was about 50% and remained the major product presently while the capacity share of 1xnm process was about 30% in 2018. In 2019, the goal of SK Hynik is to continuously increase the capacity share of 1xnm process and the expected target is 50%.

Concerning Micron's process transition schedule in Taiwan, Taiwan Micron (former HWA YA Corporation) has gradually transferred from 20nm to 1nm in 2018 and will begin the transition to 1ynm step by step in 2019. Micron Memory Taiwan (former Rexchip Electronics Corp.) will transfer the entire production capacity to 1xnm in 2019 and plan to skip the 1ynm process by directly transferring to the 1znm process. As for the Hiroshima plant of Micron Memory Japan, the 1xnm capacity share exceeded the 20 nm in Q4, 2018 and will center on the 1ynm process transition in 2019.

The production capacity of Nanya still focused on the 20nm process but the company also have plans for the research and development of the 10nm process. Powerchip has began the mass production of the 25nm process by producing products with the DDR3 4Gb die. Currently, Powerchip has devoted to the research and development of the DDR4 4Gb products to adjust to the main demand of the PC market.

As for the specifications of products, most of the Intel chip sets in servers, desktop computers, and notebooks support DDR4 architecture. As issues related to AI began to prosper in recent years, the demand for HPC continued to increase and the demand for edge computing technology also began to develop. This has driven the long-term growth of demand in the server market while the demand for large-scale data center equipment promoted the DDR4 to be the main specifications in the Server DRAM market in 2019.

(C) Supply-demand development of the industry

The market previously estimated the year 2019 as the "first year of Chinese memory" since the three major memory manufacturers in China will begin the mass production in 2019 to drive the growth of the semi-conductor industry. However, the memory industry of China inflicts heavy losses due to the impact of the United States prohibition of selling certain technology to certain countries and the recession of the global semi-conductor market. It is estimated that the mass production period of the China memory plants will be carry forward to 2020 or even later.

Since the rise of the Chinese brand mobile phones, the mainstream capacity of the phones changed from 2GB DRAM to 4GB. Construction of a large number of data centers promoted the rapid increase of the market demand for Mobile DRAM and Server DRAM. Also, the fast rise of memory prices beginning from the second half of 2017 urged the major memory manufacturers to expand their production capacity to smooth down the market shortage. The market demand began to saturate in Q3, 2018. But the supply continued to increase and the inventory level of the customer was relatively high, bringing about oversupply in the market from Q4, 2018 to the whole year of 2019.

Leading DRAM manufacturers will reduce their capital expenditure in 2019 one after another to decrease the impact on the supply, the results of which will gradually show up in Q2 to Q3, 2019. Factors such as the Sino-American trade war and the Intel CPU shortage will have impact on the demand and presently presented a frozen state. In case the demand side has recovered while the production capacity has not yet to expand, we shall pay close attention to the fluctuation of the market to see whether suppliers can react in time.

(2) Status quo of the NAND flash market

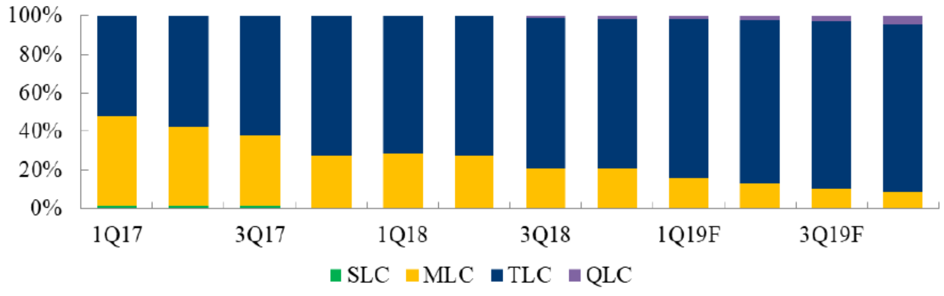
A. Market scale

Smart phones are the major products that mainly use eMMC or eMCP to support the growth of the NAND flash market. The demand for SSDs keeps growing as more servers and data centers are built. According to the estimation of the market research companies, the market scale of the NAND Flash was about USD 57 billion in 2018 with a growth rate of 22% in comparison with 2017. The global market scale of the NAND Flash is expected to decrease to USD 54 billion with a annual decline of 5%.

As for the supply, the output of 3D NAND Flash products remained above 85% and the supply of 2D NAND Flash products will drop every quarter. In 2019, the equivalent production of the 12" wafer will decline 3.6% in Q1 and have a 1.5% growth in Q2 while the growth rate by bit will grow by 0.1% and 14.8%, respectively. The capacity share of 3D NAND Flash TLC will increase to 80% thanks to the increase proportion of the advanced process in Q1, 2019. Due to the immature process of the 3D NAND Flash QLC, its production capacity is expectedly about 1% in Q1, 2019, and is expected to increase to 5% in Q4, 2019.

As for the development trend of the market in 2019, manufacturers are dedicated to improve the capacity and yield rates of the 3D NAND flash products. With the enlargement of the single capacity and the resulting increased average capacity of eMMC, UFS and SSD, the output by bit in 2018 was 118,509M (16Gb equiv.) with a significant growth rate of 45.4% in comparison with 2017. A growth of about 34.4% to 159,235M (16Gb equiv.) is expected in 2019.

In the aspect of the product structure, SLC applications focused on the demandable embedded SSD of the server and industrial control and the MCP high-performance application of smart mobile devices, network communications products, set-top boxes, smart speakers and carborn devices. The market demand is relatively stable. Major manufacturers such as Samsung, Toshiba, and Micron were the providers of SLC and the proportion of the SLC in the NAND Flash output was about 1%. The proportion of the TLC reached about 78% at the end of 2018 due to increase of the 3D NAND Flash production. It is expected to reach 85% in Q4, 2019. QLC SSD is still in the verification test process and cannot be introduced to the main market, causing a limitation of the overall production capacity (See Fig.3).



Source: TrendForce Corp., March 2019

(Fig. 3 Global NAND flash production analysis by product structure)

According to the Q4 ranking of the operating income among different brands of NAND flash memory in 2018 conducted by the market research companies, the following is a description of each market status (See Fig. 4):

The operating income of Samsung was USD 4.304 billion, with a 28.9% of decline in comparison to Q3, 2018. The main cause is the weak demand of the servers, data centers, notebooks and smart phones.

Due to the shipping amount of new Apple mobile phones was lower than expected and the Intel CPU shortage impact on the notebooks, the growth rate by bit of Toshiba struggled to remain steady in Q4, 2018, but the operating income has reduced to USD 2.732 billion with a 14.7% of decrease compared to Q3, 2018.

Benefited from the smooth introduction of UFS and UMCP to the shipment of the major smart phone customers and the high sales volume of Enterprise SSD for SATA interface, Micron only suffered the impact of the average unit price due to the falling price of the NAND Flash market. The operating income has reduced to USD 2.179 billion with a 2.2% of decrease.

Impacted by the Sino-American trade war and server demand and smart phone shipments falling below expectations in the second half of 2018, the operating income of Western Digital reduced to USD 2.173 billion with a 14.2% of recession. Though the the growth rate by bit reached 5% thanks to the SSD sales growth in Q4, 2018, the average unit price was still affected by the weak demand and the falling price of the products.

Since the smart phone shipment was not as expected in Q4 2019 and the reinforcement of the stock clearance for the OEMs and the servers, the operating income of SK Hynix was USD 1.587 billion with a 13.4% of recession.

Benefiting from their leading role in the server SSD market, Intel used a configuration with higher capacity and more 64 Layer products to maintain 15% of the shipping growth rate by bit. However, due to the impact of the declined market contract price, the operating income was USD 1.107 billion with a 2.4% of growth.

According to market survey and research institutions' estimates, the supply of the NAND flash will exceed the demand in the first half of 2019, while the prices of SSD might be adjusted downward and enable the OEM manufacturers to increase the SSD carrying capacity and installation. This demand may be helpful for the maintenance of the growth momentum. The overall market supply and demand may become balanced or the supply may be slightly unable to meet the demand in the second half of 2019 when the demand is expected to increase thanks to the traditional boom season. Therefore, the memory capacity installed in smart phones and the increase of the SSD installation will be the focus in 2019.

Unit: USD 1 million

Company	Revenue		Market Share (%)
	2018Q4	QoQ (%)	2018Q4
Samsung	4,304.3	-28.9%	30.4%
Toshiba	2,731.5	-14.7%	19.3%
Micron	2,179.0	-2.2%	15.4%
WDC	2,173.0	-14.2%	15.3%
SK Hynix	1,587.6	-13.4%	11.2%
Intel	1,107.0	2.4%	7.8%
Others	77.4	-5.5%	0.5%
Total	14,159.9	-16.8%	100%

Note 1: 2018Q4－USD 1 = KOW 1,126.8; USD 1 = JPY 112.8
Source: TrendForce Corp., March 2019

(Fig. 4 2017 2018Q4 NAND flash brand ranking by operation income)

B. Development of products

The main applications of the NAND flash are the embedded memory (e.g. portable device), SSD (e.g. notebook and data center), memory card, and USB. As the application of smart devices increases in the development of the IoT technology and big data, the smart robots, smart appliances, smart speakers, vehicle-mounted recorders, vehicle navigation systems, intelligent wearable devices, drones, reality technologies (VR, AR, SR, MR), and future AI devices have been increasing the applications of data storage and its demands.

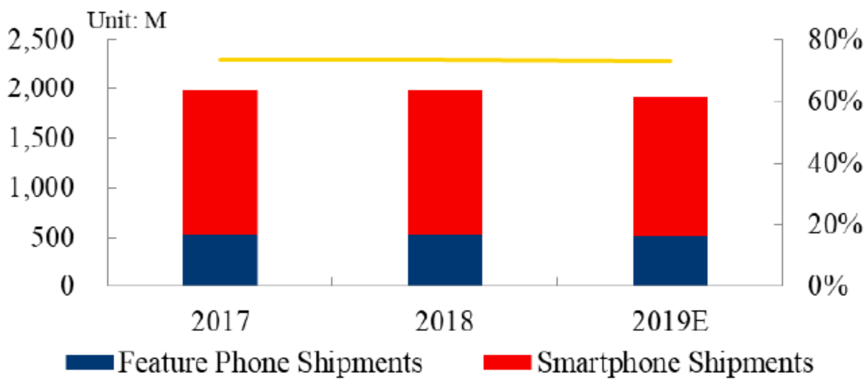
The global shipments of smart phones were 1.44 billion pieces in 2018 with a 1.4% of decline in comparison with 2017 (See Fig. 5). This is attributable to a saturation of the smart phone market after a high development period and the public's decresasing willingness to upgrade their smart phones . Samsung maintained its global leading position in the production of smart phones using its advantages acquired through long-term conscientious operations in the global market. Chinese brands (Huawei/Xiaomi/OPPO/Vivo) have frequently created new peaks of shipment thanks to the strong demand in their home market over the past years. As this market was becoming saturated, all the brands transferred to the overseas emerging markets and cooperated with local telecom carriers. With the advantage of high CP ratio, they enter the Indian and southeasten markets, and even the European market, to maitain their market shares. Apple won the second place in the global market. It plans to increase the application of the Face ID and full screen to its smart phones in 2018, optimize existing functions, and increase memory capacity. Three new models are expected to launch in Q3 2019. These efforts and the operation of the Indian market make it optimistic for Apple to have growth momentum in the future.

Ranking	Brand	Market share		
		2017	2018	2019 (estimated)
1	Samsung	21.53%	20.47%	19.59%
2	Huawei	9.86%	13.34%	15.81%
3	Apple	14.76%	14.84%	15.01%
4	Xiaomi	6.50%	8.60%	8.68%
5	OPPO	8.05%	7.89%	7.95%
6	BBK(Vivo)	6.12%	6.32%	7.00%
	Others	33.18%	27.11%	20.81%
Total production		**1.360** billion pieces	**1.462** billion pieces	**1.441** billion pieces

Source: InSpectrum (January 2019)

(Fig. 5 2017-2019 Production ranking of global smart phones by brand)

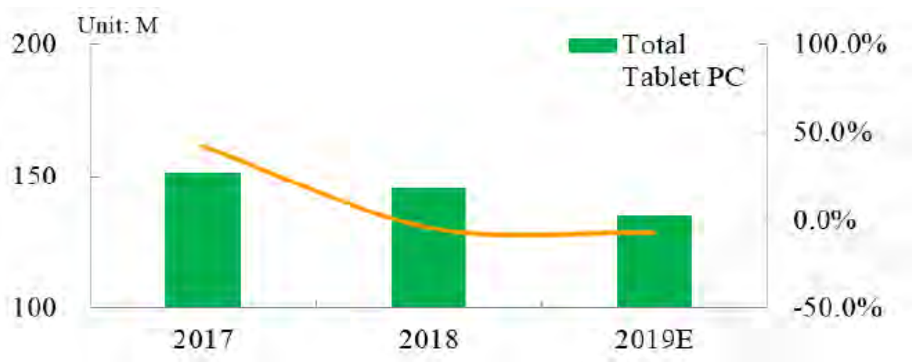
In particular, the average installation rate of eMMC/eMCP demonstrated the growth momentum of smart phones. In 2018, the capacity of Apple iPhone XR/XS/Max skipped 128GB and Samsung Note 9 skipped 256 GB while its flagship models reached 256 GB and 512GB. The capacity of the Chinese brands Huawei, OPPO, Vivo and Xiaomi also changed from 64GB/128GB to 128GB/256GB, and even to 512GB. On the whole, because of changing consumer habits and improvements across brands, the functions of smart phones are no longer limited to phone calls or SMS sending and receiving. The constant optimizations of hardware equipment of all brands include the installation of full screen with high resolution, multi-lens, camera lens with high pixel, fingerprint identification on the screen etc. As for the 5G technology, since the commercial operation time still depends on the finalization of the 5G protocols and the establishment of commercial cell sites in addition to the high cost of 5G phones and the high power consumption that affects the standby time, the wave of demands for 5G phones is estimated to come after 2020 (See Fig.6).



Source: TrendForce Corp., March 2019

(Fig. 6 2017-2019E Growth analysis of smart phones)

The total shipment volume of tablet PCs was 144 million sets in 2018 with a 4.8% decline compared to 2017. The shipment volume of the own-brand manufacturers was about 115 million sets with an annual decline of 2.4% and the shipment volume of white-box tablet PCs was 30 million sets with a annual decline rate of 13.0%, causing the increase of the total recession rate of the tablet PCs. The shipment volume of tablet PCs in 2019 will decline similarly. The shipment volume may decline to 135 million sets resulted from the continued increase of the large-size mobile phones proportions in the shipment and the tablet PC market will be eroded by large-size mobile phones. Huawei's sales volume of tablet PCs was about 13.2 million sets and the annual growth rate has reached 25.5% in 2018. But Huawei may encounter an erosion of its sales of large-size mobile phones in 2019, and therefore their sales volume has been revised down to 13.5 million sets. Other brands mostly presented a recession in 2018. The total shipment volume of Apple was 42.3 million sets with a 3.5% decline and a 3.1% decline is expected in 2019. The total shipment volume of Samsung was 23.2 million sets with a 4.5% decline and a 20.7 million sets of the total shipment volume with a 10.6% decline is expected in 2019.The total shipment volume of Amazon was 13.2 million sets with a 3.2% decline. Since the consumers have lower interest in the 7-inch devices, the Kindle Fire may continue to decline in 2019 and the shipment volume may decrease to 13 million sets with an annual decline of 1.6% (See Fig.7).

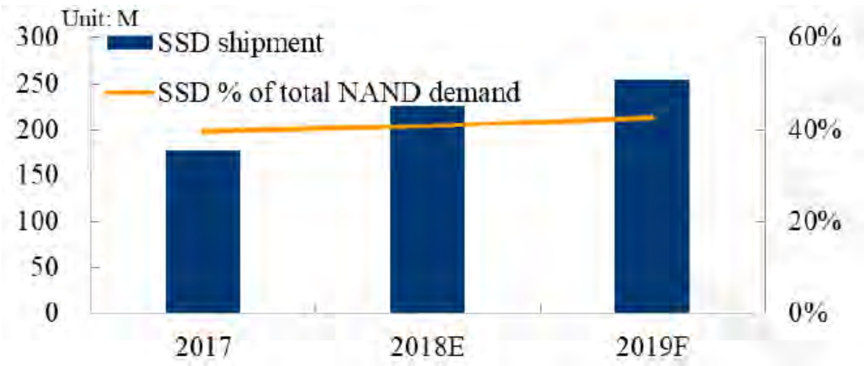


Source: TrendForce Corp., February 2019

(Fig. 7 2017-2019E Global tablet PC shipment volume)

The mainstream product of SSD manufacturers has changed to 3D TLC-SSD and focused on the new products of 64L/72L TLC SSD. 2D MLC SSD targets niche markets and most manufacturers stop producing or selling the product since the NAND Flash manufacturers has gradually reduced the output of MLC. In the Cilent SSD market in 2018, the proportion of 3D TLC has exceeded 70% and aimed toward 90% in 2019. Though 3D QLC technology has greater competitiveness in the cost, a minor increase is expected in the selling growth of 3D QLC SSD in 2019 since merely few suppliers began the mass production and had a poor yield rate. Also, there are still doubts about the performance and the durability and some manufacturers do not put their emphasis of QLC on the Client SSD market.

Due to the significant price drop of SSD in 2018, the ratio for notebooks to be equipped with SSD has exceeded 50% and expected to reach 60~65% in 2019. Benefited from the significant decline of the SSD contract price in Q1 2019, the mainstream capacity of SSD for PC OEM will be 256GB while 512GB may rank in the second place with 128GB or even excel (See Fig. 8).



Source: TrendForce Corp., February 2019

(Fig. 8 2017-2019F FSSD shipped quantity worldwide)

For the Client SSD product interface (referring to the SSD that laptops equipped with), the penetration rate of PCIe SSD will exceed 50% in 2019. The main reason is that the price difference between PCIe and SATA SSD caused by the Value PCIe TLC SSD was narrowed down to merely 1% due to the mass production of Value PCIe controllers and continued price reductions. Therefore, with the help of the Value PCIe TLC SSD, the demand for PCIe SSD is expected to begin to grow rapidly in 2019. In addition, most of the Intel CPU platform and personal PCs can support the PCIe G3 interface, resulting in the constant increase of the PCIe penetration rate. The annual growth rate of Client SSD bit consumption will be about 41%.

The application of Enterprise SSD (referring servers equipped with SSD) still grows stably. Because of the ongoing expanding demand for devices related to cloud computing, E-commerce, high speed stream media, online streaming, AI, 5G and edge computing, demand for Enterprise SSD is in a period of rapid growth. However, the server/data center inventory of the OEM customers were relatively high in Q4 2018 and the traditional low season of Q1 resulted in the active price reduction of each NAND Flash manufacturer for stock clearance. Because of these reasons, the market contact price has decline to 30%. Besides, WDC, Toshiba and SK Hynix focused on the targeted customers to send 64/72L 3D SSD product sample around midterm of 2018 and the product would officially enter the mass production stage in the second half of 2018. When looking at the Enterprise SSD bit consumption rate in 2019, the annual growth will surpass 40%.

The market of memory cards mainly relies on the demand for non-Apple phones. The sales volume of memory cards decreases with the sales decline of the smart phones. To increase the profit quality of memory card product lines in Q1, the leading memory manufacturers have started to think about bringing UFS memory cards in the market to replace the market of high end memory cards. The advantage of UFS memory cards include major advances in efficacy and supply chain manufacturers no longer needing to pay royalties. When UFS standards leader Samsung will start to support UFS memory cards in its smart phones and whether the top 5 smart phone manufacturers in China will follow suitwill be an important observation point concerning the future development of UFS memory cards. To resist the threat of UFS, the SD association plans to set a higher level standard- SD7.0 of PCIe transmission structure in 2018. Huawei has released the NM memory card with their own specifications in Q4 2018 to expand their share in the market of high-end memory cards.

The penetration rate of USB 3.1Gen1 in 2018 was between 25%-27% and has a chance to reach 30% in 2019 because the supply for the 64/72-layer 3D NAND 64/72 will be increased and the market price will come down significantly. The 3D NAND with an average capacity of 256Gb and USB3.1 with high requirements for performance, will be the mainstream. Since no control chip manufacturers has released resolutions for the next generation of USB 3.1Gen2, the launching of related products has been pushed back to 2020 at the earliest.

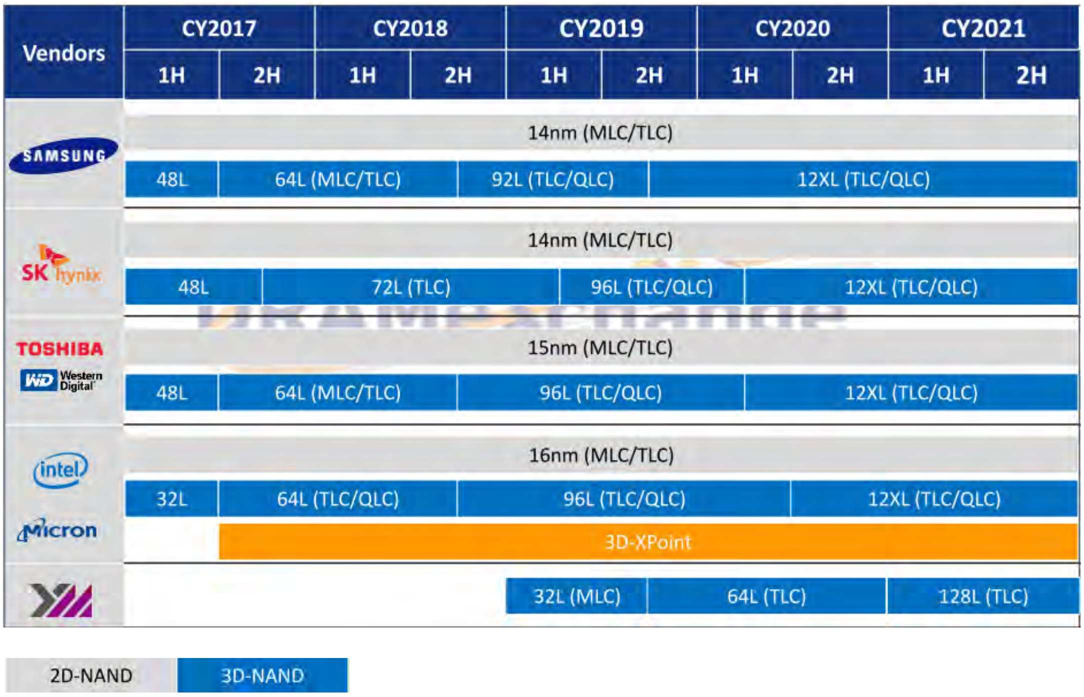
The global sales volume of automobiles was about 91.17 million units with a 1.6% of decline in 2018. As the scale of the global electric vehicle market continued to expand rapidly, countries are developing requirements for installing various advanced driver assistance systems (ADAS) in the vehicles and added them to their compulsory items. For instance, the United States announced that beginning from September, 2020, new vehicles should be equipped with Autonomous Emergency Braking System (AEB) and Korea required the installation of Autonomous Emergency Braking System and Lane Departure Warning System (LDWS) from 2019. The European Commission proposed a new motion (waiting for deliberation) of installing 11 safety systems from 2021, including fatigue monitoring systems, attention assist detection systems, emergency braking systems, active cruise control systems and lane keeping assist systems. Therefore, the need for vehicle-related Internet is exploding. The sales volume in the automobile market in China was about 28.1 million units, which is 30% of the global sales volume. China is not only the biggest production-marketing country, but also the world's largest after-market. The need of memory for smart cars and Internet vehicles cannot be underestimated since the storage of DRAM, eMMC and UFS all require high performance, high stability and shall meet the temperature requirement of AEC-Q100. UFS3.0 products will be released continuously and will expand its application in the vehicle market in 2019. The development from security control to intelligent assistance and further to unmanned driving, draws the attention of big technology manufacturers such as Samsung, Intel, Qualcomm, Micron Toshiba and Huawei to participate and have a share in the vehicle market via cooperation and mergers and acquisitions. The memory manufacturer Samsung launched the NAND and DRAM for vehicles in 2018. Micron announced to invest USD 3 billion in the expansion of its Virginia plant in the United States to produce automotive semiconductor. SK Hynik also prepared to establish a automotive strategy group to have share in the automotive market. We can anticipate the growth of the memory in the automotive market.

Following the trend of smart phones, tablets, smart wearable devices, smart TVs, PTT boxs and dashboard cameras, the shipment volume of smart speakers exceeded 60 million units in 2018, attracting Amazon, Apple, Google, Tencent, Baidu, Xiaomi, Jd.com, Alibaba and Huawei to join the competition. Currently basic-level smart speakersare equipped with small capacity 1Gb/2Gb DDR3 and 1Gb/4Gb SLC Nand Flash and the middle and high price with 4Gb/8Gb DDR3L and 4GB MLC/8GB eMMC. The memory capacity used for smart speakers is different from those of smart phones and tablets that use a high capacity of 64GB, 128GB and even 256GB, 512GB or 1TB and can quickly consume a great production capacity of the memory. However, as the constantly development of IoT, cloud applications and the artificial intelligence technologies, the integration of the smart speakers with screens can achieve more applications in different scenarios. Smart speakers with screens have installed low-power 1GB/2GB LPDDR3 and 4GB/8GB eMMC. The shipment volume of smart speakers is expected to grow to TWD 1 billion in 2019.

C. Main flash memory suppliers’ status

(A) Process transfer schedule of flash memory

The process of 2D NAND Flash is stuck at 14nm/15nm. Due to the difficulty in miniaturizing in following production process, 2D model miniaturization will not continue. All manufacturers prioritized upgrading their production process techniques and accelerating mass production, with 64L/72L becoming the main output technology last year. In 2019, the main focus will be an increase of the 96L sahre. Memory will upgrade from 128Gb in a single 2D NAND Flash to 256Gb/512Gb or even 1Tb in a single 3D NAND Flash. In addition to TLC model, they are also keen on the promotion of QLC technology. The output proportion of the overall 3D NAND Flash in Q4, 2018 was about 80%. It is expected to reach 90% by the end of 2019 to contribute to the cost reduction of SSD and the increase of SSD penetration rates (See Fig. 9).



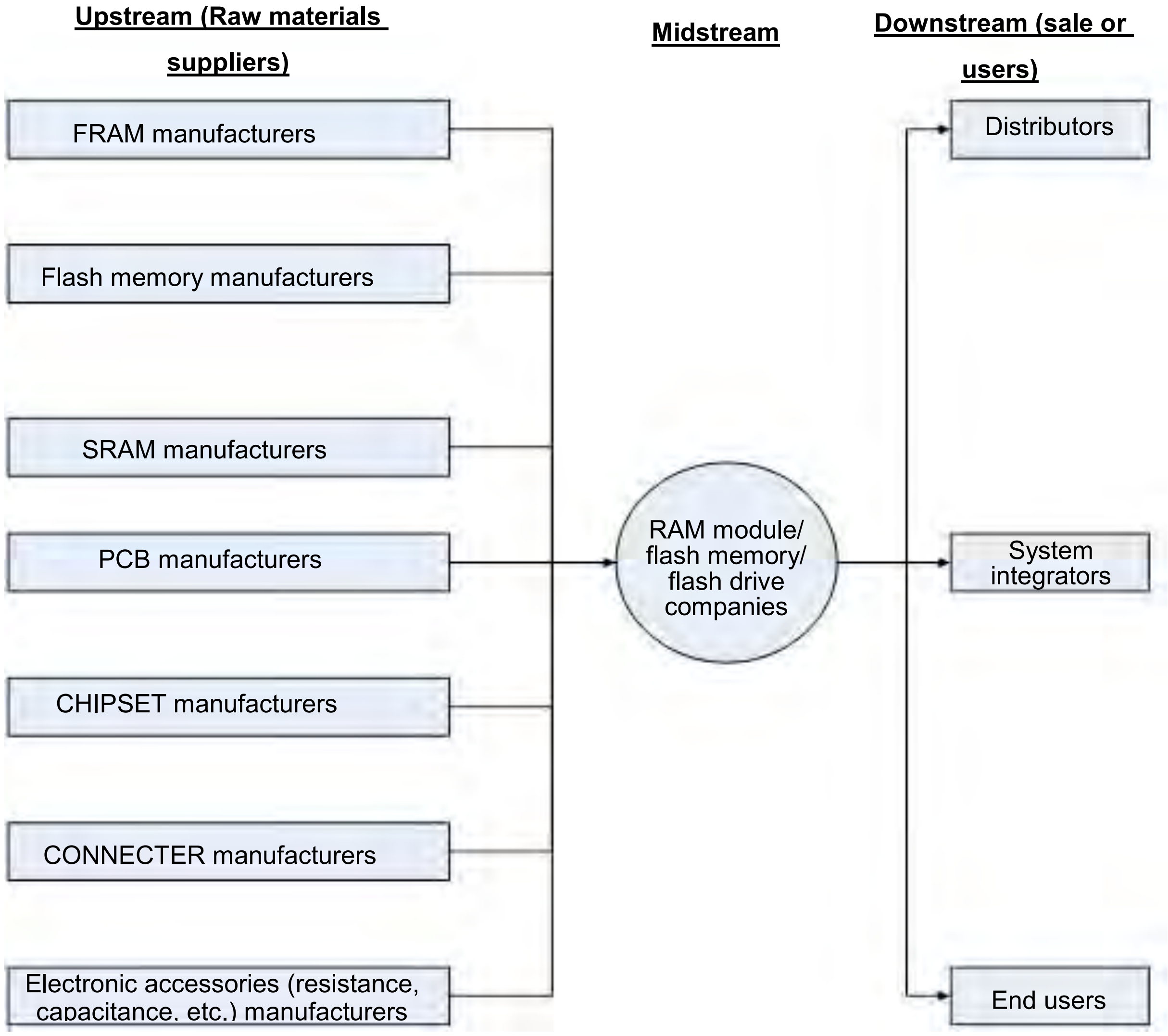
Source: TrendForce Corp., March 2019

(Fig. 9 NAND Flash 2D/3D products techniques of manufacturers)

(B) Industry supply and demand development

For NAND flash industry, 2019 will fill with challenges and opportunities. On the aspect of supply, each major manufacturer began to limit their capital expenditure in the second half of 2018 and further to adjust the process of the output growth. In this case, the supply growth has obviously lower than the level in 2018. On the aspect of terminal demand, there maybe an oversupply in 2019 because of the CPU shortage and the extended replacement period of the smart phones. Also, the method adopted by the PC OEM and the server procurement to decrease the stock in first half of the year may also have impact on the inventory and result in oversupply. The price reduction may lead to the promotion of the capacity growth and the increase of the SSD installation in 2019 while the demand may also have a significant growth.

2. The relationship between up, middle and down stream in the industry



3. The development trend of each product
   (1) the development trend of RAM module

   RAM module is mainly used in PCs, servers and mobile devices. Due to the new techniques and process, the function of DRAM upgrades rapidly. Its development mainly follows the following trends:

   A. High capacity:
   With the CPU function strengthened, DDR4 becomes the main memory format and will enter DDR5 in 2020. Meanwhile, the main capacity of DRAM IC is 8Gbit and will shift to 16Gbit at the end of 2019. The capacity of RAM module gradually shifts from 8GB to 16GB because of the product format upgrade.

   B. Low power consumption and low voltage:
   With the trend of light, thin, short and small in system products, product development will be geared toward low power consumption and voltage; and with the trend of voltage and power consumption decrease when performing a system product, RAM module product is shifting from DDR3 1.35 volt to DDR4 1.2 volt now.

   C. Hight speed:
   In coordination with the speed growth of CPU, the processing speed advance of DRAMhas become very important. In 2018, the mainstream format of DDR4 RAM module still remained 2400 MHz and 2666 MHz only occupied parts of the proportion.In2019, most of it will be transfered to 2666MHz and become 3200MHz in the second half of the year.

   (2) the development trend of flash memory

   A. The capacity expansion of smart phones and SSD is the main growth momentum.Due to the contract price reduction of NAND Flash, the DRAM and SSD capacity installed in the smart phones will be promoted and the market penetration rate of SSD will also increase.Now SSD are mainly used on business laptops or high-end consumer laptops that require more efficacy and higher efficiency, hoping that it will expand to mid-range mainstream models and lower-end product lines in 2019. As for the application of Enterprise SSD,the average carrying capacity will be promoted along with the huge growth of cloud computation and the rise of IoT. Market survey and research company, TrendForce expects a increase of 311,975MGB in the overall unit demand with a annual growth rate of 35.1%since the market price reduction may result in a chance to increase the average carrying capacity of each application product in 2019..

   B. At the prospect of 2019 cellphone market status, we predict the shipped quantity of cellphones worldwide will be 1.441 billion in 2019, presenting a contraction in shipped quantity. However, slipping contract prices may promote the increase of NAND Flash carrying capacity and boost the sales volume as brands launch their new cellphones.

C. Taken all together, the biggest demand in NAND Flash application field still comes from mobile devices and servers, such as the promotion of the carrying capacity for the smart phones, tablets and SSD.With the leading of the IoT trend, the rapid growth of intelligent devices, the need and application of data storage on smart robots, smart appliances, smart speakers, and wearable devices, IoC, vehicle navigation systems, intelligent wearable devices, drones, and future AI devices, the growth of NAND Flash application is worth expecting.

(III) Techniques and research development status

1. The R&D expenses in the recent years and as of the date on which the annual report is printed

Unit: TWD 1,000

Year	2017	2018	Through 31 March 2019
R&D expenses	99,120	120,479	27,782

2. R&D status of Apacer

Devoted to the memory storage technology and related application market, Apacer's products of the memory and storage device technology has covered the consumer and industrial application market. By accumulating our technology capabilities and developing a deep understanding of the memory storage application need, we continue to invest resources for hardware and firmware development, creating and developing the SSD storage model that industrial application needs. Moreover, based on the knowledge of the firmware and structure of SSD storage, we can swiftly provide customized storage solutions tailored to specific client needs. Based on the development of core storage techniques, we raise the stability and credibility of products. In addition to the present SATA-interface SSD, we are more devoted to developing PCIe interface SSD storage techniques, providing the storage need of newer generation transmission interface.

Policy toward developing new technologies and products includes memory and SSD application integration and innovation. With these, we actively satisfy our costumers' needs and provide them with thorough solutions. We have developed and released optical inspection devices and LAN transmission modules along with establishing the industrial IoT and intelligent IoT platform and promoting it to the industrial application field.

In addition to designing and developing higher compatibility format to fit various usage needs, we also devote ourself to new developing strategies of new formats for mobile devices storage and the development of application products related to mobile digital storage in the consumer market. We brought out many kinds of high speed USB 3.1 flash drives and external hard drive, fingerprint encrypted flash drives and dual-interface flash drives. This year, we intently invested R&D resources to the eSports market, undergoing many product developments, including FRAM, RAM modules that have LED lighting functions and ultra-high speed transmission SSD, etc. We also continued to develop multiple integration technologies for the gaming computer.

As for R & D, we have been granted 193 approved patents for our products in Taiwan and other countries. 50 patent applications are currently pending.

3. R&D outcomes

Year	R&D outcomes
2018	1. Apacer launches the AH33A USB 2.0 and AH35A USB 3.1 Gen 1 flash drives with brand-new designs. Staying true to Apacer's design philosophy of "quality is in the details," AH33A and AH35A come in high-quality stainless steel casings with hairline finishes, which bring perfect visual and tactile enjoyment. The cap-less flash drives follow an ergonomic design with a side push key for hassle-free handling. The semi-transparent strap hole placed at the end is easy for attachments to charms or key chains, making it a personal fashion accessory! 2. Apacer's latest AS2280P2 M.2 PCIe Gen3 x2 SSD is equipped with the latest 3D NAND Flash technology, significantly improving its capacity by stacking. Meeting PCIe Gen3 x2 specifications and outperforming with up to 1,650 and 1,000 MB/s for high speed read and write, AS2280P2 provides the best access performance and satisfies the needs of all gamers! 3. Built with cast metal exteriors and neat outlines, Apacer's flash drives, AH310 USB 2.0 and AH360 USB 3.1 Gen 1, are created to complement the status of the professionals. Outshining with its mirror-surface silver and element black body, the wedge cutting of the middle body of AH310 and AH360 extended toward the sophisticated shaped tip with a mechanically style strap hole for flexible use. This catchy design has leave everyone breathless. You can have a perfect match regardless of official suit or smart causal style to increase your professional image. Both of AH310 and AH360 are ultra-slim with unbeatable portability. The maximum capacity offered in these models is 64GB, which ensures sufficient capability to hold all the important files to present your professional confidence all the time! 4. Taking inspirations from Hyperloop, the new generation high-speed train, Apacer's latest additions of flash drives, the AH23A USB 2.0 and AH25A USB 3.1 Gen 1 are ergonomically shaped for a smooth grip, along with other thoughtful details, such as a cap-less slide design, streamlined silhouette following an ergonomic design, and a built-in strap hole to give the user a smooth and well-executed transmission experience. Offering a maximum capacity of 64GB for the easy carrying of mass files, AH25A, available in a classic black-red combination embodying speed and strength, is equipped with USB 3.1 Gen 1 interface, which can transfer up to 5Gb/s. With a USB 2.0 interface, AH23A is delightfully designed with sky blue and pure white combinations, bringing a comfortable and pleasant user experience. 5. Apacer introduces the brand-new metal USB hard drive AH25B USB 3.1 Gen 1 and AH23B USB 2.0. The products are designed with the finest quality metal techniques to create an attractive ultra-light touch. The mixed and compatible Deep Valley Black and Sunrise Red respectively reflect the cool and passionate style to manifest the unique taste of the

Year	R&D outcomes
	user. With a maximum capacity of 128 GB, it allows for the storage of massive amounts of data, audio and video files, letting you enjoy your life carefree! 6. Apacer introduces the second generation fingerprint flash drive, AH651, equipped with dual unlocking options: fingerprint recognition and password, along with a brand-new “partition defense” function. For best protection, the storage is divided into two partitions: the “secure partition” can only be unlocked with fingerprint recognition or password, while the “public partition” can be conveniently used and accessed to balance safety and convenience. With AH651, users have the full control and management of their data security! 7. Introduce to you the latest Apacer AH13E/AH15E! Equipped with an elastic metal buckle, you can control it easily with one finger to present your personal style with confidence and agility. Formed by high-strength zinc alloy, the metal foggy silver body has the characteristics of simplicity and grace with functions of waterproof, dust-proof and shockproof protections. By the high quality product design and high intense protection, Apacer adds an highlight to your professional confidence! 8. Inspired by the heroic roles in the animation, Apacer invented the flash drive series of “Core of Storms” USB 2.0 and AH15F USB 3.1 Gen 1. Equipped with a “dark metal”zinc alloy armor, the flash drive casted the high-tech power core totem on the tip to fulfill the pursue of ultimate combat capacity in the era of eSports. The “dark metal” armor is made of high-strength zinc alloy to display the domineering aura of the owner with waterproof, dust-proof and shockproof protections. Apacer guards the valuable data via high quality and safety to enable the gamers feel free to enjoy the delight in conquest! 9. “I’m proud of who I am today. I never gave up, seized opportunities, overcame challenges, and forged ahead in life!” The widely popular co-branded illustrator collection from Apacer Technology is extended with a new addition, this time collaborating with illustrative brand Ning’ s to launch three Apacer X Ning’sAH23A flash drives—“Opportunity”, “Resolution” and “Challenge” based on the creative concept of “Be Your Best”, as well as a co-branded AC233 portable hard drive — “Confidence”, using full positive energy to awaken the courage deep within your heart to pursue dreams and surpass yourself to be the best you can be! 10. Apacer’s launches the latest AC633 USB 3.1 Gen 1 military-grade shockproof portable hard drive with a tough and strong gene inherited from the military-grade shockproof series. It has passed the U.S. military-grade drop test and is IP55 certified for dust-proof and waterproof functions. Combining with the protective rubber case and anti vibration internal suspension structure, AC633 can effectively reduce external forces, providing the most robust data protection. AC633 is available in three colors, “power red,” “speedy blue” and “energetic yellow”. Combined with the color “tough black”, it shows a vibrant and dazzling look. Be bold to enjoy the challenging adventure, and let AC633 protect your precious memories! 11. Apacer’s latest military-grade shockproof portable hard drive - AC731 USB 3.1 Gen 1 that combined business and elegant design in the appearance design and earned recognition from 2019 Taiwan Excellence Award among over one thousand products. AC731 has passed the U.S. MIL-STD-810G Method 516.6 Procedure IV for 1.2 meter drop test as well as the top-level IP68 rating for waterproof and dust-proof protection, plus internal suspension structure featuring anti-vibration function to confront the challenges of various harsh environments. The elegant design with its sophisticated black casing and exquisite champagne gold panel like an gentle and staid gentleman turns AC731 into the perfect

Year	R&D outcomes
	aristocratic portable hard drive for today's trendy professional with absolute reliability! 12. The new high-speed memory cards microSDXC UHS-I U3 V30 and the microSDHC UHS-I U1 V10 launched by Apacer are equipped with multiple protections and high durability to ensure uninterrupted video recording in the harsh environments! Offered in a maximum capacity of 256GB, the microSDXC UHS-I U3 V30 memory card complies with SD Association's latest UHS Video Speed Class 30 (V30) standard, meaning it can record at a minimum speed of 30MB per second to support 4K Ultra HD, 3D video recording and high-speed continuous shooting. Available in 16GB and 32GB, the microSDHC UHS-I U1 V10 memory card supports Full HD recording demand and is perfect for devices requiring prolonged recording, such as dash cams and sports cameras. Users can enjoy the fun of recording videos with high resolution without worrying about the capacity limits. 13. Apacer's gaming PC memory module series glaringly launched the PANTHER RAGE DDR4 RGB and awarded the 2019 Taiwan Excellence Awards. The splashy RGB with seven gradient colors and infinite changes makes an stunning impression among the crowds. Inheriting the quality tradition of the eSports series, PANTHER RAGE DDR4 RGB has improved the performance of the computing clock rate by 200% in comparison to the previous generation by implementing the newly developed hardware architecture to enhance the RGB LED controller. It also supports the latest ASUS Aura Sync lighting control software to allow for users to select various spectrum patterns based on their preference. Equipped with the glossy gold materials and special transparent lights, PANTHER RAGE DDR4 RGB outshines its own unique style. With high clock rate and low latency, PANTHER RAGE DDR4 RGB is capable of strong performance and steady overclocking function. On top of that, it is compatible with ASUS's latest motherboard installed with Intel® and AMD platforms to assist gamers to excel in speed and announce their victory in the dazzling aurora! 14. Apacer's AS2880P4 M.2 PCIe Gen3 x4 SSD was honored with 2019 Taiwan Excellence Awards. With such upgraded performance and unchanged prices, gamers can now simpleyenjoy the ultimate reading/writing rate of 3,200/2,000MB per second with 360,000 IOS! AS2880P4 complies with the NVMe1.3 standard and uses the latest 3D NAND TLC technology to efficiently increase the device capacity and compress the volume in the extreme to provide more space for refit and expansion. With a maximum capacity of 480 GB, it perfectly satisfies the strict demands for speed and capacity of the hard-core eSport players and photo post-production and professional CAD 3D modeling designers! 15. The brand new Apacer AS730 dual-interface SSD was honored with Taiwan Excellence Award. AS730 supports 128bits AES encryption technique and applied Bluetooth V4.0LE system.You do not have to remember a password or patterns to unlock and you can perform encryption or decryption via your mobile device. The double information security protection builds the strongest and the most convenient protection for confidential information. Through the external and built-in double security protection, business professionals can enjoy the most powerful security protection for their mobile offices. 16. Regarding the Core Life intelligent variable-frequency technology with high resistance, Apacer focuses on the application demand of special industrial CoreLife SSD to launch exclusive production line via the brand new optimized SLC-litefirmware technology. Its P/E Cycle increases up to 8 times compared to MLC die and 1.5 times compared to SLC-lite and therefore greatly increase the product tolerance and extend the product durability. Meanwhile, the superior continuity of the random write

Year	R&D outcomes
	performance is the perfect application for the storage and access demand of mass random small data and high durability. Therefore, awarded with the 2019 Taiwan Excellence Awards, Core Life offers the best resolution for the gaming industry, transportation industry and IoT application. 17. Apacer's SSDWidget2.0 intelligent remote monitoring and management software received the approval of 2019 Taiwan Excellence Awards. introduces the brand-new intuitive design in the user interface and the visual design of the index page dashboard to specify important SSD information, such as the working status, the health conditions, SSD product information, the workload description etc…The users do not have to shuttle between pages to find important information. Its functions also includes the real-time monitoring of SSD P/E Cycle, numbers of unexpected power interruption and the written data amount used by the system to prevent downtime without warning. It also can detect and trace abnormal causes for timely management. Equipped with remote and cross-platform monitoring functions, SSDWidget2.0 is the best maintenance and monitoring tool for ICT managemers to significantly lower administration cost. 18. When sudden voltage instability occurs, Apacer's proprietary CoreVolt technology with special hardware circuit design can prevent SSD's operating voltage from being effected by input power changes, and further enhance data protection. 19. Apacer holds Taiwanese, /Chinese, and / United States patents on the depolarization technology for spectroradiometer. This technology can solve the error of the spectral luminance in the market to prevent the measurement data error due to different measuring directions and obtain the correct statistical data without certain polarization. The light and hand-held design of the spectroradiometer also can significantly reduces the space limitation. This AL210 spectroradiometer with its patent technology helps Apacer to won the 2019 Taiwan Excellence Awards. 20. Apacer's IIoT SRP system integration kit provides the vertical system integrators solution for comprehensive software integration and fast networking that meets the cost benefit. This resolution can largely shorten the building time of IoT systems and save the cost for manual development. By offering a simple development platform with automatic control and a visualized dashboard on the cloud for real-time monitoring, we satisfies the IoT demand in different fields. 21. Adopting intelligent disaster prevention as the development core, the IoT intelligent integration technology for environmental control designed by Apacer can timely detect abnormal situations in the environment including access control, home security, power monitoring and smart health care. The environment sensors can be flexibly deployed according to the properties of their environment. Apacer also creates a exclusive image integration monitoring system to display the scene timely when accidents happen and actively report to the police and the fire department. 22. Apacer's eSports brand ZADAK introduces the first SHIELD DC RGB DDR4 with double capacity equipped with personalized AURA2 RGB lights, the players can adjust and control the RGB lighting system by their own to create their exclusive lighting platforms! SHIELD DC DDR4 has cooperated with the ROG motherboard research team of ASUS to develop new technology to support ASUS's Z390 series motherboard such as ROG MAXIMUS XI APEX, MAXIMUS XI GENE and ROG STRIX Z390-I Gaming. Thanks to this new technology, RAM capacity is not only doubled to 32GB but its frequency is also stably increased to 3600MHz. This is the first high-end memory module widely appreciated in the PC field, making us stand out amoung our competitors.

Year	R&D outcomes
	23. Apacer's eSports brand ZADAK launches the MOAB AURA2 DDR4. It is the first memory module that received the identification of the new ASUS Aura Sync plan in 2018. The memory module not only can rapidly respond to the command of Aura Sync but also create exclusive RGB effects and a great user experience via the integration of strong computing capability. 24. Apacer's eSports brand ZADAK releases the MOAB M.2 RGB HEAT SPREADER module to provide surprisingly cooling effect via an unprecedented integration of two technlogies. By specially designed buckle component, it is perfectly compatible with most of the M.2 SSDs in the market. Also by introducing the newest 5V addressing RGB technology, it offers marvelous RGB lighting synchronization. 25. The high-end customized water cooled PC MOABII of Apacer's eSports brand ZADAK creates a overall user experience with aesthetic appearance and practical performance for PC and eSports players who want to break through all existing frameworks and sport their personal styles. Different from the popular complete computer products in the current market, ZADAK insisted on original innovation to challenge the fixed housing style of the hosts, break through the traditional split water-cooled structure and build the entire water distribution plate with aluminum via CNC technique. By introducing capacitive touch switches, water-cooled temperature indicator and controllable RGB, we display the summum of modification technology and our extraordinary quality. 26. Over the years Apacer's eSports brand ZADAK has listened to what our customers want while taking the opportunity to push innovative ideas even further by presenting the thinnest SHIELD II customized water-cooled PC in history. The patented water distribution plate is made of magnesium-aluminum alloy and CNC processing, making the overall structure as a large heat sink to present outstanding cooling performance with a 360mm heat sink. The customized RGB light controls, capacitive touch switches and real-time water temperature display reveal the ultimate creativity of the ZADAK series. The portable top handle can be mounted on a desktop and also on the wall for the consumer to display the artistical SHIELD II water-cooled PC. 27. Aiming at the industrial application in more harsh environments, we develops rugged memory module XR-DIMM. The shockproof ability of the memory module is improved by using special connector method and screw locking. 28. As for memory modules with high capacity, we have patented technology to develop exclusive module design with double memory capacity in single board and have introduced it to the usage of multiple manufacturer's motherboards and computer users.

(IV) Long-term and short-term business development plans

1. Short-term business development plan

In 2018, Apacer participated in the Branding Taiwan project of the Industrial Development Bureau to review the core values of our brand by changing it from "reliability and innovation" to a more concrete and achievable "keeping our word, insisting on the best, and advancing with our partners." In the future, we will promote this principle among our employees and external partners and march toward the goal of expanding our international brand value. In addition, the Company will continue to use "integration of digital storage, innovative application and value-added services to become the most reliable business partner" as our mission to provide products and services that exceed customer expectations. We also actively develop the application of digital storage in combination with cloud and IoT products and application services to boost growth and profits for the existing memory modules and industrial SSDs. These are our short-term objectives for business development. The following is a brief description of our strategic plans:

(1) Deep cultivation in industrial control field and reinforce R&D momentum

Regarding the products in the industrial control field, in addition to the insistence on the quality advantage and the customized services, we also continue to develop value-added services. The SSD intelligent remote monitoring and management software that received the approval of 2019 Taiwan Excellence Awards is the best example since it cancomprehensively monitor SSD lifespan and analyze the workload and reflect product problems in advance so that the customer can respond accordingly. In the short-term period, we adjust the development momentum to meet the market demand and aim at seven application fields to meet the customer needs: national defense, network communication, transportation, automated factories, medical care, gaming and IoT.

(2) Expand our footprint in eSports and develop mobile peripheral applications

We will continue to release DDR4 series products and SSDs and apply RGB LED lighting control technology to satisfy the strict requirement for performance and personal style of the professional eSports players. To get closer to gamers and lovers of overclocking, we design high-end overall unit brands for our excellent and stylish eSport products and introduce the whole series of products to players, with the Greater China region and Southeast Asia as the target market. We aim to satisfy their high-level demands regarding speed, display and cooling. As for the consumer products, besides continue developing applications for emerging markets, we evelop mobile storage products with the latest information security and protection technologies to meet consumers' strong demands for information security. The aim is to enable consumers to enjoy a smart life with greater convenience, higher speed, and better security.

(3) Expand business in the application field of optical testing and intelligent IoT

Focusing on the application demand for the cloud/IoT and the Industry 4.0 smart factory, we continue to promote SRP (Solution Ready Package) for industrial IoT developer kit to provide highly integrated smart cloud storage and application service solutions. In the meantime, we apply the intelligent IoT concept to aspects of intelligent agriculture, smart healthcare and intelligence building to create actual benefits. Moreover, we continue to optimize our sensor module performance and industrial applications on the basis of current optical products and inspection technology. We also strengthen the technical side via industry & academia research alliances and create a long-term partnership with firm system integrators.

2. Long-term business development plan

Due to widespread use of smart end devices and the booming of cloud and IoT application around the world, we rely on the solid advantages of our R&D core technologies accumulated through our core business of storage to develop potential fields of application, including storage, reception, analysis, control and sharing of information. We draw up plans for future development and keep working toward our business vision of "becoming the top manufacturer in the integration of IT-enabled information services with digital storage as the core technology".

(1) Strengthen global strategy

Applying the brand-new core value of “keeping our words, insisting on the best, and advancing with our partners,” we provide a innovative intelligent top-up service and positively deploy the global market network and develop applications for emerging markets to march toward the goal of becoming a global leading brand of digital storage.

(2) Develop technologies for cyber-physical and software-hardware integration

We actively attract and cultivate R&D talents in the fields of trending industries to enhance our R&D capabilities regarding cyber-physical and software, hardware and firmware integration.

(3) Global marketing strategy

By planning a comprehensive global brand strategy to expand our horizon, we continue to establish and cultivate the global channel system, promote our products, brands and services. We also actively expose our brand image and accumulate brand value by participating in overseas exhibitions held by the government.

(4) Establish talent supply chain systems

We pursue comprehensive implementation of a talent supply chain system with position and competency as the core concerns. In line with our organizational strategies and objectives, we connect all stages of talent management and introduce various assessment and testing tools. In this case, we can conduct talent positioning with precision and build our talent database accordingly to reserve high-potential talents for our medium-term and long-term objectives.

The policies described above are designed to achieve stable revenue growth and profits.

II. Market and production and sales status

(I) Market analysis

1. Sales region for major products

Unit: TWD 1,000

Region \ Year		2017 Sales amount	2017 %	2018 Sales amount	2018 %
Domestic sales		2,294,510	22.85%	1,622,775	17.19%
International sales	America	2,603,040	25.92%	2,796,273	29.62%
	Europe	1,191,645	11.86%	1,283,171	13.59%
	Asia	3,783,512	37.67%	3,582,819	37.95%
	Other	170,769	1.70%	156,580	1.65%
	Subtotal	7,748,966	77.15%	7,818,843	82.81%
Total		10,043,476	100.00%	9,441,618	100.00%

2. Market share

The company engages in the production and sales of memory modules and flash memory products. There are many companies engaging in these products. Due to the fact that the production scales of these companies are different, there are no professional and comprehensive industry ranking statistics. Apart from us, domestic companies engaging in the production and sales of DRAM products with a certain scale include ADATA, Transcend, Panram, Unifosa, Silicon Power, and Innodisk. The revenues and market shares of our company and aforementioned companies are listed in the following table. The ratio of operating revenues of the company to the operating revenues of aforementioned companies in 2018 is 12.90%

Unit: TWD 1,000

Name of Company	Net Operating Revenues	Market Share
Apacer	9,441,618	12.90%
ADATA	31,457,377	42.99%
Transcend	17,615,965	24.08%
Panram	1,705,165	2.33%
Unifosa	585,740	0.80%
Silicon Power	4,496,163	6.14%
Innodisk	7,866,250	10.76%
Total	73,168,278	100.00%

Source: 2018 consolidated or individual financial reports of all companies that have been certified by public accountants

3. Market supply and demand status and growth in the future

(1) Market supply and demand status and growth of DRAM in the future

A. Supply and demand status:

The difficulties in transitioning to new DRAM production processes, the prospering demand for server DRAMs and the expanding capacity of the Mobile DRAM devices were the niche factors that efficiently supported the DRAM market in 2018.

In the past two years, server DRAMs applied to data centers has grown rapidly, with shipment volumes growing over 10% during Q2 and Q3 in 2018. However, due to the impact of the Sino-American trade war, data center manufacturers hurried to increase their inventory levels before the United States increased its tariffs, resulting in stock adjustments in Q4, 2018. The overall shipment volume of Mobile DRAM gradually declined due to an almost saturated market of the mobile phone.

To cope with the downward adjustment of total demand, DRAM manufacturers began to reduce the investment scale of their capital expenditure in 2019. Samsung was the first to announce to slow down its 2019 investment plan, followed by Micron and Nanya. The DRAM suppliers in China are subject to the United States patents, and therefore the mass production of the plants in China would be extended to 2020 at the earliest. The market research institution (Trendforce) forecasts that the YoY growth rate for global DRAM supply in 2019 will be 19.9%.

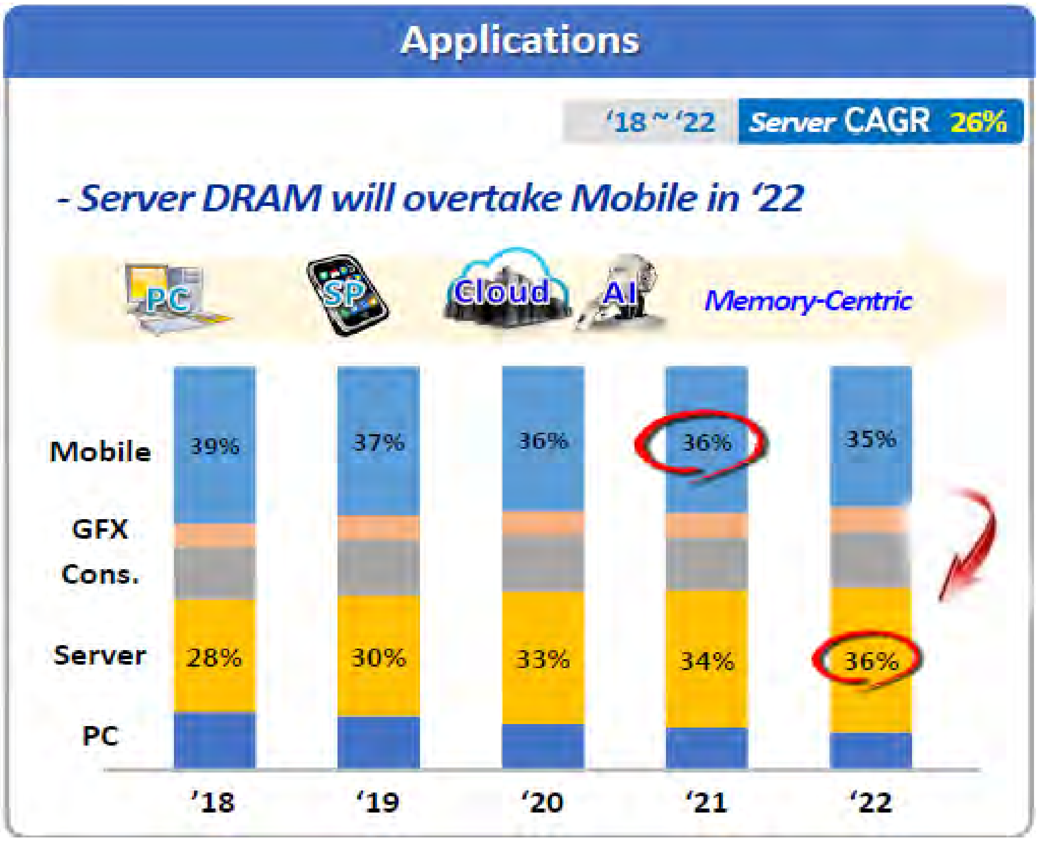
From a market demand perspective, though the server demand momentum showed short-term interference and the Mobile DRAM suffered from the market saturation, the rise of IoT, 5G business opportunity, mobile game, AR/VR, 4K image and smart city will drive demand for data centers to increase constantly along with the promotion of the average capacity of the installed mobile DRAM. Market research company Trendforce forecasts that the YoY growth rate for global DRAM demand in 2019 will be 17.0%.

B. Growth potential of DRAM in the future

Market research company Trendforce indicates that servers are the crucial driving force of the DRAM market in the coming years, epically for the large number of data centers. Driven by Google, Amazon, Microsoft, Facebook and China’s three Internet giants Tencent, Baidu and Alibaba the annual growth rate of server DRAMs may be expected to reach 3.7% in 2019. 5G will become the key technology that drives the demand in the memory market, including the growing server demand before the completion of 5G and its infrastructure and more new demands resulting from the implementation of 5G, such as edge computing and IoT/IoV. According to the shipment volume, 5G, data centers and edge computing will become the main driving force of the increasing Server DRAM demand. Beginning from 2022, Server DRAM may exceed the present mainstream Mobile DRAM application (See Fig. 1).

Sales in the smart phone market began to decline in Q4, 2018. However, manufacturers increased functions of multi-lens and AI to create differentiation and all of these functions rely on the upgrading of DRAM specifications. Therefore, the carrying capacity of the Android series flagship smart phones will increase to 10-12GB in 2019 and the official market entry of 5G smart phones in 2020 may further stimulate the growth momentum of mobile DRAM.

From an output perspective, the server growth rate will remain positive in comparison to PCs, notebooks, tablets, smartphones that turns negative in 2019 (See Fig. 2). From the perspective of carrying memory capacity, the total growth of the capacity for Desktop PCs and Notebook PCs in 2019 will be 8.2%. However, smart phones and servers may have a growth rate of 15.9% and 24.9% respectively (See Fig. 3). This is the reason why DRAM manufacturers still plan to use more than 70% of production capacity to produce mobile and server DRAM (See Fig. 4).



Source: Data from third party, November 2018

(Fig.1 2018-2022 DRAM terminal applications distribution graph)

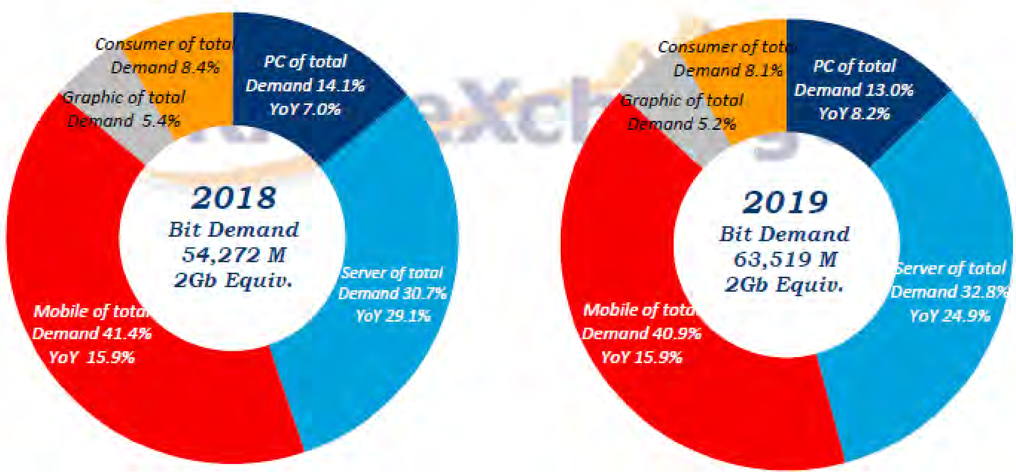
Item	2018 Shipment (unit: M)	2018 YoY	2019 Shipment (unit: M)	2019 YoY
PC	263.1	-2.7%	252.6	-4.0%
Notebook (by ODM)	164.0	-0.4%	163.2	-0.5%
Tablet PC	145.5	-4.3%	135.0	-7.3%
Server	12.4	5.1%	12.9	3.5%
Smartphone (Production Volume)	1,456.8	0.0%	1,403.6	-3.7%

Source: DRAMeXchange, February 2019

(Fig.1 Estimated shipping volume growth of DRAM end product analysis based on the application)

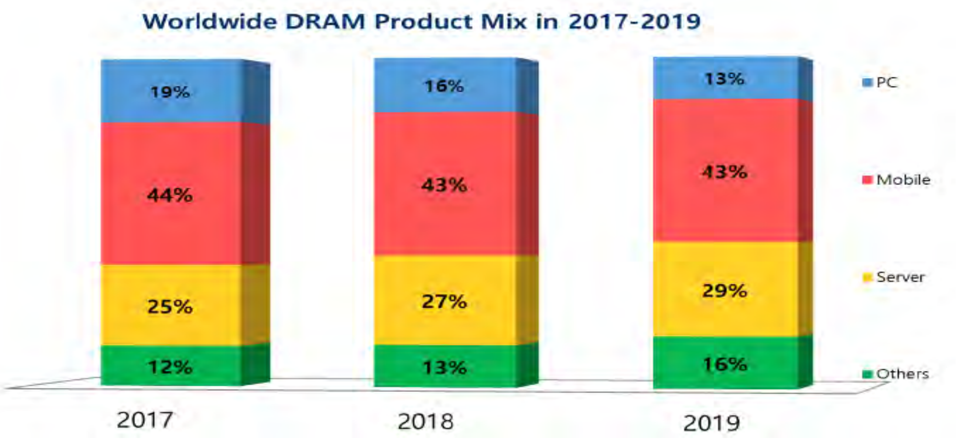
Demand YoY Bit Growth of Different Applications

Avg. Content Per Box	2018 YoY	2019 YoY
Smartphone	14.5%	19.5%
Server	39.1%	27.2%



Source: DRAMeXchange, February 2019

(Fig. 3 Estimated DRAM carrying capacity growth analysis based on the application)



Source: inSpectrum, February 2019

(Figure 4: WW DRAM production capacity comparison figure of 2017-2019)

(2) Market supply and demand status and growth of NAND flash in the future

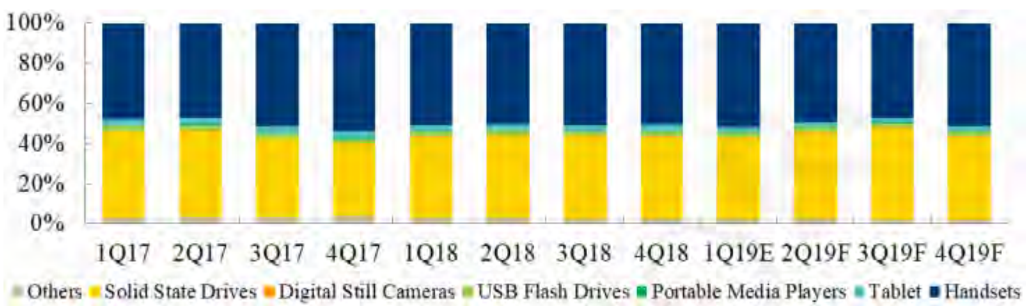
A. Supply and demand status:

According to the investigation of the market research institution, the growth rate of the NAND flash output and demand is 37.3% and 35.1% respectively, and the yield rate of their 3D production process is expected to increase. Therefore, the overall market supply will exceed the demand. The major manufacturers begin to lower the capital investment plans in 2019. Nevertheless, the carrying capacity demand will increase due to the restricted output and the market price reduction. The average carrying memory capacity of terminal devices and the demand for SSD will also increase dramatically. The consumption ratio of smart phones, tablets and SSD will surpass 80%.

B. The growth potential for NAND FLASH application in the future

When looking at the terminal applications of NAND flash in 2019, the demand ratio of smart phones, tablets and SSD will surpass 80% by the end of 2019.

The growth of SSD in 2019 remains a highly expected application (see Fig. 5). It is estimated that the SSD carrying ratio for notebook PC in 2019 will surpass 60%, which is mainly caused by the fact that the increase of yield of 3D production process lower the costs of SSD that is beneficial for the increase of SSD penetration rates and carrying capacity. In addition, concerning the massive storage demand from data centers, NAND flash firms also strive to develop new technology and new production processes for NAND flash memory in order to increase the storage capacity per unit. As we approach an era where the density of a single chip may reach tera-byte (TB) level, all manufacturers will strive for the development of 3D NAND flash memory.



Source: DRAMeXchange, February 2019

(Fig. 5 2013-2018 NAND FLASH demand analysis based on application)

As the volume of functional call phone continues to decrease and the market for smart phone becomes gradually saturated, the global smart phone output volume in 2019 is expected to be around 1,441 million. The shipment no longer have growth trend. Chinese cell phone manufacturers are seeking sales and cooperation opportunities in emerging markets, such as India and Southeast Asia, and are also actively entering the European market. Demands like face ID, video streaming, photographing and mobile games with the reduction of the average sales price will increase the average carrying capacity of NAND flash in order to provide more convenient functions, such as more fluent video processing, to cell phone users. In the absence of finalized 5G protocols, the protracted Sino-American trade war and the relatively high production cost of 5G phones, only a few countries have selected certain regions for small- scale 5G technology testing. However, after the commercial operation of 5G in 2021, it is expected to bring a wave of cellular phone replacements due to the increased transmission performance.

On the other hand, as wearable devices become common around the world, applications for wearable devices are expected to occupy a quite large market share. According to the analysis by MIC, the output value of IoT will grow rapidly. IoT devices worldwide will reach 25 billion by 2020 with the value of USD 7.1 trillion. The business opportunities of this market are astonishing. The fact that the IoT becomes common and the consumer market adopts more and more smart watches and activity trackers bring a huge opportunity for IoT manufacturers. In the application area, related equipment, such as consumer electronics, energy management and construction industry, accounts for higher output ratios. Apart from aiming at developing products that meet customer demands, all corporations draw plans with greater vision for the IoT application business opportunities. This imperceptibly increases the development of NAND flash application.

Against the backdrop of trends like 4K video, VR, AR, and booming IoT intelligent monitoring applications, the demand for NAND flash in consumer electronics, corporation, industry, and automobile markets is increasing dramatically, which brings an excellent growth opportunitie for suppliers of control chips and SSD modules.

4. Competition niches

(1) Profound digital storage core technology

We have leveraged storage core technology to develop related embedded flash (e-flash) products, adjusted our product portfolio, and gradually increased the sales ratio of flash memory products in recent years. In addition, we actively expand our product range to include more diverse digital storage areas and develop digital products and peripheral products combining cloud, IoT, and intelligent application services. Also, by integrating optical inspection applications and providing a rich product portfolio, we increase our market competitiveness and pursue market growth and stable profits in these new fields.

(2) Globalized marketing network

We have been marketing our self-owned brand to the world and have had a global channel network for many years. We have subsidiaries in the United States, the Netherlands, China, Japan and India to develop the local market and satisfy customers' timely service demands. In addition, we keep participating in international exhibitions such as COMPUTEX, Embedded World, G2E and Hong Kong International Lighting Fair (Autumn Edition) to develop overseas channels and create overseas brand exposure. In response to a need for product information, we travel around the world to hold product forums and distributor conferences. We also recruit multilingual talents to reinforce the communication with the local markets.

(3) Benefit promotion of the customized service

We put great emphasis on the customization demand since this is very important for the memory module industry. When receiving a customer's demands, besides listening and communication, clarifying pain points, specifications, and definitions, and developing customized products, we offer technical support to enable the customer to enjoy a comprehensive procurement and sales service.

(4) Stable supply sources

Since prices in the memory industry are prone to fluctuation due to the market developments, stable raw material supply sources are essential to provide products with competitive advantages to our customers. Therefore, we actively maintain our long-standing and excellent relationships with domestic and foreign suppliers to ensure stable raw material suppliers for DRAM and flash chips and maintain the basis of profits for our customers and the Company.

(5) Quality control following international standards

We have strict requirements on quality. Apart from passing the international quality management system of ISO 9001, ISO 14001, OHSAS 18001 and IECQ QC 080000 quality certifications, we enhance our process management and replace equipment to meet the requirements of RoHS and other EU directives related to the environment. Our ultimate goal is zero-defect quality.

(6) Complete customer service

We have a comprehensive customer service system in place. To correspond to the complexity of present multi-platform and applications and the frequent occurrence of compatibility problems, besides the current RMA department, we specially design the service platform to provide highly efficient and in-time technical service for the customer without regional restrictions.

(7) Innovative value-added services

In addition to tangible products, we also actively research and develop innovative value-added services. Targeting industrial control customers, we continue to release products such as SSD Widget APP real-time monitoring software, CoreVolt voltage stability software and CoreAnalyzer2 analytic enterprise behavior software to assist the customer to solve the product usage problems. As for the consumer, we have the FileBridge OTG file management app to fasten the sharing of the file data. By using the “integration of software and hardware,” we provide customers with more convenient and comprehensive value-added services.

5. Favorable and unfavorable factors of development and countermeasures

(1) Favorable factors

A. Product quality recognized by customers

Since the establishment in 1997, we understand that the product quality is the basis of sales, so we continue the investment in obtaining international standard certifications. We passed the ISO 9001 and ISO 14001 quality certifications in 2003 and 2005 respectively, and we continually introduce new automatic production equipment and high-performance inspection equipment. In the production process, we also strictly implement gateway inspections to effectively control the production quality and yield. Therefore, our products have earned a high reputation in the industry and ensure the competitiveness in the international markets.

B. Innovative R&D ability

The product research and development evolves as time changes. We follow the operational strategy to actively recruit talents, establish product development plans and apply for patents. We allocate a sum of money as the R&D cost and design products with specifications based on technology development blueprints that satisfy the terminal demands of customers in hardware, firmware, software, or testing in order to create a win-win market.

C. Alternation of generations for products that creates business opportunities

As the market development of the NAND Flash 3D process becomes more stable and the oversupply status resulting in the price reduction in the second half of 2018, SSD application will no longer be subject to the cost and can be widely applied to the consumer market. Owing to the fact that the average unit costs of SSD will continue to decrease, the quality of MLC delivery becomes more steady and the news about the delivery of more QLC products with high specifications, the market expects that the demand for SSD will increase dramatically and the market opportunity is worth expecting.

D. Sezing trends to plan the future

Looking at the technology trend, the market demand is mostly based on the extension of the mobile, artificial intelligent, cloud storage, IoT and big data. the Company uses digital storage as the core to plan its production lines in an anticipatory manner and expand its integrated technology-based services for the reception, analysis, sharing, and monitoring of information to develop potential markets.

E. Globalized marketing strategy and channels

Ever since its foundation, our Company ahs been marketing its self-owned brand "Apacer" products around the world. Rooted in our Taiwanese home market, we have established overseas subsidiaries at important posts. This not only helps the Company to understand the demands of those local markets, but also helps provide services to customers in those areas to reduce the cost of customer service over long distances.

F. Long-term and stable partnerships

Owing to the nature of the industry, the price fluctuations of major raw materials is susceptible to the external environment. Our major suppliers for DRAM chips are from major DRAM suppliers around the world. We have diversified our procurement sources for flash memory chips in order to prevent massive inventory loss due to market fluctuations. Our company and its supply chain have collaborated for quite some time based on mutual trust and have developed excellent relationships, which means that we enjoy stable supply sources and prices.

Owing to our strategic alliance with Phison Electronics through private placement, the competitiveness advantages and resources from both parties have become integrated. While making our product lines more complete, we also expanded our operation scale and offers our customers more diverse customized solutions. Currently, we focus on further development in customized industrial control SSD storage devices, continue to expand our differentiation advantages, and drive the integration of our companies in order to take on the global competition and ever-changing industrial environment, jointly expand the cross-border niche markets, increase competitiveness of both parties in the global market, and create synergy along our overall industrial chain.

(2) Unfavorable factors and countermeasures

A. Volatile price fluctuations of main raw materials affecting the stability of profits

Regarding the product cost, the key raw materials DRAM and flash chips that account for high product cost ratio and has rapid price fluctuations, are a important factor affecting profits. Therefore, we plan the following countermeasures:

a. Continuously collect supply and demand market information of the raw materials, enhance our sensitivity and assessment of pricing trends in the marketplace, and improive our capabilities to respond to the risks of price decreases and fluctuations.

b. By analyzing the data from the global marketing posts and enhancing our inventory management and estimated sales, we increase the production and shipping speed in order to lower our price fluctuation risks.

B. The short life cycle of products causing the intense price competition

Due to the shortening product life cycles , manufacturers accelerate their development and production cycles in response to market demand, which also cuases intense price competition. In this context it is not easyto control inventories manage product development to respond timely enough to changes in the market which has led to excess inventory or changes in the raw material prices. Therefore, we plan the following countermeasures:

We intensively monitor market trends and demand via our overseas marketing channels and use this feedback as input to the R&D team for their research and development and product design. We also provides products with high value-added, gross profit and quality to assist us stabilize our international market. Meanwhile, we improve production management efficiency, quality control and inventory level management in the factories and lower production costs to maintain the internationally competitive standard of our brand and product quality.

C. Exchange rate fluctuation risks

Owing to the high export dependence of our Company, exchange rate fluctuations have a certain impact on our profits . Therefore, we plan the following countermeasures:

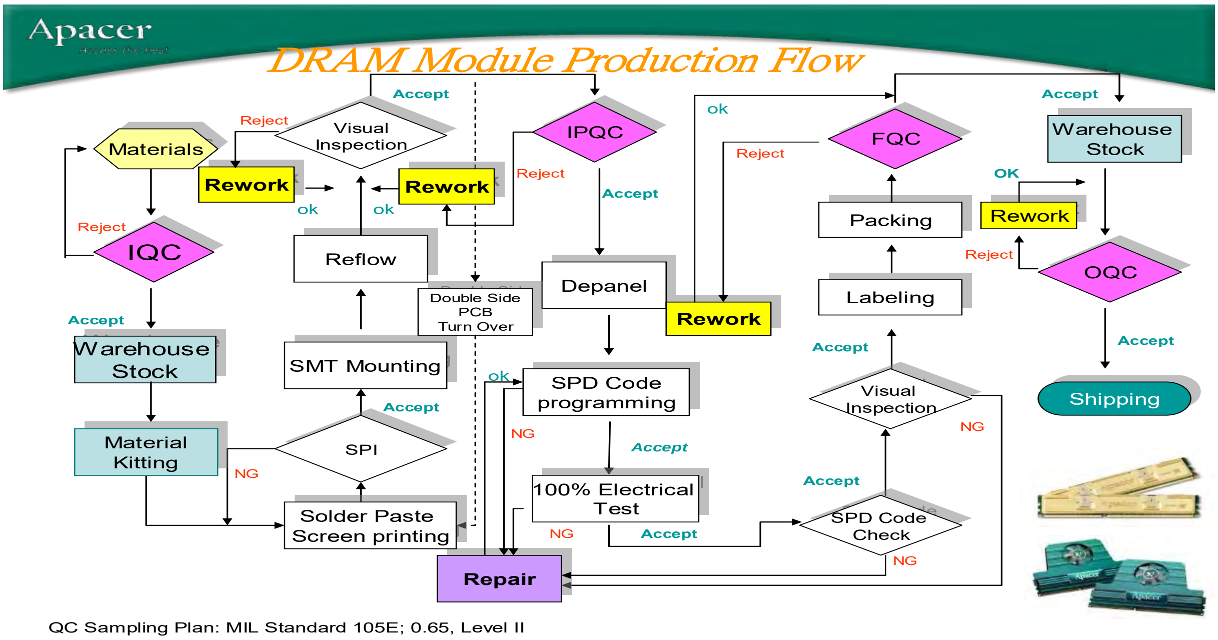
Our company keeps close and stable relationship with banks to effectively grasp the status of exchange rate fluctuations in time. We also assign personnel to collect exchange rate fluctuation information and prepare research report in order to control the timeliness of exchange rate fluctuation and adjust our foreign currency asset and liability positions. We also use financial instruments to effectively respond to impacts caused by exchange rate fluctuations.

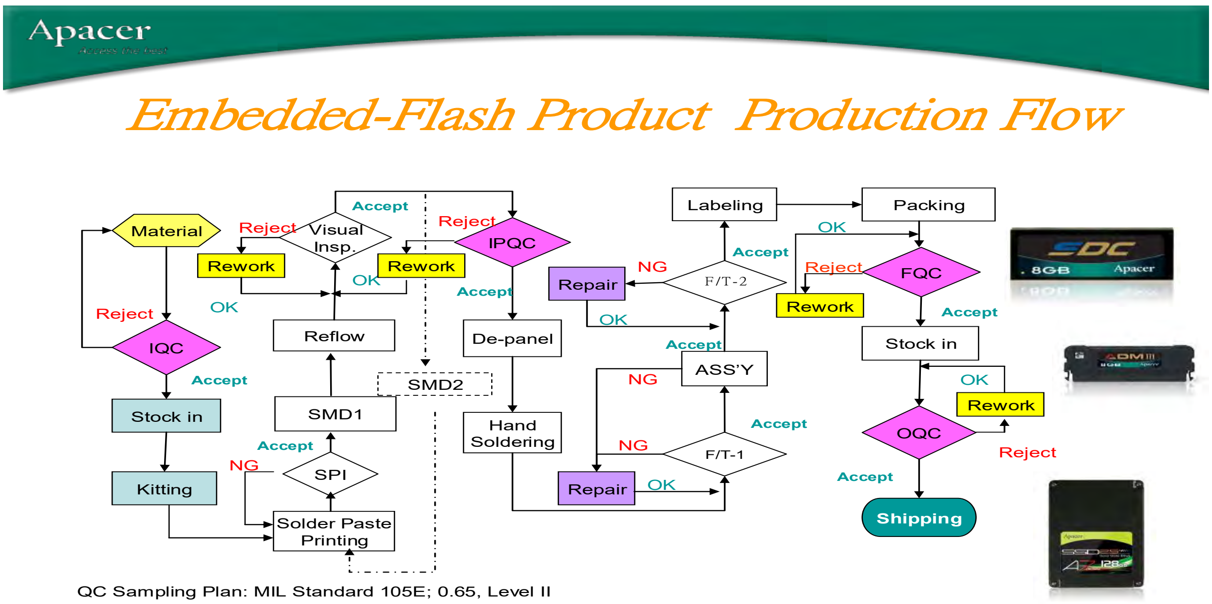
(II) Important uses and production processes of our main products

1. Important uses of the main products

Main products	Main uses
Memory module	Memory modules are various types of DRAMs printed on a circuit board via a circuit design, which are embedded in computer main boards and which are compatible with the computer functions, to expand the data processing capacity of the computer and accelerate data processing. They are mainly used in personal computer systems and consumer electronics, for example: personal computers, notebook computers, laser printers, servers, and workstations.
Flash memory	(1) Applied as information storage in portable digital products. flash memory is a non-volatile semiconductor technology, which can be used for permanent and modifiable data storage. Thanks to its small size, large capacity, easy portability, and high reliability, it is used in SSDs, mobile phones and tablets. (2) Applied in embedded systems to replace traditional hard disks in industrial applications such as Thin Clients, medical devices, POS machines, surveillance systems, or military equipment. Consumer applications such as set-top boxes, game consoles, satellite navigation systems, etc.

2. Production processes





(III) Main raw material supply

Product name	Main raw material	Major suppliers	Supply situation
Memory modules, flash memory and related products	DRAM, Flash	Samsung, Phison Electronics Corp.,World Peace International Group, among others	Normal

(IV) List of major suppliers and customers

1. List of suppliers accounting for more than 10% of total procurement in either of the last two years:

Unit: TWD 1,000

2017				2018				2019 , until March 31			
Title	Amount	Annual net procurement ratio (%)	Relationship with the issuer	Title	Amount	Annual net procurement ratio (%)	Relationship with the issuer	Title	Amount	Annual net procurement ratio (%)	Relationship with the issuer
A	2,550,763	28.33	None	A	1,973,390	25.97	None	A	323,083	22.84	None
B	1,152,646	12.80	None	C	1,203,171	15.84	None	B	235,805	16.67	None
C	973,657	10.82	None	B	1,131,254	14.89	None	C	231,133	16.34	None
Other	4,325,960	48.05		Other	3,290,159	43.30		Other	624,681	44.15	
Net procurement amount	**9,003,026**	**100.00**		**Net procurement amount**	**7,597,974**	**100.00**		**Net procurement amount**	**1,414,702**	**100.00**	

2. List of customers accounting for more than 10% of total procurement in either of the last two years: None.

(V) Production value over the last two years

Units: 1,000 pieces; TWD 1,000

Year / Productionvalue / Major products	2017			2018		
	Production capacity	Production volume	Production value	Production capacity	Production volume	Production value
Memory module	(Note 1)	2,808	2,755,391	(Note 3)	3,546	3,145,312
Flash memory	(Note 2)	11,276	2,520,779	(Note 4)	10,637	2,595,328
Total	**5,336**	**14,084**	**5,276,170**	**4,390**	**14,183**	**5,740,640**

Note 1: Nearly 26% of this production volume is outsourced.
Note 2: Nearly 74% of this production volume is outsourced.
Note 3: Nearly 42% of this production volume is outsourced.
Note 4: Nearly 73% of this production volume is outsourced.

(VI) Sales value over the last two years

Units: 1,000 pieces; TWD 1,000

Year / Salesvalue / Major products	2017				2018			
	Domestic sales		International sales		Domestic sales		International sales	
	Amount	Value	Amount	Value	Amount	Value	Amount	Value
Flash memory	9,295	907,562	11,590	4,400,844	7,941	624,628	10,582	4,168,751
Memory module	8,668	1,386,501	2,994	3,348,054	5,787	995,677	2,740	3,649,003
Other	293	447	32	68	5	2,470	1	1,089
Total	**18,256**	**2,294,510**	**14,616**	**7,748,966**	**13,733**	**1,622,775**	**13,323**	**7,818,843**

III. Personnel information over the last two years

(I) Talent cultivation and career development

In response to the rapidly changing environment in and around our industry, our company provides education and training to its staff to develop the competencies needed to achieve our organizational goals and business strategies, to enhance their professional capabilities, and to boost their knowledge and energy, in order to respond to the challenges in our work. We deploy a range of hard skills and soft skills training for various positions and roles of our staff members in alignmment with the organization's goals and strategies. Besides inviting external instructors and outstanding internal managers to teach, discuss, hold experience camps and share their experiences, we also regularly upgrade and assess the skill sets of our technicians. In addition, our staff is also encouraged to participate in public training courses organized by external professional organizations as another enriching avenue for continuous learning. In 2018, the total number of training hours for direct and indirect personnel was 12,741 hours.

(II) Number of employees, average years with our company, average age, and degree distribution ratio

Year		2017	2018	2019, until March 31
Number of employees	Direct personnel	174	186	184
	Indirect personnel	373	403	397
	Total	547	589	581
Average age		37	87	37
Average years with our company		6	6	6
Degree distribution ratio	Doctoral degree	0%	0%	0%
	Master's degree	14%	17%	18%
	College	69%	67%	64%
	Senior high school	16%	15%	17%
	Below senior high school	1%	1%	1%

(III) Training structure and efficacy

The Department of Human Resources and Administrative Services arranges training for our staff aligned with their needs. Before any training, the department confirms the performance goals of the heads and the competence gap of the employees of each unit. After the training, a four-level evaluation is executed to continuously revised and adjusted the training. In line with the organization's goals and business strategy, the main framework for the annual training are as follows:

1. Hold industry trends seminars: Help the staff to understand the overall situation and business opportunities in the industry and the market.
2. Customized training courses: Give different training courses according to the needs of the training participants.
3. Training internal lecturers: Train and strengthen the skill sets of our internal lecturers, whose experience is close to the actual situation of their colleagues.
4. Continuing the talent supply chain: Select key staff members with potential to expand our talent pool and build successors.

To enable employees to improve their professional capabilities and in line with their ability to accomplish the organization’s strategic goals, the training courses will be divided based on the participants:

1. New staff training: This offers new employees knowledge about the Company's business direction, development vision, corporate culture and articles of incorporation and then they will further identify with the core values and management system of the Company.
2. General staff training: This focuses on general knowledge for every employee and is divided into hard and soft general training. Hard training includes courses required by regulations or certifications while soft training includes courses on physical and mental development or health management.
3. Supervisor training: The focus of middle-level supervisors is on the core value of continuous innovation, and the ability to carry out change management in response to the environment, predict and control risks of the industry and its context in the future, and understand financial figures and be able to apply them. Base-level supervisors must strengthen their self-awareness in their roles, improve the planning of work flows, carry out good execution, and have a basic understanding of financial figures.
4. Potential talent training: To reduce gaps in our workforce and to identify high-potentials, we ask senior members of our management team and external instructors to give lectures. We also give them projects to manage and help them improve their work flows to enable them to meet the potential talent requirements of the Company.

The 2018 education and training outcomes have been as follows:

Course type	Number of courses	Number of participants	Number of hours	Total cost (TWD)
New staff training	39	330	865	2,500,222
General training	151	2,520	8,906	
Supervisor training	3	96	560	
Talent Training	17	310	1,569	
External training	116	116	841	
Total	326	3,372	12,741	

(IV) Diversified learning and development

Every employee can enhance their professional capabilities through various channels, such as, in the Company: on-the-job training, job coaching, job transfer, seminars, online learning, reading clubs, etc. Outside the Company, they can participate in study activities of professional organizations, short-term training courses of well-known domestic and foreign universities and training institutes, etc.

(V) Corporate Social Responsibility Report

We continuously strive, through its mission, philosophy, beliefs, employees' value judgments and codes of conduct, to integrate internal and external resources of the Company and practices energy-saving, environmental-friendly and healthy living. We pursue sustainability and profitability, while also fulfilling our social responsibility.

(VI) Employee Code of Conduct and Code of Ethics

In its system of rules, we clearly set forth the rights and obligations of employer and employees in order to build a management system, improve organizational functions, and improve work efficiency. We have norms to regulate employees' professional conduct in the work place and deepen their ethics through internal announcements and training.

1. Implement hierarchical management

   We have adopted a "Decision making authority table", "Principles for managerial titles and grades at all levels of the organization" and "Grade/title system list", which set forth the rules and specifications of jobs across the Company in order to clarify the various levels, ensure smooth operations, and offer employees a career development blueprint.

2. Follow government regulations

   We strictly abide by all government laws and decrees as well as regulations formulated by the competent authorities. In addition to safeguarding employees' rights and interests, these also regulate employees' behavior and professional ethics.

3. Employees' Code of Conduct

   A. Avoidance of Conflict of Interest: According to the Company's "Integrity Code of Conduct" and "Integrity Management Procedures and Behavior Guidelines", employees are strictly required to avoid actual or potential interference from personal interests with the Company's overall interests.

B. In accordance with the norms of the "Internal Important Information Handling Operation Procedures", we regularly remind and require our employees to abide by these codes of conduct. The legal, audit, finance, information, and administrative departments also remind their staff from time to time of the key points of these behaviors, including norms relating to intellectual property rights protection and information security.

C. The "Work Rules" set forth clear norms for employees' conduct and codes, along with sanctions that may include termination of the employment relationship in serious cases such as:

(1) Where the employee misrepresents any fact at the time of signing of a labor contract and thus caused the Company to suffer damage or fear thereof.

(2) Where a worker commits a violent act against or grossly insults the Company's responsible person, his /her family member, a manager at any level, or a fellow employee.

(3) Where the employee has been sentenced to temporary imprisonment, and is not granted a suspended sentence or permitted to commute the sentence to payment of a fine.

(4) Where the employee deliberately damages or abuses any machinery, tool, raw materials, product, or other property of the Company, or deliberately discloses any technical or operational confidential information of the Company thereby causing serious damage to the Company.

(5) Where the employee is, without good cause, absent from work for three consecutive days, or for a total six days in any month.

(6) Where the employee engages in corruption or misappropriation of public funds, or accepts bribes or commissions.

(7) Where the employee runs other business outside the Company which affects the Company's interests and business conflicts in a serious way.

(8) Where the employee refuses to follow reasonable instructions and neglect their duties, resulting in damage to the Company; this must be specific and serious.

(9) Where the employee slanders the Company, instigates an illegal slow-down or illegal strikes, with specific evidence.

(10) Where the employee forges the signature of their supervisor or abuses their supervisor's stamp.

(11) Where the employee threatens the supervisor or destroys or alters a company file.

(12) Where the employee steals or gambles anywhere within the premises of the Company that affects the order of

work; with specific evidence after investigation.

(13) Where the employee violates a national statute and thus affects the performance of a labor contract, or breaches the labor contract in a serious way.

(14) Where the employee brings banned items such as guns, ammunition, or knives into the workplace without good reason.

4. Protecting and using company assets properly

Our employees are responsible for protecting the Company's assets and ensuring that they can be legally and effectively used. If they wish to use the services, equipment, facilities, items, or other resources of the Company for other than business, they must obtain permission beforehand. The use and management of our assets are controlled through a clear system.

5. Responsibility for confidentiality

We set great store with protecting confidentiality and intellectual property rights. Our employees are required to sign an "Employment/Confidentiality Agreement" and "Confidentiality Rules" at the time of joining the Company. Their content covers the confidentiality obligations of the Company, the ownership of intellectual property rights during employment and after resignation, and other related regulations. Secrets regarding business or technology must not be disclosed; one must not read documents, letters, emails, design drawings, etc. that are not related to one's job.

6. Gender equality and the prevention of sexual harassment

In accordance with the law, we have included norms on gender equality in its "Work Rules" and has formulated a "Regulation on the Reporting and Punishment of Sexual Harassment in the Workplace", which provide detailed behavioral standards and reporting channels and processes for employees to follow.

IV. Environmental protection expenditure

(I) During last year and this year to date, the total amount of losses (including compensation paid) and penalties. We also disclose future countermeasures (including improvement measures) and potential expenditures (including estimated amounts for potential losses, penalties, and compensations paid for future countermeasures; if difficult to estimate, describe the matters that are difficult to estimate): None.

(II) Greenhouse gas emissions and reductions

Apacer Technology took greenhouse gas inventories in 2013 and set 2012 as the base year for inspections going forward. In the same year, we were verified through an external third-party verification company and obtained a statement of reasonable assurance level. Apacer Technology annually checks its greenhouse gas emissions of the previous year. The boundary of the inventory is the direct and indirect greenhouse gas emissions of all our plant sites in Taiwan.

In 2018, our total greenhouse gas emissions were 2,063.957 metric tons of CO2-e/year. This was a increase of 187.225 metric tons of CO2-e/year when compared to 2017. This is because the Company's indirect greenhouse gas emissions accounted for more than 99% of the total emissions every year. We adopted the domestic greenhouse gas emission coefficient in 2018 and the coefficient increased from 0.530CO2-e/degree in 2016 to 0.554CO2-e/degree in 2017. If we use the original emission coefficient for calculation, then there is only a slight difference in the total emission between the two years. Our average greenhouse gas emissions from 2013 to 2018 were 1,810.218 metric tons CO2-e/year, which was 0.527% higher than the 2012 base year (1,800.715 metric tons CO2-e/year). The reasons are analyzed and concluded as follows:

1. In recent years, the electricity emission coefficient announced by the Bureau of Energy has increased every year (0. 530CO2-e/degree in 2016 till 0.554CO2-e/degree in 2017). This multiplication resulted in the increased emissions figures.
2. Increases in capacity utilization and turnover have led to increased emissions.

Year	2017	2018
Direct greenhouse gas emissions	8.505 metric tons CO2-e/year	8.752 metric tons CO2-e/year
Indirect greenhouse gas emissions	1,868.228 metric tons CO2-e/year	2,055.205 metric tons CO2-e/year
Total greenhouse gas emissions	1,876.732 metric tons CO2-e/year	2,063.957 metric tons CO2-e/year

(III) Energy conservation and carbon emission reduction awards

As we support green energy and environmental protection, Apacer Technology is always focused on strengthening energy efficiency within the Company and reducing unnecessary energy consumption. We also stimulate our employees to reduce energy use, carbon emissions, and greenhouse gas emissions. In 2014, Apacer was awarded the Energy Conservation and Carbon Reduction Action Mark by the Environmental Protection Agency. In 2015, we participated in the "Clean Energy Conservation and Carbon Reduction Production Plan" of the New Taipei City Government. Our new technologies, techniques, and resources help control the use of energy and resources, raise energy efficiency and improve our competitiveness on our path toward greater corporate sustainability. In recognition of Apacer's efforts and achievements in energy conservation and carbon reduction, the New Taipei City Government presented us with a Certificate of Appreciation during the announcement of the outcomes of the 2015 Clean Energy Conservation and Carbon Reduction Production Coaching Program.

(IV) Green product management

In response to the European Union's RoHS Directive and customer requirements, we have made all its processes lead-free as of 2007, and gradually made them halogen-free as well since 2011 in line with the environmental trend of green products. The RoHS Directive has been fully incorporated into our production processes and material management, which comply with the EU's REACH regulation. We also use these regulations in our audits of component suppliers whom we require to provide us with their environmental protection commitments and RoHS test reports. In July 2007, we passed the IECQ QC080000 management system audit carried out by a third-party certification company. Under this system, we completely control the management of prohibited hazardous substances from product to manufacturing process.

We also promise that products delivered to our customers will never use metals from conflict mining areas, in accordance with the DRC Conflict-Free norms.

Our products comply with international standards, and our response measures have not significantly impacted our financial performance.

In response to the European Union's RoHS Directive, we will implement the extended directive (EU)/2015/863 to add four plasticizer hazardous substances (BBP/DBP/DEHP/DIBP) in July 22, 2019. We have introduced it into the supplier management two years earlier in July 1, 2017, ahead of all industry peers. We also required our suppliers to provide qualified test reports of a third-party laboratory to show compliance with the latest RoHS standards. We provide products and services free from hazardous substance for the customers and the consumers.

V. Labor relations

(I) Below follows a list of our company's employee welfare measures and education, training, retirement systems, with descriptions of their implementation status within as well as agreements between management and labor and the status of employees' rights and interests:

1. Staff welfare measures, education, training and implementation
   (1) Employee welfare measures
      A. Employee group insurance: To provide more complete guarantees for its employees in addition to the statutory labor insurance and health insurance for employees, we have taken out group insurances for its employees, including injury insurance, hospital treatment insurance, and cancer health insurance.
      B. Employee activities: We have an Employee Welfare Committee in accordance with the law, which plans employee activities throughout the year. These include a Family Day and Dragon Boat Festival and Mid-Autumn Festival fun contests to nurture the physical and mental health of our employees and their team spirit. We also have a staff recreation room with health equipment.
      C. Other benefits: wedding and funeral allowances, social allowances for teams, regular health checks, special offers of company products, travel allowances, and gift certificates for the three major holidays.
   (2) Staff training system

      In addition to the training courses, we also offer diversified learning management to stimulate peer learning and knowledge sharing. This includes the following items:
      A. The company's Intranet offers dedicated areas for articles, good books, and experience sharing.
      B. An incentive system for promoting reading clubs and other learning activities.
      C. Our library provides a variety of books and magazines for employees to read.
   (3) Staff education and training

      In order to achieve our vision of "Becoming the Leading Information Service Integrator with Digital Storage" we work to enhance our employees' and company's culture values of "Trust, Innovation" and the human-centric qualities of "Caring, Sharing, and Mutual Assistance". Our education and training develop core competences in our staff to their competitiveness in the workplace. These courses consist of the following four types:
      A. Core courses: These courses on our corporate culture and corporate strategy cultivate our advantages as a leading organization and our abilities to maintain core technology.
      B. Management courses: These develop management capabilities needed by managers at all levels.
      C. Specialist courses: These cultivate the specialized skills necessary for our staff to perform their jobs.
      D. General courses: These cultivate common knowledge among our employees such as new staff induction training, labor safety training, responsible business alliance training, etc.

2. Retirement system

We take responsibility for the stability of its employees' life in retirement, also in order to improve their working morale during employment. In accordance with the Enforcement Rules of Labor Pension Act, we have an employee retirement plan, which specifies employee retirement conditions, pension benefits standards, pension applications, and pension disbursements. In accordance with the law, we also have a Workers’ Retirement Reserve Fund Supervision Committee. In accordance with the “Regulations for the Allocation and Management of the Workers’ Retirement Reserve Funds”, monthly pension contributions are transferred to the Workers’ Retirement Reserve Fund account at a financial institution designated by law. In July 2005, in response to the government's new pension system, 6% of the income of employees who chose the new pension system is transferred to individual accounts at the Labor Insurance Bureau in accordance with the law. Those who chose the old system continue to enjoy their pension rights under the old system.

3. Agreements between labor and capital

By emphasizing the harmony of management and labor and paying attention to the welfare of employees, the labor relations of the Company are good and there have been no labor disputes.

4. Employee rights

We invest in labor relations from a perspective of co-existence and co-prosperity. Therefore, we set much store with employees’ opinions. Employees may communicate through formal and informal channels at any time to give feedback on issues in their lives and at work. Two-way communication enables the Company and its employees to understand and support each other, build consensus, and create success.

(1) Management labor conferences:

We regularly hold management labor conferences, where representatives from the employer and employees participate in two-way communication on our company's systems and employees' issues regarding company rules, the work environment, and safety and health. This negotiation model helps both parties to strengthen mutual trust and provides valuable input to the management.

(2) Employee Welfare Committee:

The Employee Welfare Committee consists of members selected from among employees who are passionate about public welfare and are good communicators. Therefore, the committee’s meetings offer management and labor insights into welfare measures of the Company.

(II) Protection measures for the working environment and employees' personal safety

1. Specific measures for safety and health management

A. Periodic review of the safety and health management system

The periodic review mechanisms of ISO 14001 and

OHSAS 18001 ensure that all work processes are in line with international requirements.

B. Evaluating risks and countermeasures

We periodically review each unit for unacceptable risks and non-compliance with regulations, after which we formulate safety and health management plans and risk control measures, and submit these outcomes results to the Safety and Health Committee for review.

C. Movement toward zero disasters

We implement a self-management plan for safety and health as well as a safety and health education and training plan to achieve zero occupational hazards.

D. Evaluation of the work environment

According to the "Implementation Rules for the Measurement of Labor Environments", the committee must regularly have their company’s operating environment assessed by a qualified operating environment evaluation agency to determine whether the measurement result meet the statutory requirements. Any anomaly in the measurement results must be improved to ensure employee health.

E. Health care and management

In accordance with the "Labor Health Protection Rules", health inspections for general operations and for hazardous operations are carried out separately. The inspection items include chest X-ray, blood pressure, electrocardiogram, urine, blood, and biochemistry serum assays. Special inspections are conducted for special hazards at work such as free radiation, organic solvents, and the like, and implementations are carried out at different levels. With regard to hypertension, hyperlipidemia, abnormal blood glucose, abnormal body mass, and other metabolic syndromes. Our resident nurses use the "Personnel Risk Assessment Table" to assist people to mind their health status and to grow healthy living habits. In addition, external experts are regularly invited to share new and correct health knowledge through seminars to promote preventive care among employees.

We have a "Workplace Health Promotion Program" to create a relaxed and healthy workplace culture so that employees can build and enjoy a work environment that is happy for the body and mind. It not only reduces leave taken, staff turnover, and medical expenses, but also can bring down the incidence and cost of physical and mental health issues caused by injury and chronic diseases - a win-win result.

2. Implement operational safety control

A. In line with the requirements of safety and health regulations and the outcomes of our safety and health risk assessments, we have strict operations control and work permits for operations such as work at elevated height, with open fire, free radiation equipment, etc., and staff must follow these.

B. All machinery and equipment are legally qualified through regular inspections. Operators have professional licenses and regularly follow on-the-job training.

C. All incidents (with or without injury and including false alarms) are reported and given follow-up to eliminate potential hazards. In addition, equipment with moving parts, potentially dangerous process points, and protective devices are physically inspected and improvement plans formulated and implemented, to prevent injury.

D. Roaming inspectors in the plant compound inspect activities and environments along their routes, and also assist with support or rescue in the event of traffic accidents, emergencies, or major drills.

E. To ensure that operators are not exposed to radiation hazards, periodic inspections of equipment are carried out. Also staff are required to wear anti-radiation gear and participate in radiation work health inspections. Based on the readings of radiation meters and medical check-ups. Radiation doses and employees' health conditions are monitored to prevent equipment anomalies causing radiation damage to our staff.

(III) List the total amount of losses due to labor disputes During last year and this year to date. Also disclose estimated amounts and countermeasures for current and potential future events (if difficult to estimate, describe the matters that are difficult to estimate):

Our company has harmonious labor relationships and has not suffered any losses due to labor disputes. Such losses are not expected to occur in the future.

VI. Important contracts

Nature of contract	Parties	Contract date	Main content	Limits Terms
System maintenance contract	Data Systems Consulting Co.	December 1, 2018 - December 31, 2019	Information system maintenance	None
Insurance contract	Fubon Property and Casualty Insurance Co., Ltd.	July 1, 2018 - July 31, 2019	Commercial fire insurance	None
Insurance contract	Shin Kong Insurance Co., Ltd.	January 1, 2019 - December 31, 2019	Cargo insurance	None
Insurance contract	Hotai Insurance Co., Ltd.	January 1, 2019 - December 31, 2019	Product liability insurance and public accident liability insurance	None
Insurance contract	Fubon Property and Casualty Insurance Co., Ltd.	January 1, 2019 - December 31, 2019	Directors and Managers Liability Insurance	None

Financial overview

I. Condensed balance sheet and comprehensive income statement over the past five years

(I) Condensed balance sheet and consolidated income statement information - IFRS

(1) Condensed balance sheet (consolidated financial statement)

Unit: TWD 1,000

Item \ Year		Financial information of the last five years (Note 1)					As of March 31,2019 (Note 1)
		2014	2015	2016	2017	2018	
Current assets		3,245,221	2,945,616	2,856,713	3,589,477	3,175,676	2,982,722
Long-term investment		99,597	18,249	17,984	19,197	45,821	46,959
Property, plant and equipment		718,861	888,960	902,951	899,387	887,458	887.743
Intangible assets		11,953	7,691	11,123	24,363	66,280	64,110
Other assets		30,058	42,329	51,758	100,381	100,284	138,314
Total assets		4,105,690	3,902,845	3,840,529	4,632,805	4,275,519	4,119,848
Current liabilities	Before allocation	1,472,599	1,009,232	1,372,374	2,010,340	1,538,233	1,290,685
	After allocation	1,806,105	1,199,309	1,614,529	2,272,674	(Note 2)	(Note 2)
Non-current liabilities		15,228	17,131	39,620	54,325	41,830	63,335
Total liabilities	Before allocation	1,487,827	1,026,363	1,411,994	2,064,665	1,580,063	1,354,020
	After allocation	1,821,333	1,216,440	1,654,149	2,326,999	(Note 2)	(Note 2)
Equity attributed to stockholders of the parent company							
Share capital		1,365,437	1,515,987	1,008,978	1,008,978	1,008,978	1,008,978
Capital surplus		254,299	489,941	359,203	358,225	359,910	359,910
Retained earnings	Before allocation	1,037,354	930,854	1,086,882	1,250,073	1,393,935	1,460,781
	After allocation	703,848	740,777	844,727	987,739	(Note 2)	(Note 2)
Other equities		(39,227)	(60,300)	(30,971)	(49,321)	(67,540)	(64,013)
Treasury stocks		-	-	-	-	-	-
Total stockholders' equity attribute to the parent company	Before allocation	2,617,863	2,876,482	2,424,092	2,567,955	2,695,283	2,675,656
	After allocation	2,284,357	2,686,405	2,181,937	2,305,621	(Note 2)	(Note 2)
Non-controlling interests		-	-	4,443	185	173	172
Total equity	Before allocation	2,617,863	2,876,482	2,428,535	2,568,140	2,695,456	2,765,828
	After allocation	2,284,357	2,686,405	2,186,380	2,305,806	(Note 2)	(Note 2)

Note 1: The financial information in the above table has been audited/reviewed by our CPAs. Related information is available at the Market Observation Post System website.

Note 2: The shareholders' meeting has not approved for the distribution of 2018 surplus.

(2) Condensed Consolidated Comprehensive Income Statement (Consolidated Financial Statement)

Unit: TWD 1,000

Item \ Year	Financial information of the last five years (Note 1)					As of March 31,2019 (Note 1)
	2014	2015	2016	2017	2018	
Operating revenue	10,218,111	7,379,728	6,822,226	10,043,476	9,441,618	1,943,423
Gross operating profit	1,361,776	961,243	1,156,300	1,298,790	1,309,289	297,713
Operating income	615,453	314,718	406,303	474,842	437,883	86,994
Non-operating income and expenses	(6,203)	(34,261)	18,906	(1,802)	623	(913)
Net income before tax	609,250	280,457	425,209	473,040	438,506	86,081
Net income of continuing operations for the current period	491,389	228,389	349,291	404,957	358,830	67,402
Losses of discontinued operations	-	-	-	-	-	-
Net profit for the current period	491,389	228,389	349,291	404,957	358,830	67,402
Other comprehensive income(loss) for the current period (net of tax)	(5,281)	(16,856)	(10,001)	(18,169)	16,826	3,531
Total consolidated comprehensive income for the current period	486,108	211,533	339,290	386,788	375,656	70,933
Net income for the current period attributed to stockholders of the parentcompany	491,389	228,389	349,467	405,418	358,839	67,6407
Net profit for the current period attributed to non-controlling interests	-	-	(176)	(461)	(9)	(5)
Total comprehensive income attributed to stockholders of the parentcompany	486,108	211,533	339,695	386,996	375,668	70,934
Total comprehensive income attributed to non-controlling interests	-	-	(405)	(208)	(12)	(1)
Earnings per share	3.63	1.53	2.74	4.02	3.56	0.67

Note 1: The financial information in the above table has been audited/reviewed by our CPAs. Related information is available at the Market Observation Post System website.

(II) Condensed balance sheet and income statement information - IFRS

(1) Condensed balance sheet (parent-company only financial statement)

Unit: TWD 1,000

Item \ Year		Financial information of the last five years (Note 1)				
		2014	2015	2016	2017	2018
Current assets		2,986,665	2,690,997	2,543,801	3,260,681	2,843,922
Long-term investment		282,843	222,736	266,142	280,722	342,034
Property, plant and equipment		717,264	884,982	899,431	896,601	883,660
Intangible assets		11,769	7,617	10,868	24,158	66,024
Other assets		21,735	36,751	45,783	92,825	92,823
Total assets		4,020,276	3,843,083	3,766,025	4,554,987	4,228,463
Current liabilities	Before allocation	1,387,185	949,470	1,302,313	1,962,467	1,506,707
	After allocation	1,720,691	759,393	1,544,468	2,224,801	(Note 2)
Non-current liabilities		15,228	17,131	39,620	24,565	26,473
Total liabilities	Before allocation	1,402,413	966,601	1,341,933	1,987,032	1,533,180
	After allocation	1,735,919	776,524	1,584,088	2,249,366	(Note 2)
Share capital		1,365,437	1,515,987	1,008,978	1,008,978	1,008,978
Capital surplus		254,299	489,941	359,203	358,225	359,910
Retained earnings	Before allocation	1,037,354	930,854	1,086,882	1,250,073	1,393,935
	After allocation	703,848	740,777	844,727	987,739	(Note 2)
Other equities		(39,227)	(60,300)	(30,971)	(49,321)	(67,540)
Treasury stock		-	-	-	-	-
Total stockholders' equity attribute to the parent company	Before allocation	2,617,863	2,876,482	2,424,092	2,567,955	2,695,283
	After allocation	2,284,357	2,686,405	2,181,937	2,305,621	(Note 2)
Non-controlling interests		-	-	-	-	-
Total equity	Before allocation	2,617,863	2,876,482	2,424,092	2,567,955	2,695,283
	After allocation	2,284,357	2,686,405	2,181,937	2,305,621	(Note 2)

Note 1: The financial information in the above table has been audited/reviewed by our CPAs. Related information is available at the Market Observation Post System website.
Note 2: The shareholders' meeting has not passed approved a resolution on the surplusfor the distribution of 2018 surplus.

(2) Condensed comprehensive income statement (parent-company only financial statement)

Unit: TWD 1,000

Item \ Year	Financial information of the last five years (Note 1)				
	2014	2015	2016	2017	2018
Operating revenue	9,961,861	7,082,614	6,567,983	9,844,821	9,064,195
Gross operating profit	1,127,817	731,096	895,449	1,028,072	1,062,262
Operating income	565,244	280,111	361,037	425,915	416,470
Non-operating income and expenses	36,349	1,852	48,471	31,430	22,044
Net income before tax	601,593	281,963	409,508	457,345	438,514
Net income of continuing operations for the current period	491,389	228,389	349,467	405,418	358,839
Losses of discountinued operations	-	-	-	-	-
Net income for the current period	491,389	228,389	349,467	405,418	358,839
Other comprehensive income(loss) for the current period (net of tax)	(5,281)	(16,856)	(9,772)	(18,422)	16,829
Total comprehensive income for the current period	486,108	211,533	339,695	386,996	375,668
Earnings per share	3.63	1.53	2.74	4.02	3.56

Note 1: The financial information in the above table has been audited/reviewed by our CPAs. Related information is available at the Market Observation Post System website.

(二) Accountants’ names and review opinions over the last five years

Accountants’ names that have reviewed and given their opinions over the last five years:

Year	Signing accountant name	Accountant opinion
2014	Tang Ci-Jie, Chen Mei-Yan	Unqualified-modified opinion
2015	Chen Mei-Yan, Wu Lin	Unqualified opinion
2016	Chen Mei-Yan, Wu Lin	Unqualified opinion
2017	Tang Ci-Jie, Chen Mei-Yan	Unqualified opinion
2018	Tang Ci-Jie, Chen Mei-Yan	Unqualified opinion

II. Financial analysis of the last five years

(I) Financial Analysis - Adoption of International Financial Reporting Standards (consolidated)

Item		Financial analysis of the last five years (Note 1) 2014	2015	2016	2017	2018	As of March 31,2018 (Note 1)
Financial structure	Debt to assets ratio (%)	36.24	26.30	36.76	44.57	36.96	32.87
	Long-term capital to property, plant and equipment ratio (%)	364.17	323.58	273.34	291.58	308.44	318.69
Debt paying ability	Current ratio (%)	220.37	291.87	208.15	178.55	206.45	231.10
	Quick ratio (%)	130.02	223.11	114.36	97.80	127.48	156.28
	Interest protection	143.68	109.66	666.43	46.61	58.28	53.78
Operational capacity	Receivables turnover ratio (times)	11.49	8.43	7.77	8.80	7.65	7.10
	Average collection days	32	43	47	41	48	51
	Inventory turnover ratio (times)	6.96	6.44	5.75	6.05	6.81	6.21
	Payable turnover (times)	11.79	9.51	7.67	9.00	7.95	7.47
	Average inventory turnover days	52	57	63	60	63	59
	Property, plant and equipment Turnover rate (times)	14.25	9.18	7.61	11.14	10.57	8.76
	Total asset turnover ratio (times)	2.49	1.84	1.76	2.37	2.12	1.85
Profitability	Return on assets (%)	12.64	5.76	9.04	9.76	8.19	1.64
	Return on equity (%)	19.66	8.31	13.17	16.21	13.63	2.47
	Pre-tax income to paid-in capital ratio (%)	44.62	18.50	42.14	46.88	43.46	8.53
	Net profit ratio (%)	4.81	3.09	5.12	4.03	3.80	3.47
	Earnings per share (TWD)	3.63	1.53	2.74	4.01	3.56	0.67
Cash flow	Cash flow ratio (%)	13.66	68.49	9.97	1.95	53.94	20.42
	Cash flow adequacy ratio (%)	92.98	90.57	57.37	44.84	69.54	79.42
	Cash reinvestment ratio (%)	(2.52)	11.65	(2.01)	(7.23)	19.53	8.76
Leverage	Operational leverage	6.30	6.61	7.32	9.34	9.39	10.52
	Financial leverage	1.01	1.01	1.00	1.02	1.02	1.02

Increases or decreases of more than 20% in the financial ratio over the past two years are explained below:

1. Financial structure:
   The increase in " quick ratio" is due to the increase in inventory resulting from the decrease in account payable and bank borrowings.
2. Repayment ability:
   The increase in the "Interest protection " was due to the decrease in interest expenses resulting from the decrease in bank borrowings.
3. Cash flow:
   The decreases in "cash flow ratio", "cash reinvestment ratio" and "cash flow adequacy ratio" are due to decreased inventory resulted in a increased of cash flow from operating activities.

Note 1: The financial information in the above table has been audited/reviewed by our CPAs. Related information is available at the Market Observation Post System website.

1. Financial structure:
   (1) Debt to assets ratio = Total liabilities / Total assets
   (2) Long-term capital to property, plant and equipment ratio = (Total equity + Non-current liabilities) /Net value of property, plant and equipment
2. Debt paying ability:
   (1) Current ratio = Current assets / Current liabilities
   (2) Quick ratio = (Current assets - Inventory - Prepaid expenses) / Current liabilities
   (3) Interest protection = Net income before tax and interest expense/interest expense of the current period
3. Operating ability:
   (1) Receivables turnover rate (including accounts receivable and bills arising from operations) = Net sales/average receivables for each period (including accounts receivable and bills arising from operations)
   (2) Average collection days = 365/ Receivables turnover ratio
   (3) Inventory turnover ratio = Cost of goods sold / Average inventory value
   (4) Payables turnover ratio (including accounts payable and notes payable arising from operations) = Cost of goods sold/Average payables for each period (including accounts payable and bills arising from business operations)
   (5) Average inventory turnover days = 365 / Inventory turnover rate
   (6) Turnover of property, plant and equipment = Net sales / Average net value of property, plant and equipment
   (7) Turnover of total assets = Net sales / Average total assets
4. Profitability:
   (1) Return on assets = (Profits or losses after tax + interest expenses × (1-tax rate)) / Average total assets
   (2) Return on equity = Profits or losses after tax / Average total equity
   (3) Net profit ratio = Profits or losses after tax / Net sales
   (4) Earnings per share = (Income attributed to stockholders of the parent company - Special shares dividends) / Weighted averageof issued shares
5. Cash flow:
   (1) Cash flow ratio = Net cash flow from operating activities / Current liabilities
   (2) Net cash flow adequacy ratio = Net cash flow from operating activities over the last five years /(Capital expenditure + Inventory increase + Cash dividend) over the last five years

(3) Cash reinvestment ratio = (Net cash flow from operating activities - Cash dividends) /(Gross value of property, plant and equipment + Long-term investments + Other non-current assets + Working capital)

6. Leverage:

(1) Operating leverage = (Net operating revenue - Variable operating costs and expenses) / Operating profits

(2) Financial Leverage = Operating income / (Operating income - Interest expenses)

(II) Financial Analysis – Based on International Financial Reporting Standards (IFRS; parent-company only)

Item	Year	2014	2015	2016	2017	2018
		Financial analysis of the last five years (Note 1)				
Financial structure	Debt to assets ratio (%)	34.88	25.15	35.63	43.62	36.26
	Long-term capital to property, plant and equipment ratio (%)	364.98	325.03	269.51	289.15	308.01
Debt paying ability	Current ratio (%)	215.30	283.42	195.33	166.15	188.75
	Quick ratio (%)	125.25	212.28	98.59	92.04	113.02
	Interest protection	141.89	106.80	635.90	45.12	58.32
Operational capacity	Receivables turnover ratio (times)	12.57	9.29	8.51	8.87	7.56
	Average collection days	29	39	43	41	48
	Inventory turnover ratio (times)	7.23	6.64	5.88	6.52	6.22
	Payable turnover (times)	11.84	9.46	7.69	9.08	7.85
	Average inventory turnover days	51	55	62	56	59
	Property, plant and equipment turnover ratio (times)	13.92	8.84	7.36	10.96	10.18
	Total asset turnover rate (times)	2.48	1.84	1.73	2.37	2.06
Profitability	Return on assets (%)	12.94	5.87	9.20	9.95	8.31
	Return on equity (%)	19.66	8.31	13.19	16.24	13.64
	Pretax income to paid-in capital Ratio (%)	44.06	18.60	40.59	45.33	43.46
	Net profit margin (%)	4.93	3.22	5.32	4.12	3.96
	Earnings per share (TWD)	3.63	1.53	2.74	4.02	3.56
Cash flow	Cash flow ratio (%)	19.98	79.02	8.84	0.46	59.09
	Cash flow adequacy ratio (%)	94.50	59.19	61.06	49.3	80.49
	Cash reinvestment ratio (%)	0.23	13.61	(2.84)	(8.42)	21.81
Leverage	Operational leverage	6.52	6.79	7.78	10.10	9.77
	Financial leverage	1.01	1.01	1.00	1.02	1.02
Increases or decreases of more than 20% in the financial ratio over the past two years are explained below:						

1. Financial structure:
   The increase in " quick ratio" is due to the increase in inventory resulting from the decrease in account payable and bank borrowings.
2. Repayment ability:
   The increase in the "Interest protection " was due to the decrease in interest expenses resulting from the decrease in bank borrowings.
3. Cash flow:
   The decreases in "cash flow ratio", "cash reinvestment ratio" and "cash flow adequacy ratio" are due to decreased inventory resulted in a increased of cash flow from operating activities.

Note 1: The financial information in the above table has been audited/reviewed by our CPAs. Related information is available at the Market Observation Post System website.

1. Financial structure:
   (1) Debt to assets ratio = Total liabilities / Total assets
   (2) Long-term capital to property, plant and equipment ratio = (Total equity + Non-current liabilities) /Net value of property, plant and equipment
2. Debt paying ability:
   (1) Current ratio = Current assets / Current liabilities
   (2) Quick ratio = (Current assets - Inventory - Prepaid expenses) / Current liabilities
   (3) Interest protection = Net income before tax and interest expense/interest expense of the current period
3. Operating ability:
   (1) Receivables turnover rate (including accounts receivable and bills arising from operations) = Net sales/ average receivables for each period (including accounts receivable and bills arising from operations)
   (2) Average collection days = 365/ Receivables turnover ratio
   (3) Inventory turnover ratio = Cost of goods sold / Average inventory value
   (4) Payables turnover ratio (including accounts payable and notes payable arising from operations) = Cost of goods sold/Average payables for each period (including accounts payable and notes payable arising from business operations)
   (5) Average inventory turnover rate = 365 / Inventory turnover rate
   (6) Turnover of property, plant and equipment = Net sales / Average net value of property, plant and equipment
   (7) Turnover of total assets = Net sales / Average total assets
4. Profitability:
   (1) Return on assets = (Profits or losses after tax + interest expenses × (1-tax rate)) / Average total assets
   (2) Return on equity = Profits or losses after tax / Average total equity
   (3) Net profit ratio = Profits or losses after tax / Net sales
   (4) Earnings per share = (Income attributed to stockholders of the company - Special shares dividends) / Weighted averageof issued shares

5. Cash flow:

(1) Cash flow ratio = Net cash flow from operating activities / Current liabilities

(2) Net cash flow adequacy ratio = Net cash flow from operating activities over the last five years /(Capital expenditure + Inventory increase + Cash dividend) over the last five years

(3) Cash reinvestment ratio = (Net cash flow from operating activities - Cash dividends) /(Gross value of property, plant and equipment + Long-term investments + Other non-current assets + Working capital)

6. Leverage:

(1) Operating leverage = (Net operating revenue - Variable operating costs and expenses) / Operating profits

(2) Financial Leverage = Operating income / (Operating income - Interest expenses)

III. Audit committee's review report of the most recent annual financial report

Audit committee’s review report

The Board of Directors has prepared the Company’s 2018 Business Report, Financial Statements, and proposal for allocation of earnings. The Certified Public Accoutants Tzu-Chieh Tang and Mei-yan Chen of KPMG Taiwanwas retained to audit Apacer’s Financial Statements and has issued an audit report relating to the Financial Statements. The Business Report, Financial Statements, and earnings allocation proposal have been reviewed and determined to be correct and accurate by the Audit Committee members of Apacer Technology Co., Ltd. According to relevant requirements of the Securities and Exchange Act 14.4 and the Company Law Act 219, we hereby submit this report.

To

Apacer Technology Co., Ltd. 2019 Shareholders' Meeting

Chaiman of Audit Committee: Max Wu

February 21, 2019

IV. The most recent annual financial report

(1)Consolidated financial report

Representation Letter

The entities that are required to be included in the combined financial statements of Apacer Technology Inc. as of and for the year ended December 31, 2018 under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports, and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with International Financial Reporting Standards No. 10 "Consolidated Financial Statements" endorsed by the Financial Supervisory Commission. In addition, the information required to be disclosed in the combined financial statements is included in the consolidated financial statements. Consequently, Apacer Technology Inc. and Subsidiaries do not prepare a separate set of combined financial statements.

Hereby declare

Apacer Technology Inc.
I-Shih Chen
Chairman
February 21, 2019

安侯建業聯合會計師事務所
KPMG
台北市11049信義路5段7號68樓(台北101大樓)
68F., TAIPEI 101 TOWER, No. 7, Sec. 5,
Xinyi Road, Taipei City 11049, Taiwan (R.O.C.)

Telephone 電話 + 886 2 8101 6666
Fax 傳真 + 886 2 8101 6667
Internet 網址 kpmg.com/tw

Independent Auditors' Report

The Board of Directors
Apacer Technology Inc.:

Opinion

We have audited the consolidated financial statements of Apacer Technology Inc. and its subsidiaries (the "Group"), which comprise the consolidated balance sheets as of December 31, 2018 and 2017, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and 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 Group as of December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and with the International Financial Reporting Standards, International Accounting Standards, interpretations as well as related guidence endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Certification of Financial Statements by Certified Public Accountants and the auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the Certified Public Accountants Code of Professional Ethics in Republic of China (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis of 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 of the current period. These matters were addressed in the context of our audit of consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters for the Group's consolidated financial statements for the year ended December 31, 2018 are stated as follows:

1. Revenue recognition

   Please refer to notes 4(o) and 6(s) for the accounting policy on "Revenue recognition" and "Revenue from contracts with customers" for the related disclosures, respectively, of the notes to consolidated financial statements.

Description of key audit matter:

The Group engages primarily in the manufacturing and sales of memory modules and flash memory products, with product diversification and marketing channels spread globally. The Group recognizes its revenue depending on the various trade terms in each individual sale transaction and the transfer of control of the goods, which are considered to be complex in determining the timing of revenue recognition. Consequently, the revenue recognition has been identified as one of the key audit matters.

How the matter was addressed in our audit:

In relation to the key audit matters above, our principal audit procedures included understanding and testing the design and operating effectiveness of the Group's internal controls over revenue recognition; assessing whether the accounting policy of the timing of revenue recognition is appropriate through understanding the main types of revenues of the Group, and reviewing the sales contracts and the related trade terms with customers; assessing whether the accounting treatment of revenue recognition is appropriate through performing a sample test of the original documents of sales transaction; performing a sample test of sales transactions that took place before and after the balance sheet date, and reviewing the related documents to understand and analyze the reason for any identified sales returns and allowances that took place after the balance sheet date, to assess whether the revenue is recognized within the proper period.

2. Valuation of inventories

Please refer to notes 4(h), 5 and 6(h) for the inventory accounting policy, "Critical accounting judgments and key sources of estimation uncertainty" for estimation uncertainty of inventory valuation, and "Inventories" for the related disclosures, respectively, of the notes to consolidated financial statements.

Description of key audit matter:

The Group's inventories are measured at the lower of cost and net realizable value. Management is required to make judgments and estimates in determining the net realizable value of inventories on the reporting date. The market prices of the Group's main raw materials, constituting the majority amount of product cost, fluctuate rapidly and the life cycle of certain products of the Group are short, which could possibly result in a price decline and obsolescence of inventories, wherein the inventories cost may exceed its net realizable value, as the Group fails to timely respond to market changes. Therefore, the valuation of inventories has been identified as one of the key audit matters.

How the matter was addressed in our audit:

In relation to the key audit matters above, our principal audit procedures included obtaining and understanding the Group's accounting policy of valuation of inventories, performing a retrospective test to understand the reasonableness of estimations of allowance for inventory valuation loss with reference to actual write-off of inventories in a subsequent period, and evaluating the reasonableness of the accounting policy of valuation of inventories; as well as performing a sample test of the estimated selling price provided by Management to assess the reasonableness of the net realizable value and allowance for inventory valuation loss.

Other Matter

Apacer Technology Inc. has additionally prepared its parent-company-only financial statements as of and for the years ended December 31, 2018 and 2017, on which we have issued an unmodified audit opinion.

KPMG

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

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

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

Those charged with governance (including members of the Audit Committee) are responsible for overseeing the Group's financial reporting process.

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

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with 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 auditing standards generally accepted in the Republic of China, we exercised professional judgment and maintained professional skepticism throughout the audit. We also:

1. Identified and assessed 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. Obtained an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

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

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

5. Evaluated 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. Obtained sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remained solely responsible for our audit opinion.

We communicated 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 identified during our audit.

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

From the matters communicated with those charged with governance, we determined those matters that were of most significance in the audit of the consolidated financial statements for the year ended December 31, 2018 and are therefore the key audit matters. We described these matters in our auditor' s report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determined 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' audit report are Tzu-Chieh Tang and Mei-Yen Chen.

KPMG

Taipei, Taiwan (Republic of China)
Febuary 21, 2019

Notes to Readers

The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with the 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.

The independent auditors' report and the accompanying consolidated financial statements are the English translation of the Chinese version prepared and used in the Republic of China. If there is any conflict between, or any difference in the interpretation of the English and Chinese language independent auditors' report and consolidated financial statements, the Chinese version shall prevail.

(English Translation of Consolidated Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC. AND SUBSIDIARIES

Consolidated Balance Sheets

December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

Code	Assets	December 31, 2018 Amount	%	December 31, 2017 Amount	%
	Current assets:				
1100	Cash and cash equivalents (note 6(a))	$ 741,561	17	591,613	13
1110	Financial assets at fair value through profit or loss—current (note 6(b))	454	-	688	-
1170	Notes and accounts receivable, net (notes 6(f) and (s))	1,174,106	28	1,294,100	28
1180	Accounts receivable from related parties (notes 6(f), (s) and 7)	1,039	-	4	-
1200	Other receivables (note 6(g))	43,760	1	76,614	1
1310	Inventories (note 6(h))	1,193,885	28	1,605,866	35
1476	Other financial assets—current	-	-	3,109	-
1479	Other current assets	20,871	-	17,483	-
	Total current assets	3,175,676	74	3,589,477	77
	Non-current assets:				
1523	Available-for-sale financial assets—non-current (note 6(d))	-	-	12,117	-
1543	Financial assets carried at cost—non-current (note 6(e))	-	-	5,359	-
1517	Financial assets at fair value through other comprehensive income—non-current (note 6(c))	44,937	1	-	-
1550	Investments accounted for using equity method (note 6(i))	884	-	1,721	-
1600	Property, plant and equipment (note 6(j))	887,458	21	899,387	19
1780	Intangible assets (note 6(k))	66,280	2	24,363	1
1840	Deferred income tax assets (note 6(p))	92,831	2	69,320	2
1980	Other financial assets—non-current	7,062	-	7,641	-
1990	Other non-current assets	391	-	23,420	1
	Total non-current assets	1,099,843	26	1,043,328	23
	Total assets	$ 4,275,519	100	4,632,805	100

Code	Liabilities and Equity	December 31, 2018 Amount	%	December 31, 2017 Amount	%
	Current liabilities:				
2100	Short-term borrowings (note 6(l))	$ 138,218	3	492,240	11
2120	Financial liabilities at fair value through profit or loss—current (note 6(b))	289	-	354	-
2170	Notes and accounts payable	820,008	19	1,091,974	23
2180	Accounts payable to related parties (note 7)	132,755	3	-	-
2200	Other payables (notes 6(o), (u) and 7)	341,251	8	317,439	7
2230	Current income tax liabilities	56,193	2	65,931	1
2250	Provisions—current (note 6(m))	12,625	-	15,695	-
2300	Other current liabilities	36,894	1	26,707	1
	Total current liabilities	1,538,233	36	2,010,340	43
	Non-current liabilities:				
2570	Deferred income tax liabilities (note 6(p))	903	-	867	-
2640	Net defined benefit liabilities (note 6(o))	25,570	1	22,359	1
2645	Guarantee deposits	15,357	-	31,099	1
	Total non-current liabilities	41,830	1	54,325	2
	Total liabilities	1,580,063	37	2,064,665	45
	Equity attributable to shareholders of the Company (note 6(q)):				
3100	Common stock	1,008,978	24	1,008,978	21
3200	Capital surplus	359,910	8	358,225	8
3300	Retained earnings	1,393,935	33	1,250,073	27
3400	Other equity	(67,540)	(2)	(49,321)	(1)
	Total equity attributable to shareholders of the Company	2,695,283	63	2,567,955	55
36XX	Non-controlling interests	173	-	185	-
	Total equity	2,695,456	63	2,568,140	55
	Total liabilities and equity	$ 4,275,519	100	4,632,805	100

See accompanying notes to the consolidated financial statements.

(English Translation of Consolidated Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC. AND SUBSIDIARIES

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars, Except for Earnings Per Share)

		2018		2017	
		Amount	%	Amount	%
4000	**Revenue (notes 6(m), (s), (t), 7 and 14)**	$ 9,441,618	100	10,043,476	100
5000	**Cost of revenue (notes 6(h), (j), (k), (m), (n), (o), 7 and 12)**	8,132,329	86	8,744,686	87
	Gross profit	1,309,289	14	1,298,790	13
	Operating expenses (notes 6(f), (j), (k), (n), (o), (u), 7 and 12):				
6100	Selling expenses	553,688	6	546,243	5
6200	Administrative expenses	195,725	2	178,585	2
6300	Research and development expenses	120,479	1	99,120	1
6450	Expected credit losses	1,514	-	-	-
6000	**Total operating expenses**	871,406	9	823,948	8
	Operating income	437,883	5	474,842	5
	Non-operating income and loss (notes 6(i), (j), (n), (v)):				
7010	Other income	4,932	-	5,475	-
7020	Other gains and losses－net	5,868	-	6,263	-
7050	Finance costs	(7,655)	-	(10,372)	-
7770	Share of losses of associates	(2,522)	-	(3,168)	-
	Total non-operating income and loss	623	-	(1,802)	-
	Income before income tax	438,506	5	473,040	5
7950	**Income tax expense (note 6(p))**	79,676	1	68,083	1
	Net income	358,830	4	404,957	4
	Other comprehensive income:				
8310	**Items that will not be reclassified subsequently to profit or loss:**				
8311	Remeasurements of defined benefit plans (note 6(o))	(3,207)	-	(87)	-
8316	Unrealized gains from investments in equity instruments measured at fair value through other comprehensive income (notes 6(q) and (w))	11,135	-	-	-
8349	Less: income tax related to items that will not be reclassified subsequently to profit or loss (note 6(p))	641	-	15	-
		8,569	-	(72)	-
8360	**Items that may be reclassified subsequently to profit or loss:**				
8361	Exchange differences on translation of foreign operations (note 6(q))	8,257	-	(18,097)	-
8399	Less: income tax related to items that may be reclassified subsequently to profit or loss	-	-	-	-
		8,257	-	(18,097)	-
	Other comprehensive income for the year, net of income tax	16,826	-	(18,169)	-
	Total comprehensive income for the year	$ **375,656**	**4**	**386,788**	**4**
	Net income attributable to:				
	Shareholders of the Company	$ 358,839	4	405,418	4
	Non-controlling interests	(9)	-	(461)	-
		$ **358,830**	**4**	**404,957**	**4**
	Total comprehensive income attributable to:				
	Shareholders of the Company	$ 375,668	4	386,996	4
	Non-controlling interests	(12)	-	(208)	-
		$ **375,656**	**4**	**386,788**	**4**
	Earnings per share (in New Taiwan dollars) (note 6(r)) :				
9750	Basic earnings per share	$	**3.56**		**4.02**
9850	Diluted earnings per share	$	**3.50**		**3.97**

See accompanying notes to the consolidated financial statements.

(English Translation of Consolidated Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC. AND SUBSIDIARIES

Consolidated Statements of Changes in Equity

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

	Attributable to shareholders of the Company											
			Retained earnings				Total other equity					
	Common stock	Capital surplus	Legal reserve	Special reserve	Unappropriated earnings	Total	Exchange differences on translation of foreign operations	Unrealized gains (losses) on financial assets measured at fair value through other comprehensive income	Total	Total equity of the Company	Non-controlling interests	Total equity
Balance at January 1, 2017	$ 1,008,978	359,203	232,743	26,750	827,389	1,086,882	(30,971)	-	(30,971)	2,424,092	4,443	2,428,535
Appropriation of earnings:												
Legal reserve	-	-	34,947	-	(34,947)	-	-	-	-	-	-	-
Special reserve	-	-	-	4,221	(4,221)	-	-	-	-	-	-	-
Cash dividends distributed to shareholders	-	-	-	-	(242,155)	(242,155)	-	-	-	(242,155)	-	(242,155)
Net income in 2017	-	-	-	-	405,418	405,418	-	-	-	405,418	(461)	404,957
Other comprehensive income in 2017	-	-	-	-	(72)	(72)	(18,350)	-	(18,350)	(18,422)	253	(18,169)
Total comprehensive income in 2017	-	-	-	-	405,346	405,346	(18,350)	-	(18,350)	386,996	(208)	386,788
Changes in equity of associates accounted for using equity method	-	(978)	-	-	-	-	-	-	-	(978)	-	(978)
Changes in non-controlling interests	-	-	-	-	-	-	-	-	-	-	(4,050)	(4,050)
Balance at December 31, 2017	1,008,978	358,225	267,690	30,971	951,412	1,250,073	(49,321)	-	(49,321)	2,567,955	185	2,568,140
Effects of retrospective application	-	-	-	-	49,923	49,923	-	(37,614)	(37,614)	12,309	-	12,309
Balance at January 1, 2018 after adjustments	1,008,978	358,225	267,690	30,971	1,001,335	1,299,996	(49,321)	(37,614)	(86,935)	2,580,264	185	2,580,449
Appropriation of earnings:												
Legal reserve	-	-	40,542	-	(40,542)	-	-	-	-	-	-	-
Special reserve	-	-	-	18,350	(18,350)	-	-	-	-	-	-	-
Cash dividends distributed to shareholders	-	-	-	-	(262,334)	(262,334)	-	-	-	(262,334)	-	(262,334)
Net income in 2018	-	-	-	-	358,839	358,839	-	-	-	358,839	(9)	358,830
Other comprehensive income in 2018	-	-	-	-	(2,566)	(2,566)	8,260	11,135	19,395	16,829	(3)	16,826
Total comprehensive income in 2018	-	-	-	-	356,273	356,273	8,260	11,135	19,395	375,668	(12)	375,656
Changes in equity of associates accounted for using equity method	-	1,685	-	-	-	-	-	-	-	1,685	-	1,685
Balance at December 31, 2018	$ 1,008,978	359,910	308,232	49,321	1,036,382	1,393,935	(41,061)	(26,479)	(67,540)	2,695,283	173	2,695,456

See accompanying notes to the consolidated financial statements.

(English Translation of Consolidated Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC. AND SUBSIDIARIES

Consolidated Statements of Cash Flows

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

	2018	2017
Cash flows from operating activities:		
Income before income tax	$ 438,506	473,040
Adjustments:		
Depreciation	36,274	35,419
Amortization	9,544	7,553
Expected credit loss / provision for bad debt expense	1,514	1,189
Interest expense	7,655	10,372
Interest income	(1,776)	(1,267)
Share of losses of associates	2,522	3,168
Gain on disposal of property, plant and equipment	(343)	(4,999)
Impairment loss on non-financial assets	127	6,994
Subtotal	55,517	58,429
Changes in operating assets and liabilities:		
Changes in operating assets:		
Financial assets at fair value through profit or loss	234	(521)
Notes and accounts receivable	118,403	(307,850)
Accounts receivable from related parties	(1,035)	-
Other receivables	32,833	(14,990)
Inventories	411,981	(318,699)
Other current assets	(3,709)	(13,647)
Net changes in operating assets	558,707	(655,707)
Changes in operating liabilities:		
Financial liabilities at fair value through profit or loss	(65)	(1,924)
Notes and accounts payable	(62,984)	239,781
Accounts payable to related parties	(76,227)	-
Other payables	28,772	20,601
Provisions	(3,070)	164
Other current liabilities	10,187	(8,468)
Net defined benefit liabilities	4	(9)
Net changes in operating liabilities	(103,383)	250,145
Total changes in operating assets and liabilities	455,324	(405,562)
Total adjustments	510,841	(347,133)
Cash provided by operations	949,347	125,907
Interest received	1,797	1,263
Interest paid	(7,872)	(10,267)
Income taxes paid	(113,561)	(77,694)
Net cash provided by operating activities	829,711	39,209

See accompanying notes to the consolidated financial statements.

(English Translation of Consolidated Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC. AND SUBSIDIARIES

Consolidated Statements of Cash Flows (Continued)

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

	2018	2017
Cash flows from investing activities:		
Acquisition of financial assets at fair value through other comprehensive income	(3,940)	-
Acquisition of financial assets carried at cost	-	(5,359)
Acquisition of property, plant and equipment	(25,549)	(48,265)
Proceeds from disposal of property, plant and equipment	343	4,999
Acquisition of intangible assets	(45,392)	(11,520)
Decrease (increase) in other financial assets—non-current	579	(2,149)
Decrease (increase) in other non-current assets	16,956	(23,420)
Net cash used in investing activities	(57,003)	(85,714)
Cash flows from financing activities:		
Increase (decrease) in short-term loans	(354,022)	363,240
Increase (decrease) in guarantee deposits	(15,742)	14,206
Cash dividends distributed to shareholders	(262,334)	(242,155)
Acquisition of subsidiary's interests from non-controlling interests	-	(4,050)
Net cash provided by (used in) financing activities	(632,098)	131,241
Effect of foreign exchange rate changes	9,338	(17,954)
Net increase in cash and cash equivalents	149,948	66,782
Cash and cash equivalents at beginning of year	591,613	524,831
Cash and cash equivalents at end of year	$ **741,561**	**591,613**

See accompanying notes to the consolidated financial statements.

(Expressed in Thousands of New Taiwan Dollars, Unless Otherwise Specified)

1. Organization and business

Apacer Technology Inc. (the "Company") was incorporated on April 16, 1997 as a company limited by shares under the laws of the Republic of China ("R.O.C.") and registered under the Ministry of Economic Affairs, R.O.C. The address of the Company's registered office is 1F, No.32, Zhongcheng Rd., Tucheng Dist., New Taipei City, Taiwan. The Company and its subsidiaries (collectively the "Group") are engaged in the research and development, design, manufacturing, processing, maintenance and sales of memory modules, flash memory cards and consumer electronic products.

2. Authorization of the consolidated financial statements

These consolidated financial statements were authorized for issuance by the Board of Directors on Febuary 21, 2019.

3. Application of new, revised or amended accounting standards and interpretations

(a) The impact of the International Financial Reporting Standards ("IFRSs") endorsed by the Financial Supervisory Commission, R.O.C. ("FSC") which have already been adopted.

The following new standards, interpretations and amendments have been endorsed by the FSC and are effective for annual periods beginning on or after January 1, 2018.

New, Revised or Amended Standards and Interpretations	Effective date per IASB
Amendment to IFRS 2 "Classification and Measurement of Share-based Payment Transactions"	January 1, 2018
Amendments to IFRS 4 "Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts"	January 1, 2018
IFRS 9 "Financial Instruments"	January 1, 2018
IFRS 15 "Revenue from Contracts with Customers"	January 1, 2018
Amendment to IAS 7 "Statement of Cash Flows—Disclosure Initiative"	January 1, 2017
Amendment to IAS 12 "Income Taxes—Recognition of Deferred Tax Assets for Unrealized Losses"	January 1, 2017
Amendments to IAS 40 "Transfers of Investment Property"	January 1, 2018
Annual Improvements to IFRS Standards 2014–2016 Cycle:	
Amendments to IFRS 12	January 1, 2017
Amendments to IFRS 1 and Amendments to IAS 28	January 1, 2018
IFRIC 22 "Foreign Currency Transactions and Advance Consideration"	January 1, 2018

(Continued)

Except for the following items, the Group assessed that the initial application of the above IFRSs would not have any material impact on the consolidated financial statements. The extent and impact of changes are as follows:

(i) IFRS 15 “Revenue from Contracts with Customers”

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognized. It replaces the existing revenue recognition guidance, including IAS 18 “Revenue” and IAS 11 “Construction Contracts”. The Group applies this standard retrospectively with the cumulative effect, it need not restate those contracts, but instead, continues to apply IAS 11, IAS 18 and the related Interpretations for comparative reporting period. The Group recognizes the cumulative effect upon the initially application of this Standard as an adjustment to the opening balance of retained earnings on January 1, 2018. The Group uses the practical expedients for completed contracts, which means it need not restate those contracts that have been completed on January 1, 2018.

The following are the nature and impacts on changing of accounting policies:

1) Sales of goods

In the past, for the sale of goods, revenue was recognized based on the individual sales agreement and trade terms of each sales of goods when the related significant risks and rewards of ownership are transferred to customers; meanwhile, the revenue and costs can be measured reliably, the recovery of the consideration is probable and there is no continuing management involvement with the goods. Under IFRS 15, revenue is recognized when a customer obtains control of the goods.

2) Impacts on consolidated financial statements

The changes in accounting policies above did not have any material impact on the Group’s consolidated financial statements.

(ii) IFRS 9 “Financial Instruments”

IFRS 9 replaces IAS 39 “Financial Instruments: Recognition and Measurement” which contains classification and measurement of financial instruments, impairment and hedge accounting.

As a result of the adoption of IFRS 9, the Group adopted the consequential amendments to IAS 1 “Presentation of Financial Statements” which requires impairment of financial assets to be presented in a seperate line item in the consolidated statements of comprehensive income. Previously, the Gruop’s approach was to include the impairment of accounts receivable in selling expenses. Additionally, the Group adopted the consequential amendments to IFRS 7 “Financial Instruments: Disclosures” that are applied to disclosures about 2018 but generally have not been applied to comparative information.

(Continued)

The detail of new significant accounting policies and the nature and effect of the changes to IFRS 9 are as follows:

1) Classification of financial assets and financial liabilities

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL). The classification of financial assets under IFRS 9 is generally based on the business model in which financial assets are managed and their contractual cash flow characteristics. The standard eliminates the previous IAS 39 categories of held to maturity, loans and receivables and available for sale. For an explanation of how the Group classifies and measures financial assets and accounts for related gains and losses under IFRS 9, please refer to note 4(g).

The adoption of IFRS 9 did not have any significant impact on its accounting policies on financial liabilities.

2) Impairment of financial assets

IFRS 9 replaces the 'incurred loss' model in IAS 39 with a forward-looking 'expected credit loss' (ECL) model. The new impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVOCI, but not to investments in equity instruments. Under IFRS 9, credit losses are recognized earlier than under IAS 39. Please refer to note 4(g) for more details.

3) Transition

The adoption of IFRS 9 have generally been applied retrospectively, except as described below:

- Differences in the carrying amounts of financial assets resulting from the adoption of IFRS 9 are recognized in retained earnings and other equity on January 1, 2018. Accordingly, the information presented for 2017 does not generally reflect the requirements of IFRS 9 and therefore is not comparable to the information presented for 2018 under IFRS 9.

- The following assessments have been made on the basis of the facts and circumstances that existed at the date of initial application.

  - The determination of the business model within which a financial asset is held.

  - The designation and revocation of previous designations of certain financial assets and financial liabilities as measured at FVTPL.

  - The designation of certain investments in equity instruments not held for trading as at FVOCI.

(Continued)

4) Classification of financial assets on the date of initial application of IFRS 9

The following table shows the original measurement categories under IAS 39 and the new measurement categories under IFRS 9 for each class of the Group's financial assets as of January 1, 2018. (The measurement categories and carrying amount of financial liabilities are not changed.)

	IAS39		IFRS9	
Financial Assets	**Measurement categories**	**Carrying Amount**	**Measurement categories**	**Carrying Amount**
Cash and cash equivalents	Loans and receivables (Note 1)	591,613	Amortized cost	591,613
Derivative instruments	Held-for-trading	688	Mandatorily at FVTPL	688
Equity instruments	Available-for-sale financial assets (Note 2)	17,476	FVOCI	29,862
Notes and accounts receivable and other receivables	Loans and receivables (Note 1)	1,370,718	Amortized cost	1,370,641
Other financial assets (Refundable deposits)	Loans and receivables (Note1)	10,750	Amortized cost	10,750

Note1: Cash and cash equivalents, notes and accounts receivable, other receivables and other financial assets that were classified as loans and receivables under IAS 39 are now classified at amortized cost. An increase of $77 thousand in the allowance for impairment of accounts receivable was recognized in opening retained earnings upon transition to IFRS 9 on January 1, 2018.

Note2: These equity instruments (including financial assets carried at cost) represent investments that the Group intends to hold for long-term strategic purposes. As permitted by IFRS 9, the Group has designated these investments at the date of initial application as measured at FVOCI, resulting in an increase of $12,386 thousand in those assets recognized, and a decrease of $37,614 thousand in other equity, as well as an increase of $50,000 thousand in retained earnings were recognized on January 1, 2018.

The following table reconciles the carrying amounts of financial assets under IAS 39 to the carrying amounts under IFRS 9 upon transition to IFRS 9 on 1 January, 2018.

(Continued)

	December 31, 2017 IAS 39 Carrying Amount	Reclassifications	Remeasurements	January 1, 2018 IFRS 9 Carrying Amount	January 1, 2018 Retained earnings	January 1, 2018 Other equity
Financial assets at fair value through other comprehensive income:						
Beginning balance of available for sale (including carried at cost) (IAS 39)	$ 17,476	-	-		-	-
Available for sale to FVOCI	-	-	12,386		50,000	(37,614)
Total	$ 17,476	-	12,386	29,862	50,000	(37,614)
Financial assets measured at amortized cost:						
Beginning balance of cash and cash equivalents, notes and accounts receivable, other receivables and other financial assets (IAS 39)	$ 1,973,081	-	-		-	-
Adjustments for allowance of impairment for financial assets measured at amortized cost	-	-	(77)		(77)	-
Total	$ 1,973,081	-	(77)	1,973,004	(77)	-

There is no material impact on the Group's basic and diluted earnings per share for the year ended December 31, 2018.

(iii) Amendments to IAS 7 "Disclosure Initiative"

The amendments require disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flow and non-cash changes.

To satisfy the new disclosure requirements, the Group presents a reconciliation between the opening and closing balances for liabilities with changes arising from financing activities as note 6(z).

(b) The impact of IFRSs endorsed by the FSC but not yet effective

The following new standards, interpretations and amendments have been endorsed by the FSC and are effective for annual periods beginning on or after January 1, 2019 in accordance with Ruling No. 1070324857 issued by the FSC on July 17, 2018:

New, Revised or Amended Standards and Interpretations	Effective date per IASB
IFRS 16 "Leases"	January 1, 2019
IFRIC 23 "Uncertainty over Income Tax Treatments"	January 1, 2019
Amendments to IFRS 9 "Prepayment features with negative compensation"	January 1, 2019
Amendments to IAS 19 "Plan Amendment, Curtailment or Settlement"	January 1, 2019
Amendments to IAS 28 "Long-term interests in associates and joint ventures"	January 1, 2019
Annual Improvements to IFRS Standards 2015–2017 Cycle	January 1, 2019

(Continued)

Except for the following items, the Group assessed that the initial adoption of the above IFRSs would not have any material impact on its consolidated financial statements. The extent and impact of signification changes are as follows:

(i) IFRS 16“Leases”

IFRS 16 replaces the existing leases guidance, including IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases – Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

IFRS 16 introduces a single and an on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. In addition, the nature of expenses related to those leases will now be changed since IFRS 16 replaces the straight-line operating lease expense with a depreciation charge for right-of-use assets and interest expense on lease liabilities. There are recognition exemptions for short-term leases and leases of low-value items. The lessor accounting remains similar to the current standard – i.e. the lessors will continue to classify leases as finance or operating leases.

1) Determining whether an arrangement contains a lease

On transition to IFRS 16, the Group can choose to apply either of the following:

- IFRS 16 definition of a lease to all its contracts; or

- a practical expedient that does not need any reassessment whether a contract is, or contains, a lease.

The Group plans to apply the practical expedient to grandfather the definition of a lease upon transition. This means that the Group will apply IFRS 16 to all contracts entered into before January 1, 2019 and identified as leases in accordance with IAS 17 and IFRIC 4.

2) Transition

As a lessee, the Group can apply the standard using either of the following:

- retrospective approach; or

- modified retrospective approach with optional practical expedients.

The lessee applies the election consistently to all of its leases.

On January 1, 2019, the Group plans to initially apply IFRS 16 using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019, not to restate comparative information.

(Continued)

When applying the modified retrospective approach to leases previously classified as operating leases under IAS 17, the lessee can elect, on a lease-by-lease basis, whether to apply a number of practical expedients on transition. The Group plans to use these practical expedients as below:

- apply a single discount rate to a portfolio of leases with reasonably similar characteristics;

- exclude initial direct costs from the measurement of the right-of-use asset at the date of initial application;

3) So far, the most significant impact identified is that the Group will have to recognize right-of-use assets and lease liabilities for its operating leases of offices and warehouses. The Group estimates that the right-of-use assets and the lease liabilities to increase by $38,794 thousand and $39,353 thousand, respectively, as well as the retained earnings to decrease by $559 thousand on January 1, 2019.

The actual impacts of adopting the new standards may change depending on the economic conditions and events which may occur in the future.

(c) The impact of IFRS issued by IASB but not yet endorsed by the FSC

The following IFRSs have been issued by the IASB, but have yet to be endorsed by the FSC:

New, Revised or Amended Standards and Interpretations	**Effective date per IASB**
Amendments to IFRS 3 “Definition of a Business”	January 1, 2020
Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets Between an Investor and Its Associate or Joint Venture”	Effective date to be determined by IASB
IFRS 17 “Insurance Contracts”	January 1, 2021
Amendments to IAS 1 and IAS 8 “Definition of Material”	January 1, 2020

Those which may be relevant to the Group are set out below:

Issuance / Release Dates	**Standards or Interpretations**	**Content of amendment**
October 31, 2018	Amendments to IAS 1 and IAS 8 “Definition of Material”	The amendments clarify the definition of material and how it should be applied by including in the definition guidance that until now has featured elsewhere in IFRS Standards. In addition, the explanations accompanying the definition have been improved. Finally, the amendments ensure that the definition of material is consistent across all IFRS Standards.

(Continued)

The Group is evaluating the impact on its consolidated financial position and consolidated financial performance upon the initial adoption of the abovementioned standards or interpretations. The results thereof will be disclosed when the Group completes its evaluation.

4. Summary of significant accounting policies:

The significant accounting policies presented in the consolidated financial statements are summarised as follows. Except for those specifically indicated, the following accounting policies were applied consistently throughout the periods presented in these financial statements.

(a) Statement of compliance

The Group's accompanying consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers (the "Regulations") and the IFRSs, IASs, IFRIC Interpretations, and SIC Interpretations endorsed and issued into effect by the FSC (collectively as "Taiwan-IFRSs").

(b) Basis of preparation

(i) Basis of measurement

The accompanying consolidated financial statements have been prepared on a historical cost basis except for the following items in the balance sheets:

1) Financial instruments measured at fair value through profit or loss (including derivative financial instruments);
2) Financial assets at fair value through other comprehensive income (available-for-sale financial assets); and
3) Defined benefit liabilities are recognized as the present value of the defined benefit obligation less fair value of the plan assets and the effect of the asset ceiling mentioned in note 4(p).

(ii) Functional and presentation currency

The functional currency of each Group entity is determined based on the primary economic environment in which the entity operates. The Group's consolidated financial statements are presented in New Taiwan dollars, which is the Company's functional currency. Except when otherwise indicated, all financial information presented in New Taiwan dollars has been rounded to the nearest thousand.

(c) Basis of consolidation

(i) Principles of preparation of consolidated financial statements

The accompanying consolidated financial statements incorporate the financial statements of the Company and its controlled entities (the subsidiaries). The Company controls an investee when it is exposed, or has rights, to variable return from its involvement with the investee and has the ability to affect those returns through its power over the investee.

(Continued)

The financial statements of the subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. Intra-group balances and transactions, and any unrealized profit and loss arising from intra-group transactions are eliminated in preparing the consolidated financial statements. Total comprehensive income of subsidiaries is attributed to the shareholders of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, financial statements of subsidiaries are adjusted to align their accounting policies with those adopted by the Company.

Changes in the Group's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. The difference between the adjustment of the non-controlling interest and the fair value of the payment or receipt is recognized as equity and belongs to the Company.

(ii) List of subsidiaries in the consolidated financial statements

The subsidiaries included in the consolidated financial statements were as follows:

			Percentage of Ownership	
Name of Investor	**Name of Investee**	**Main Business and Products**	**December 31, 2018**	**December 31, 2017**
The Company	Apacer Memory America Inc. (AMA)	Sales of memory modules, flash memory cards and consumer electronic products	100.00 %	100.00 %
The Company	Apacer Technology B.V. (AMH)	Sales of memory modules, flash memory cards and consumer electronic products	100.00 %	100.00 %
The Company	Apacer Technology Japan Corp. (AMJ)	Sales of memory modules, flash memory cards and consumer electronic products	100.00 %	100.00 %
The Company	Kingdom Corp. Limited (AMK)	Sales of memory modules, flash memory cards and consumer electronic products	100.00 %	100.00 %
The Company /ACYB	Apacer Technologies Private Limited (ATPL)	Sales of memory modules, flash memory cards and consumer electronic products	100.00 %	100.00 %
The Company	Apacer Technology (BVI) Inc. (ACYB)	Investment holding activity	100.00 %	100.00 %
ACYB	Apacer Electronic (Shanghai) Co., Ltd. (AMC)	Sales of memory modules, flash memory cards and consumer electronic products	100.00 %	100.00 %
AMK	Shenzhen Kylinesports Technology Co. (AMS)	Sales of gaming products and consumer electronic products	99.00 %	99.00 %

(iii) List of subsidiaries which are not included in the consolidated financial statements: None.

(d) Foreign currency

(i) Foreign currency transactions

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at exchange rates at the end of the period ("the reporting date") of monetary assets and liabilities denominated in foreign currencies are recognized in profit or loss.

Non-monetary assets and liabilities denominated in foreign currencies which are measured at fair value are retranslated at the exchange rate prevailing at the date when the fair value is determined. Exchange differences arising on the translation of non-monetary items are recognized in profit or loss, except for exchange differences arising 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 denominated in a foreign currency that are measured at historical cost are not retranslated.

(ii) Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising from acquisition, are translated into the presentation currency of the Group’ s consolidated financial statements at the exchange rates at the reporting date. The income and expenses of foreign operations are translated into the presentation currency of the Group’ s consolidated financial statements at the average exchange rates for the period. All resulting exchange differences are recognized in other comprehensive income.

On the disposal of a foreign operation which involves a loss of control over a subsidiary or loss of significant influence over an associate that includes a foreign operation, all of the exchange differences accumulated in equity in respect of that operation attributable to the shareholders of the Company are entirely reclassified to profit or loss. In the case of a partial disposal that does not result in the Group losing control over a subsidiary, the proportionate share of accumulated exchange differences is reclassified to non-controlling interests. For a partial disposal of the Group’ s ownership interest in an associate, the proportionate share of the accumulated exchange differences in equity is reclassified to profit or loss.

When the settlement of a monetary receivable from or payable to a foreign operation is neither planned nor likely to occur in the foreseeable future, the monetary item is, in substance, a part of net investment in that foreign operation, and the related foreign exchange gains and losses thereon are recognized as other comprehensive income.

(e) Classification of current and non-current assets and liabilities

An asset is classified as current when one of following criteria is met; all other assets are classified as non-current assets.

(i) It is expected to be realized, or sold or consumed in the normal operating cycle;
(ii) It is held primarily for the purpose of trading;
(iii) It is expected to be realized within twelve months after the reporting date; or
(iv) The asset is cash or a cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting date.

A liability is classified as current when one of following criteria is met; all other liabilities are classified as non-current liabilities:

(i) It is expected to be settled in the normal operating cycle;
(ii) It is held primarily for the purpose of trading;
(iii) It is due and to be settled within twelve months after the reporting date; or

(Continued)

(iv) The Group does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting date.

(f) Cash and cash equivalents

Cash consists of cash on hand, checking deposits, and demand deposits. Cash equivalents consist of short-term and highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value. Time deposits that meet the aforesaid criteria and are held for meeting short-term cash commitments instead of helding for investing and other purposes are also classified as cash equivalents.

(g) Financial instruments

(i) Financial assets (applicable from January 1, 2018)

Financial assets are classified into the following categories: measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL). Regular way purchases or sales of financial assets are recognized or derecognized on a trade-date basis.

The Group shall reclassify all affected financial assets only when it changes its business model for managing its financial assets.

1) Financial assets measured at amortized cost

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and

- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A financial asset measured at amortized cost is initially recognized at fair value, plus any directly attributable transaction costs. These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses, and impairment loss, are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

2) Financial assets at fair value through other comprehensive income (Financial assets at "FVOCI")

A debt investment is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and

(Continued)

- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an instrument-by-instrument basis.

A financial asset measured at FVOCI is initially recognized at fair value, plus any directly attributable transaction costs. These assets are subsequently measured at fair value. Foreign exchange gains and losses, interest income calculated using the effective interest method and impairment losses, deriving from debt investments are recognized in profit or loss; whereas dividends deriving from equity investments are recognized as income in profit or loss, unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses of financial assets measured at FVOCI are recognized in OCI. On derecognition, gains and losses accumulated in OCI of debt investments are reclassified to profit or loss. However, gains and losses accumulated in OCI of equity investments are reclassified to retain earnings instead of profit or loss.

Dividend income derived from equity investments is recognized on the date that the Group's right to receive payment is established, which in the case of quoted securities is normally the ex-dividend date.

3) Financial assets at fair value through profit or loss (Financial assets at "FVTPL")

All financial assets not classified as amortized cost or FVOCI described as above are measured at FVTPL, including derivative financial assets. On initial recognition, the Group may irrevocably designate a financial asset, which meets the requirements to be measured at amortized cost or at FVOCI, as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets in this category are measured at fair value at initial recognition. Attributable transaction costs are recognized in profit or loss as incurred. Subsequent changes that are measured at fair value, which take into account any dividend and interest income, are recognized in profit or loss.

4) Assessment whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, 'principal' is defined as the fair value of the financial assets on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs, as well as a profit margin.

(Continued)

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features)

5) Impairment of financial assets

The Group recognizes loss allowances for expected credit losses on financial assets measured at amortized cost (including cash and cash equivalents, notes and accounts receivable, other receivables and other financial assets).

The Group measures loss allowances at an amount equal to lifetime expected credit loss (ECL), except for the following which are measured as 12-month ECL:

- bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition.

Loss allowance for accounts receivables are always measured at an amount equal to lifetime ECL.

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument. 12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 month after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis based on the Group's historical experience and informed credit assessment as well as forward-looking information.

(Continued)

ECLs are probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial asset.

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.

The gross carrying amount of a financial asset is written off, either partially or in full, to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

6) Derecognition of financial assets

Financial assets are derecognized when the contractual rights to the cash flows from the assets expire, or when the Group transfers substantially all the risks and rewards of ownership of the financial assets.

On derecognition of a debt instrument in its entirety, the Group recognizes the difference between its carrying amount and the sum of the consideration received or receivable and any cumulative gain or loss that had been recognized in other comprehensive income and presented in " other equity– unrealized gains or losses on fair value through other comprehensive income", in profit or loss, and presents it in the line item of non-operating income and expenses.

On derecognition of a financial asset other than in its entirety, the Group allocates the previous carrying amount of the financial asset between the part it continues to recognize under continuing involvement, and the part it no longer recognizes on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognized and the sum of the consideration received for the part no longer recognized and any cumulative gain or loss allocated to it that had been recognized in other comprehensive income is recognized in profit or loss, and presented in the line item of non-operating income and expenses. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is no longer recognized on the basis of the relative fair values of those parts.

(ii) Financial assets (applicable before January 1, 2018)

Financial assets are classified into the following categories: financial assets at fair value through profit or loss, loans and receivables, and available-for-sale financial assets. Regular way purchases or sales of financial assets are recognized or derecognized on a trade-date basis.

(Continued)

1) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss consist of financial assets held for trading and those designated as at fair value through profit or loss at inception. A financial asset is classified in this category if acquired principally for the purpose of selling and repurchasing in the short term. Derivatives are also categorized as financial assets at fair value through profit or loss unless they are designated as hedges.

At initial recognition, financial assets carried at fair value through profit or loss are recognized at fair value. Any attributable transaction costs are recognized in profit or loss as incurred. Subsequent to the initial recognition, changes in fair value (including dividend income and interest income) are recognized in profit or loss.

2) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables comprise accounts receivable and other receivables. At initial recognition, such assets are recognized at fair value, plus, any directly attributable transaction costs. Subsequent to initial recognition, loans and receivables other than insignificant interest on short-term receivables are measured at amortized cost using the effective interest method, less, any impairment losses. Interest income is recognized as non-operating income in profit or loss.

3) Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are designated as available-for-sale or are not classified in any of the other categories of financial assets. At initial recognition, available-for-sale financial assets are recognized at fair value plus any directly attributable transaction cost. Subsequent to initial recognition, these assets are measured at fair value, and changes therein, other than impairment losses, interest income calculated using the effective interest method, dividend income, and foreign currency differences on monetary financial assets, are recognized in other comprehensive income and presented in “unrealized gain/loss from available-for-sale financial assets” in equity. When the financial asset is derecognized, the gain or loss previously accumulated in equity is reclassified to profit or loss.

Investments in equity instruments that do not have a quoted market price in a non-active market and whose fair value cannot be reliably measured are measured at cost less impairment loss and are reported as financial assets measured at cost.

Dividends received from equity investments are recognized as non-operating income on the date of entitlement to receive dividends (usually the ex-dividend date).

(Continued)

4) Impairment of financial assets

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

Evidence of impairment may include indications that the debtor is experiencing significant financial difficulty, default or delinquency in interest or principal payments, indications that the debtor or issuer will probably enter bankruptcy or other financial reorganization, and the disappearance of an active market for that financial asset because of financial difficulties. For available-for-sale equity investments, a significant or prolonged decline in the fair value of the security below its cost is also evidence that the assets are impaired.

If the Group determines that no objective evidence of impairment exists for an individually assessed accounts receivable, whether significant or not, such asset is included in a group of accounts receivable with similar credit risk characteristics which are then collectively assessed for impairment. Objective evidence that receivables are impaired includes the Group's collection experience in the past, an increase in delayed payments, and national or local economic conditions that correlate with overdue receivables.The Group assesses the collectability of receivables by performing the accounts receivable aging analysis and evaluating the credit quality of its customers.

An impairment loss is recognized by reducing the carrying amount of the respective financial assets with the exception of receivables, where the carrying amount is reduced through an allowance account. Changes in the amount of the allowance account are recognized in profit or loss.

An impairment loss in respect of a financial asset measured at amortized cost is measured as the excess of the asset's carrying amount over the present value of the estimated future cash flows discounted at the financial asset's original effective interest rate. If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed to the extent that the carrying amount of the financial assets at the date the impairment loss is reversed does not exceed what the amortized cost would have been had the impairment loss not been recognized.

An impairment loss in respect of a financial asset measured at cost is measured as the excess of the asset's carrying amount over the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. A subsequent reversal of the impairment loss is prohibited.

When an impairment loss is recognized for an available-for-sale asset, the cumulative gains or loss that had been recognized in other comprehensive income is reclassified from equity to profit or loss. Any subsequent recovery in the fair value of an impaired available-for-sale equity security is recognized in other comprehensive income, and accumulated in other equity.

(Continued)

The impairment loss and the reversal gain for accounts receivable are recognized as selling expenses, and as non-operating income and loss for financial assets other than accounts receivable.

5) Derecognition of financial assets

Financial assets are derecognized when the contractual rights of the cash inflow from the asset are terminated, or when the Group transfers out substantially all the risks and rewards of ownership of the financial assets to other enterprises.

On derecognition of a financial asset in its entirety, the difference between the carrying amount and the sum of the consideration received or receivable and any cumulative gain or loss that had been recognized in other comprehensive income and accumulated in other equity— unrealized gains or losses from available-for-sale financial assets is recognized in profit or loss, and included in the non-operating income and loss of the statement of comprehensive income.

On derecognition of part of a financial asset, the previous carrying amount of the financial asset shall be allocated between the part that continues to be recognized and the part that is derecognized, on the basis of relative fair values of those parts on the date of transfer. The difference between the carrying amount allocated to the part derecognized and the sum of the consideration received or receivable for the part of the financial asset derecognized and the cumulative gain or loss that had been recognized in other comprehensive income allocated to the part derecognized is charged to profit or loss. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is derecognized, based on the relative fair values of those parts.

(iii) Financial liabilities

1) Financial liabilities at fair value through profit or loss

A financial liability is classified in this category if it is classified as held for trading or is designated as a financial liability at fair value through profit or loss on initial recognition. A financial liability is classified as held for trading if it is acquired principally for the purpose of selling or repurchasing in the short term. Derivatives are also categorized as financial liabilities at fair value through profit or loss unless they are designated as hedges.

At initial recognition, this type of financial liability is recognized at fair value, and any attributable transaction costs are recognized in profit or loss as incurred. Subsequent to initial recognition, the financial liabilities are measured at fair value, and changes therein, which take into account any interest expense, are recognized in profit or loss.

(Continued)

2) Financial liabilities measured at amortized cost

Financial liabilities not classified as held for trading or not designated as at fair value through profit or loss, which comprise short-term borrowings, notes and accounts payable, and other payables, are measured at fair value plus any directly attributable transaction cost at initial recognition. Subsequent to initial recognition, these financial liabilities are measured at amortized cost using the effective interest method. Interest expense which is not capitalized as asset is recognized in profit or loss, and included in non-operating income and loss of the consolidated statement of comprehensive income.

3) Derecognition of financial liabilities

The Group derecognizes a financial liability when its contractual obligation has been fulfilled or cancelled, or has expired. The difference between the carrying amount of a financial liability derecognized and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss and included in the non-operating income and loss of the consolidated statement of comprehensive income.

4) Offsetting of financial assets and liabilities

Financial assets and liabilities are presented on a net basis only when the Group has the legally enforceable right to offset and intends to settle such financial assets and liabilities on a net basis or to realize the assets and settle the liabilities simultaneously.

(iv) Derivative financial instruments

Derivative financial instruments such as foreign currency forward contracts are held to hedge the Group's foreign currency exposures. Derivatives are recognized initially at fair value and attributable transaction costs are recognized in profit or loss as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are recognized in profit or loss, and included in non-operating income and loss. If the valuation of a derivative instrument results in a positive fair value, it is classified as a financial asset; otherwise, it is classified as a financial liability.

(h) Inventories

Inventories are measured at the lower of cost and net realizable value. The cost of inventories is calculated based on the weighted-average method and includes expenditure incurred in acquiring the inventories, production or conversion costs, and other costs incurred in bringing them to the location and condition ready for sale. Fixed manufacturing overhead is allocated to finished products and work in process based on the higher of normal capacity or actual capacity; variable manufacturing overhead is allocated based on the actual capacity of machinery and equipment. Net realizable value represents the estimated selling price in the ordinary course of business, less all estimated costs of completion and necessary selling expenses.

(i) Investment in associates

Associates are those entities in which the Group has significant influence, but not control or joint venture, over the financial and operating policies.

(Continued)

Investments in associates are accounted for using the equity method and are recognized initially at cost, plus, any transaction costs. The carrying amount of the investment in associates includes goodwill identified on acquisition, net of any accumulated impairment losses. When necessary, the entire carrying amount of the investment (including goodwill) will be tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Group's share of its associates' post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized as other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When changes in an associate's equity are not recognized in profit or loss or other comprehensive income of the associate, and such changes do not affect the Group's ownership percentage of the associate, the Group recognizes the change in ownership interests of its associate as "capital surplus" in proportion to its ownership.

Unrealized profits resulting from transactions between the Group and an associate are eliminated to the extent of the Group's interest in the associate. Unrealized losses on transactions with associates are eliminated in the same way, except to the extent that the underlying asset is impaired.

When the Group's share of losses in an associate equals or exceeds its interest in the associate, the recognition of further losses is discontinued. Additional losses are provided for, and a liability is recognized, only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

When an associate issues new shares and the Group does not subscribe to the new shares in proportion to its original ownership percentage, the Group's interest in the associate's net assets will be changed. The change in the equity interest is adjusted through the capital surplus and investment accounts. If the Group's capital surplus is insufficient to offset the adjustment to investment accounts, the difference is charged as a reduction of retained earnings. If the Group's interest in an associate is reduced due to the additional subscription to the shares of associate by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate shall be reclassified to profit or loss on the same basis as would be required if the associate had directly disposed of the related assets or liabilities.

Adjustments are made to associates' financial statements to conform to the accounting polices applied by the Group.

(j) Property, plant and equipment

(i) Recognition and measurement

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. Cost includes expenditure that is directly attributed to the acquisition of the asset and bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and any borrowing cost that is eligible for capitalization.

The gain or loss arising from the disposal of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item, and is recognized in other gains and losses－net.

(ii) Subsequent costs

Subsequent costs are capitalized only when it is probable that future economic benefits associated with the costs will flow to the Group and the cost of the item can be measured reliably. The carrying amount of a replaced part is derecognized in profit or loss. All other repairs and maintenance are charged to expense as incurred.

(iii) Depreciation

Depreciation is provided for property, plant and equipment over the estimated useful lives using the straight-line method. When an item of property, plant and equipment comprises significant individual components for which different depreciation methods or useful lives are appropriate, each component is depreciated separately. Land is not depreciated. The depreciation is recognized in profit or loss.

The estimated useful lives for property, plant and equipment are as follows: buildings and improvements: 6 to 47 years; machinery and equipment: 2 to 11 years; transportation equipment: 4 years; and other equipment: 3 to 15 years.

Depreciation methods, useful lives, and residual values are reviewed at each financial year-end, with the effect of any changes in estimate accounted for on a prospective basis.

(k) Leases

(i) The Group as lessor

Lease income from an operating lease is recognized in profit or loss on a straight-line basis over the lease term. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized as expense over the lease term on a straight-line basis.

(ii) The Group as lessee

Payments made under an operating lease (excluding insurance and maintenance expenses) are charged to expense over the lease term on a straight-line basis.

(l) Intangible assets

The Group's intangible assets are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized in profit or loss using the straight-line method over the following estimated useful lives: acquired computer software: 2 to 7 years; royalties for the use of patents: 13 to 17 years.

The residual value, amortization period, and amortization method are reviewed at least at each financial year-end, with the effect of any changes in estimate accounted for on a prospective basis.

(Continued)

(m) Impairment of non-financial assets

Non-financial assets other than inventories, deferred income tax assets, and assets arising from employee benefits are reviewed for impairment at each reporting date to determine whether there is any indication of impairment. When there exists an indication of impairment for an asset, the recoverable amount of the asset is estimated. If the recoverable amount of an individual asset cannot be determined, the Group estimates the recoverable amount of the cash-generating units ("CGU") to which the asset has been allocated.

The recoverable amount for an individual asset or a CGU is the higher of its fair value less costs to sell or its value in use. When the recoverable amount of an asset or a CGU is less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount, and an impairment loss is recognized in profit or loss immediately.

The Group assesses at each reporting date whether there is any evidence that an impairment loss recognized in prior periods for an asset other than goodwill may no longer exist or may have decreased. If so, an impairment loss recognized in prior periods for an asset other than goodwill is reversed, and the carrying amount of the asset or CGU is increased to its revised estimate of recoverable amount. The increased carrying amount shall not exceed the carrying amount (net of amortization or depreciation) that would have been determined had no impairment loss been recognized in prior years.

(n) Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

(i) Warranties

A provision for warranties is recognized when the underlying products or services are sold. This provision reflects the historical warranty claim rate and the weighting of all possible outcomes against their associated probabilities.

(ii) Sales return and allowances provision

A provision for sales returns and allowances is recognized when the underlying products are sold. This provision is estimated based on historical sales return and allowances data.

(o) Revenue recognition

(i) Revenue from contracts with customers (applicable from January 1, 2018)

Revenue is measured based on the consideration to which the Group expects to be entitled in exchange for transferring goods to a customer. The Group recognizes revenue when it satisfies a performance obligation by transferring control of a good to a customer.

(Continued)

1) Sale of goods

The Group recognizes revenue when control of the goods has been transferred to the customer, being when the goods have been delivered to the customer, and there is no unfulfilled obligation that could affect the customer's acceptance of the goods. Delivery occurs when the customer has accepted the goods in accordance with the terms of sales, the risks of obsolescence and loss have been transferred to the customer, and the Group has objective evidence that all criteria for acceptance have been satisfied.

A receivable is recognized when the goods are delivered as this is the point in time that the Group has a right to an amount of consideration that is unconditional.

2) Financing components

The Group does not expect that the period between the transfer of the promised goods to the customer and payment by the customer exceeds one year. As a consequence, the Group does not adjust any of the transaction prices for the time value of money.

(ii) Revenue recognition (applicable before January 1, 2018)

1) Sale of goods

Revenue from the sale of goods is recognized when all the following conditions have been satisfied: (a) the significant risks and rewards of ownership of the goods have been transferred to the buyer; (b) the Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold; (c) the amount of revenue can be measured reliably; (d) it is probable that the economic benefits associated with the transaction will flow to the Group; and (e) the cost incurred or to be incurred in respect of the transaction can be measured reliably.

The timing of the transfers of risks and rewards varies depending on the individual terms of the sales agreement. Revenue is not recognized for the sale of key components to an original design manufacturer for manufacture or assembly as the significant risks and rewards of the ownership of materials are not transferred.

2) Interest income and dividend income

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

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

(p) Employee benefits

(i) Defined contribution plans

Obligations for contributions to defined contribution pension plans are expensed during the year in which employees render services.

(Continued)

(ii) Defined benefit plans

The liability recognized in respect of defined benefit pension plans is the present value of the defined benefit obligation at the reporting date less the fair value of plan assets. The discount rate for calculating the present value of the defined benefit obligation refers to the interest rate of high-quality government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the term of the related pension obligation. The defined benefit obligation is calculated annually by qualified actuaries using the projected unit credit method.

When the benefits of a plan are improved, the expense related to the increased obligations resulting from the services rendered by employees in the past years are recognized in profit or loss immediately.

The remeasurements of the net defined benefit liability (asset) comprise (i) actuarial gains and losses; (ii) return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset); and (iii) any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset). The remeasurements of the net defined benefit liabilities (asset) are recognized in other comprehensive income and then transferred to retained earnings.

The Group recognizes gains or losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs. The gain or loss on curtailment or settlement comprises any resulting change in the fair value of plan assets and any change in the present value of the defined benefit obligation.

(iii) Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed during the period in which employees render services. A liability is recognized for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Group has a present legal or constructive obligation to make such payments as a result of past service provided by the employees, and the obligation can be estimated reliably.

(q) Income taxes

Income tax expenses include both current taxes and deferred taxes. Current and deferred taxes are recognized in profit or loss unless they relate to items recognized directly in equity or other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred income taxes are recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred taxes are not recognized for:

(i) Temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;

(Continued)

(ii) Temporary differences arising from investments in subsidiaries to the extent that the Group is able to control the timing of the reversal of the temporary differences, and it is probable that the differences will not reverse in the foreseeable future; and

(iii) Temporary differences arising from initial recognition of goodwill.

Deferred tax is measured based on the expected manner of realization or settlement of the carrying amount of the assets and liabilities, using tax rates enacted or substantively enacted at the reporting date.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred tax assets and liabilities relate to income taxes levied by the same tax authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

Deferred tax assets are recognized for unused tax losses, tax credits, and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realized.

(r) Earnings per share ("EPS")

The basic and diluted EPS attributable to shareholders of the Company are disclosed in the consolidated financial statements. Basic EPS is calculated by dividing net income attributable to shareholders of the Company by the weighted-average number of common shares outstanding during the year. In calculating diluted EPS, the net income attributable to shareholders of the Company and weighted-average number of common shares outstanding during the year are adjusted for the effects of dilutive potential common shares. The Group's dilutive potential common shares are profit sharing for employees to be settled in the form of common stock.

(s) Operating segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the Group). Operating results of the operating segment are regularly reviewed by the Group's chief operating decision maker to make decisions on the allocation of resources to the segment and to assess its performance for which discrete financial information is available.

5. Critical accounting judgments and key sources of estimation uncertainty

The preparation of the consolidated financial statements in conformity with the Regulations and Taiwan-IFRSs requires management to make judgments, estimates, and assumptions that affect the application of the accounting policies and the reported amount of assets, liabilities, income and expenses. 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 estimates are revised and the future periods affected.

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year is as follows:

(Continued)

Inventories are measured at the lower of cost or net realizable value. The Group estimates the net realizable value of inventory, taking into account obsolescence and unmarketable items at the reporting date, 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, which could result in significant adjustments. Refer to note 6(h) for more details of the valuation of inventories.

6. Significant account disclosures

(a) Cash and cash equivalents

		December 31, 2018	December 31, 2017
Cash on hand	$	98	179
Demand deposits		739,181	562,363
Time deposits with original maturities less than three months		2,282	29,071
	$	**741,561**	**591,613**

(b) Financial assets and liabilities at fair value through profit or loss－current

		December 31, 2018	December 31, 2017
Financial assets mandatorily measured at fair value through profit or loss －current:			
Foreign currency forward contracts	$	454	-
Financial assets held for trading－current:			
Foreign currency forward contracts		-	688
	$	**454**	**688**
Financial liabilities held for trading－current:			
Foreign currency forward contracts	$	**(289)**	**(354)**

Refer to note 6(v) for the detail of the changes in fair value recognized in profit or loss.

The Group entered into derivative contracts to manage foreign currency exchange risk resulting from its operating activities. The derivative financial instruments that did not conform to the criteria for hedge accounting and were classified as financial assets mandatorily measured at fair value through profit or loss as of December 31, 2018, and financial assets held for trading as of December 31, 2017 consisted of the following:

	December 31, 2018				
	Contract amount (in thousands)		Fair value	Currency (Sell / Buy)	Maturity period
Financial assets－foreign currency forward contracts	USD	6,500	**454**	USD / TWD	2019/01/04~2019/01/25

(Continued)

	December 31, 2017				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial assets－foreign currency forward contracts	JPY	44,300	86	JPY / TWD	2018/01/25～2018/02/23
	USD	6,500	602	USD / TWD	2018/01/03～2018/02/02
			$ 688		

	December 31, 2018				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial liabilities－foreign currency forward contracts	JPY	48,200	(246)	JPY / TWD	2019/01/25
	USD	1,500	(43)	USD / TWD	2019/01/04～2019/01/11
			$ (289)		

	December 31, 2017				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial liabilities－foreign currency forward contracts	TWD	81,997	(244)	TWD / USD	2018/01/02～2018/01/29
	USD	2,000	(110)	USD / TWD	2018/02/08
			$ (354)		

(c) Financial assets at fair value through other comprehensive income－non-current

	December 31, 2018
Equity investments at fair value through other comprehensive income:	
Domestic unlisted stocks	$ 44,520
Foreign unlisted stocks	417
	$ 44,937

The Group designated the abovementioned investments as at fair value through other comprehensive income because these equity investments represent those investments that the Group intends to hold for long-term strategic purposes. These investments were classified as available-for-sale financial assets－non-current and financial assets carried at cost－non-current, respectively, on December 31, 2017.

No strategic investments were disposed for the year ended December 31, 2018, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

For credit risk and market risk, please refer to note 6(x).

(d) Available-for-sale financial assets－non-current

	December 31, 2017
Domestic unlisted stocks	$ 12,117

The abovementioned investments were classified as financial assets at fair value through other comprehensive income－non-current on December 31, 2018; please refer to note 6(c).

For credit risk and market risk, please refer to note 6(x).

(e) Financial assets carried at cost－non-current

	December 31, 2017
Domestic unlisted stocks	$ 5,359

To expand its business, the Group invested in OTO Photonics Inc. On December 31, 2017, this investment should be classified as available-for-sale financial assets according to the Group’s intention. However, there is a wide range of estimated fair value of the abovementioned investments and the probability for each estimate of fair value cannot be reasonably determined. The Group’s management concludes that its fair value cannot be measured reliably and this investment is reported as financial assets carried at cost. The abovementioned investments were classified as financial assets at fair value through other comprehensive income on December 31, 2018, please refer to note 6(c).

(f) Notes and accounts receivable

	December 31, 2018	December 31, 2017
Notes receivable	$ 296	1,524
Accounts receivable	1,178,080	1,295,255
Accounts receivable from related parties	1,039	4
	1,179,415	1,296,783
Less: loss allowance	(4,270)	(2,679)
	$ 1,175,145	1,294,104

(Continued)

The Group applies the simplified approach to provide for its expected credit losses, i.e. the use of lifetime expected loss provision for all receivables (including related parties) on December 31, 2018. The loss allowance provision as of December 31, 2018 was determined as follows:

	Gross carrying amount	Weighted-average loss rate	Loss allowance provision
Current	$ 1,009,859	0.0565%	570
Past due 1-90 days	166,239	0.2320%	386
Past due 91-180 days	5	37.50%	2
Past due over 181 days	3,312	100%	3,312
	$ 1,179,415		**4,270**

As of December 31, 2017, the Group applied the incurred loss model to consider the loss allowance provision of notes and accounts receivable (including related parties). The aging analysis of notes and accounts receivable (including related parties) which were past due but not impaired was as follows:

	December 31, 2017
Past due 1-90 days	**$ 155,772**

Movements of the loss allowance for notes and accounts receivable (including related parties) were as follows:

	2018	2017 Individually assessed impairment	2017 Collectively assessed impairment
Balance at January 1 (per IAS 39)	$ 2,679	3,192	-
Adjustment on initial application of IFRS 9	77		
Balance at January 1 (per IFRS 9)	2,756		
Impairment loss	1,514	1,189	-
Write-off	-	(1,702)	-
Balance at December 31	**$ 4,270**	**2,679**	**-**

(g) Other receivables

	December 31, 2018	December 31, 2017
Other receivables	**$ 43,760**	**76,614**

There is no loss allowance provisions for other receivables on December 31, 2018 after the assessment.

(Continued)

As of December 31, 2017, the Group expected other receivables could be collected within one year and no loss allowance provision was provided for after assessment.

(h) Inventories

	December 31, 2018	December 31, 2017
Raw materials	$ 500,256	687,842
Work in process	101,616	86,807
Finished goods	577,704	655,200
Inventories in transit	14,309	176,017
	$ 1,193,885	**1,605,866**

For the years ended December 31, 2018 and 2017, the amounts of inventories recognized as cost of revenue were as follows:

	2018	2017
Cost of inventories sold	$ 8,088,292	8,616,181
Write-downs of inventories	44,037	128,505
	$ 8,132,329	**8,744,686**

The above write-downs of inventories to net realizable value were included in cost of revenue.

(i) Investments accounted for using equity method

(i) Investments in associates

	December 31, 2018		December 31, 2017	
Name of Associates	**Percentage of voting rights**	**Carrying amount**	**Percentage of voting rights**	**Carrying amount**
JoiiUp Technology Inc.	16.15 %	**$ 884**	17.78 %	**1,721**

Aggregate financial information of associates that were not individually material was summarized as follows. The financial information was included in the Group's consolidated financial statement.

	December 31, 2018	December 31, 2017
The aggregate carrying amount of associates that were not individually material	**$ 884**	**1,721**

	2018	2017
Attributable to the Group:		
Net income	$ (2,522)	(3,168)
Other comprehensive income	-	-
Total comprehensive income	**$ (2,522)**	**(3,168)**

(Continued)

(j) Property, plant and equipment

The movements of cost, accumulated depreciation and impairment loss of the property, plant and equipment for the years ended December 31, 2018 and 2017 were as follows:

	Land	Buildings	Machinery and equipment	Transportation equipment	Other equipment	Equipment to be inspected and construction in progress	Total
Cost:							
Balance at January 1, 2018	$ 556,498	275,836	176,566	-	97,027	841	1,106,768
Additions	-	1,236	7,152	-	4,863	12,298	25,549
Disposals	-	-	(9,243)	-	(597)	-	(9,840)
Other reclassification and effect of exchange rate changes (Note)	-	11	1,481	-	173	(2,592)	(927)
Balance at December 31, 2018	**$ 556,498**	**277,083**	**175,956**	**-**	**101,466**	**10,547**	**1,121,550**
Balance at January 1, 2017	$ 556,498	274,407	166,153	1,500	93,603	8,029	1,100,190
Additions	-	1,429	10,825	-	3,502	32,509	48,265
Disposals	-	-	(30,197)	(1,500)	-	-	(31,697)
Other reclassification and effect of exchange rate changes (Note)	-	-	29,785	-	(78)	(39,697)	(9,990)
Balance at December 31, 2017	**$ 556,498**	**275,836**	**176,566**	**-**	**97,027**	**841**	**1,106,768**
Accumulated depreciation and impairment loss:							
Balance at January 1, 2018	$ -	27,491	114,561	-	65,329	-	207,381
Depreciation	-	7,141	17,551	-	11,582	-	36,274
Disposals	-	-	(9,243)	-	(597)	-	(9,840)
Impairment loss	-	-	127	-	-	-	127
Other reclassification and effect of exchange rate changes (Note)	-	-	14	-	136	-	150
Balance at December 31, 2018	**$ -**	**34,632**	**123,010**	**-**	**76,450**	**-**	**234,092**
Balance at January 1, 2017	$ -	20,668	120,869	1,500	54,202	-	197,239
Depreciation	-	6,823	16,922	-	11,674	-	35,419
Disposals	-	-	(30,197)	(1,500)	-	-	(31,697)
Impairment loss	-	-	6,994	-	-	-	6,994
Other reclassification and effect of exchange rate changes (Note)	-	-	(27)	-	(547)	-	(574)
Balance at December 31, 2017	**$ -**	**27,491**	**114,561**	**-**	**65,329**	**-**	**207,381**
Carrying amount:							
Balance at December 31, 2018	**$ 556,498**	**242,451**	**52,946**	**-**	**25,016**	**10,547**	**887,458**
Balance at December 31, 2017	**$ 556,498**	**248,345**	**62,005**	**-**	**31,698**	**841**	**899,387**

Note: reclassified from property, plant and equipment to other non-current assets.

In 2018 and 2017, the Group recognized an impairment loss on property, plant and equipment of $127 and $6,994, respectively, which were included in non-operating income and loss.

(Continued)

(k) Intangible assets

The movements of costs and accumulated amortization of intangible assets for the years ended December 31, 2018 and 2017 were as follows:

		Computer software	Royalties for the use of patents	Total
Costs:				
Balance at January 1, 2018	$	52,634	4,104	56,738
Addition		45,313	79	45,392
Other reclassification and effect of exchange rate changes (Note)		6,077	(1)	6,076
Balance at December 31, 2018	$	**104,024**	**4,182**	**108,206**
Balance at January 1, 2017	$	35,752	763	36,515
Addition		8,179	3,341	11,520
Other reclassification and effect of exchange rate changes (Note)		9,258	-	9,258
Derecognition		(555)	-	(555)
Balance at December 31, 2017	$	**52,634**	**4,104**	**56,738**
Accumulated amortization:				
Balance at January 1, 2018	$	31,879	496	32,375
Amortization		9,322	222	9,544
Other reclassification and effect of exchange rate changes (Note)		7	-	7
Balance at December 31, 2018	$	**41,208**	**718**	**41,926**
Balance at January 1, 2017	$	25,006	386	25,392
Amortization		7,443	110	7,553
Other reclassification and effect of exchange rate changes (Note)		(15)	-	(15)
Derecognition		(555)	-	(555)
Balance at December 31, 2017	$	**31,879**	**496**	**32,375**
Carrying amount:				
Balance at December 31, 2018	$	**62,816**	**3,464**	**66,280**
Balance at December 31, 2017	$	**20,755**	**3,608**	**24,363**

Note: reclassified from other non-current assets to intangible assets.

The amortization of intangible assets is included in the following line items of the consolidated statement of comprehensive income:

		2018	2017
Cost of revenue	$	**2,211**	**714**
Operating expenses	$	**7,333**	**6,839**

(Continued)

(l) Short-term borrowings

The details of short-term borrowings were as follows:

	December 31, 2018	December 31, 2017
Unsecured bank loans	$ 138,218	492,240
Unused credit facilities	$ 2,491,803	1,778,440
Interest rate interval	3.08%	1.13%~2.64%

(m) Provisions

	Warranties	Sales returns and allowances	Total
Balance at January 1, 2018	$ 9,965	5,730	15,695
Provisions made	252	-	252
Amount utilized	(2,864)	(458)	(3,322)
Balance at December 31, 2018	$ 7,353	5,272	12,625
Balance at January 1, 2017	$ 12,394	3,137	15,531
Provisions made	1,353	2,593	3,946
Amount utilized	(3,782)	-	(3,782)
Balance at December 31, 2017	$ 9,965	5,730	15,695

(i) Warranties

The provision for warranties is made based on the number of units sold currently under warranty, historical rates of warranty claim on those units, and cost per claim to satisfy the warranty obligation. The Group reviews the estimation basis on an ongoing basis and revises it when appropriate.

(ii) Sales returns and allowances

Expected sales returns and allowances are estimated based on historical experience.

(n) Operating lease

(i) Lessee

Future minimum lease payments under operating leases are as follows:

	December 31, 2018	December 31, 2017
Within 1 year	$ 19,005	19,052
1 to 5 years	24,627	27,640
	$ 43,632	46,692

The Group leases its offices and warehouses under operating leases. The leases typically run for a period of 1 to 3 years. Lease payments are paid based on the terms of the lease contracts.

(Continued)

In 2018 and 2017, the rental expense of operating leases, amounted to $26,742 and $23,077, respectively, were recognized in cost of revenue and operating expenses.

(ii) Lessor

The Group leased its offices to others under operating leases. In 2018 and 2017, the rental income amounted to $3,156 and $4,208, respectively.

(o) Employee benefits

(i) Defined benefit plans

The reconciliation between the present value of defined benefit obligations and the net defined benefit liabilities for defined benefit plans were as follows:

	December 31, 2018	December 31, 2017
Present value of defined benefit obligations	$ 60,759	56,350
Fair value of plan assets	(35,189)	(33,991)
	25,570	22,359
Effects of the asset ceiling	-	-
Net defined benefit liabilities	$ **25,570**	**22,359**

Except for the Company, there is not any other entity within the Group which has defined benefit plans. The Company makes defined benefit plan contributions to the pension fund account at Bank of Taiwan that provides pension benefits for its employees upon retirement. The Company also established pension funds in accordance with the Regulations Governing the Management, Investment, and Distribution of the Employees' Retirement Fund Established by a Profit-seeking Enterprise, which are deposited monthly in the designated financial institutions. The plans entitle a retired employee to receive a payment based on years of service and average salary for the six months prior to the employee's retirement.

1) Composition of plan assets

In accordance with the requirements of the Labor Standards Law, the Company's pension fund account at Bank of Taiwan is managed and administered by the Bureau of Labor Funds of the Ministry of Labor (the Bureau of Labor Funds). According to the Regulations for Revenues, Expenditures, Safeguard and Utilization of the Labor Retirement Fund, with regard to the utilization of the Fund, minimum earnings shall be no less than the earnings attainable from two-year time deposits, with interest rates offered by local banks.

As of December 31, 2018 and 2017, the Group's labor pension fund account balance at Bank of Taiwan amounted to $35,189 and $33,991, respectively. Please refer to the website of the Bureau of Labor Funds for information on the labor pension fund assets including the asset portfolio and yield of the fund.

(Continued)

2) Movements in present value of defined benefit obligations

The movements in present value of defined benefit obligations of the Group were as follows:

	2018	2017
Defined benefit obligations at January 1	$ 56,350	55,758
Current service costs and interest expense	915	767
Remeasurement on the net defined benefit liabilities (assets):		
－Actuarial loss (gain) arising from changes in financial assumptions	2,383	(2,408)
－Actuarial loss arising from experience adjustments	1,643	2,361
Benefits paid by the plan	(532)	(128)
Defined benefit obligations at December 31	**$ 60,759**	**56,350**

3) Movements of fair value of plan assets

The movements of the fair value of plan assets of the Group were as follows:

	2018	2017
Fair value of plan assets at January 1	$ 33,991	33,477
Interest income	554	463
Remeasurement on the net defined benefit liabilities (assets)		
－Return on plan assets (excluding current interest expense)	819	(134)
Contributions by the employer	357	313
Benefits paid by the plan	(532)	(128)
Fair value of plan assets at December 31	**$ 35,189**	**33,991**

4) Changes in the effect of the asset ceiling

There was no effect of the asset ceiling.

(Continued)

5) Expenses recognized in profit or loss

The expenses recognized in profit or loss were as follows:

	2018	2017
Net interest expense on the net defined benefit liability	$ 361	304
Cost of revenue	$ 107	99
Selling expenses	118	106
Administrative expenses	85	61
Research and development expenses	51	38
	$ 361	304

6) Remeasurement of the net defined benefit liabilities recognized in other comprehensive income

The remeasurement of the net defined benefit liabilities recognized in other comprehensive income were as follows:

	2018	2017
Cumulative amount at January 1	$ 24,137	24,050
Recognized during the period	3,207	87
Cumulative amount at December 31	$ 27,344	24,137

7) Actuarial assumptions

The principal assumptions of the actuarial valuation were as follows:

	2018	2017
Discount rate	1.375 %	1.625 %
Future salary increases rate	3.000 %	3.000 %

The Group expects to make contribution of $361 to the defined benefit plans in the year following December 31, 2018.

The weighted average duration of the defined benefit plans is 17.24 years.

8) Sensitivity analysis

When calculating the present value of the defined benefit obligations, the Group uses judgments and estimations to determine the actuarial assumptions for each measurement date, including discount rates, employee turnover rates and future salary changes. Any changes in the actuarial assumptions may significantly impact the amount of the defined benefit obligations.

(Continued)

The following table summarizes the impact of a change in the assumptions on the present value of the defined benefit obligation on December 31, 2018 and 2017.

	Increase (decrease) in present value of defined benefit obligations	
	0.25% Increase	**0.25% Decrease**
December 31, 2018		
Discount rate	(2,383)	2,486
Future salary change rate	2,409	(2,318)
December 31, 2017		
Discount rate	(2,301)	2,435
Future salary change rate	2,346	(2,249)

Each sensitivity analysis considers the change in one assumption at a time, leaving the other assumptions unchanged. This approach shows the isolated effect of changing one individual assumption but does not take into account that some assumptions are related. The method used to carry out the sensitivity analysis is the same as the calculation of the net defined benefit liabilities recognized in the balance sheets.

In 2018, the method and assumptions used to carry out the sensitivity analysis is the same as in the prior year.

(ii) Defined contribution plans

The Company contributes monthly an amount equal to 6% of each employee's monthly wages to the employee' s individual pension fund account at the Bureau of Labor Insurance in accordance with the provisions of the Labor Pension Act. Foreign subsidiaries make contributions in compliance with their respective local regulations. Under this defined contribution plan, the Group has no legal or constructive obligation to pay additional amounts after contributing a fixed amount.

For the years ended December 31, 2018 and 2017, the Group recognized pension expenses of $23,120 and $21,289, respectively, in relation to the defined contribution plans.

(p) Income taxes

According to the amendments to the "Income Tax Act" enacted by the office of the President of the Republic of China (Taiwan) on February 7, 2018, the corporate income tax rate was adjusted from17% to 20% starting from 2018.

(Continued)

(i) The components of income tax expense were as follows:

	2018	2017
Current income tax expense		
Current period	$ 106,495	118,211
Adjustments for prior years	(3,985)	(27,510)
	102,510	90,701
Deferred income tax benefit		
Origination and reversal of temporary differences	(11,595)	(22,618)
Adjustments in tax rate	(11,239)	-
	(22,834)	(22,618)
Income tax expense	**$ 79,676**	**68,083**

The components of income tax benefit recognized in other comprehensive income were as follows:

	2018	2017
Items that will not be reclassified subsequently to profit or loss:		
Remeasurement of defined benefit plans	**$ 641**	**15**

Reconciliation of income tax expense and income before income tax was as follows:

	2018	2017
Income before income tax	**$ 438,506**	**473,040**
Income tax using the Company's statutory tax rate	$ 87,701	80,417
Effect of different tax rates in foreign jurisdictions	5,028	10,866
Adjustments in tax rate	(11,239)	-
Investment tax credits	(3,500)	(3,000)
Changes in unrecognized temporary differences	(8,339)	(3,296)
Prior-year adjustments	(3,985)	(27,510)
10% surtax on undistributed earnings	8,419	6,814
Others	5,591	3,792
	$ 79,676	**68,083**

(ii) Deferred income tax assets and liabilities

1) Unrecognized deferred income tax assets and liabilities

	December 31, 2018	December 31, 2017
Unrecognized deferred income tax assets:		
Aggregate deductible temporary differences associated with investments in subsidiaries	$ 22,801	21,206
Deductible temporary differences	788	669
	$ 23,589	**21,875**

(Continued)

	December 31, 2018	December 31, 2017
Unrecognized deferred income tax liabilities:		
Aggregate taxable temporary differences associated with investments in subsidiaries	$ 47,617	37,564

As the Group is able to control the timing of the reversal of the temporary differences associated with investments in its subsidiaries as of December 31, 2018 and 2017, and Management believes that it is probable that the temporary differences will not reverse in the foreseeable future, such temporary differences are not recognized as deferred income tax assets and liabilities.

2) Recognized deferred income tax assets and liabilities

Changes in the amount of deferred income tax assets and liabilities were as follows:

Deferred income tax assets:

	Defined benefit plans	Provision for inventory obsolescence	Warranty provision	Unrealized impairment loss on financial assets	Others	Total
Balance at January 1, 2018	$ 4,913	40,229	1,694	8,500	13,984	69,320
Recognized in profit or loss	-	9,464	(522)	-	2,536	11,478
Recognized in other comprehensive income	641	-	-	-	-	641
Adjustments in tax rate	867	7,031	299	1,500	1,695	11,392
Balance at December 31, 2018	**$ 6,421**	**56,724**	**1,471**	**10,000**	**18,215**	**92,831**
Balance at January 1, 2017	$ 4,898	18,211	2,107	8,500	12,550	46,266
Recognized in profit or loss	-	22,018	(413)	-	1,434	23,039
Recognized in other comprehensive income	15	-	-	-	-	15
Balance at December 31, 2017	**$ 4,913**	**40,229**	**1,694**	**8,500**	**13,984**	**69,320**

Deferred income tax liabilities:

	Others
Balance at January 1, 2018	$ 867
Recognized in profit or loss	(117)
Adjustments in tax rate	153
Balance at December 31, 2018	**$ 903**
Balance at January 1, 2017	$ 446
Recognized in profit or loss	421
Balance at December 31, 2017	**$ 867**

(iii) The Company’ s income tax returns for the years through 2016 have been examined and approved by the R.O.C. income tax authorities.

(Continued)

(q) Capital and other equity

(i) Common stock

As of December 31, 2018 and 2017, the Company's authorized shares of common stock consisted of 200,000 thousand shares, of which 100,898 thousand shares were issued and outstanding. The par value of the Company's common stock is $10 (dollars) per share. The Company has reserved 15,000 thousand shares for the exercise of employee stock options.

In order to enrich the necessary working capital in response to develop long-term operations, the Company's temporary shareholders' meeting held on December 29, 2014 resolved to raise capital through private placement. The effective date of the capital increase was January 21, 2015, and the issuance of common stock has been registered with the government authorities on January 28, 2015. Details are summarized below:

1) Shares issued: 15,000 thousand shares of common stock

2) Issue price: $25.38 (dollars) per share

3) Total proceeds received by the Company: $380,700

4) Investor of the private placement: Phison Electronics Corporation

5) Rights and obligations: All the rights and obligations of shares of common stock through the private placement (the "Private Placement Shares") shall be the same as those of shares of common stock issued and outstanding. However, except for selling to specific investors defined in Article 43-8 of the Securities and Exchange Act, the Private Placement Shares cannot be resold during a three-year period from delivery date. After three years from delivery date, according to the Securities and Exchange Act, and Directions for Public Companies Conducting Private Placements of Securities, the Company shall obtain a letter issued by Taiwan Stock Exchange Corporation ("TWSE") acknowledging that the Private Placement Shares have met the standards for TWSE listing before it may file with FSC for retroactive handling of public issuance procedures. Thereafter, the Company can apply for listing in TWSE of Private Placement Shares.

6) Others: The Company recognized capital surplus of $230,700, resulting from the issuance price of Private Placement Shares in excess of common stock's par value.

On May 8, 2018, the public issuance of abovementioned Private Placement Shares was approved by and registered with FSC.

(ii) Capital surplus

	December 31, 2018	December 31, 2017
Paid-in capital in excess of par value	$ 331,707	331,707
Employee stock options	12,901	12,901
Treasury stock transactions	3,781	3,781
Changes in equity of associates accounted for using equity method	11,521	9,836
	$ 359,910	**358,225**

(Continued)

Pursuant to the Company Act, any realized capital surplus is initially used to cover an accumulated deficit, and the balance, if any, could be transferred to common stock as stock dividends based on the original shareholding ratio or distributed as cash dividends based on a resolution approved by the shareholders. Realized capital surplus includes the premium derived from the issuance of shares of stock in excess of par value and donations from shareholders received by the Company. In accordance with the Regulations Governing the Offering and Issuance of Securities by Securities Issuers, distribution of stock dividends from capital surplus in any one year shall not exceed 10% of paid-in capital.

(iii) Retained earnings

1) Legal reserve

According to the Company Act, the Company must retain 10% of its annual income as a legal reserve until such retention equals the amount of paid-in capital. If a company has no accumulated deficit, it may, pursuant to a resolution approved by the shareholders, distribute its legal reserve to its shareholders by issuing new shares or by distributing cash for the portion in excess of 25% of the paid-in capital.

2) Special reserve

In accordance with Ruling No. 1010012865 issued by the FSC on April 6, 2012, a special reserve equal to the total amount of items that were accounted for as deductions from shareholders' equity was set aside from current and prior-year earnings. This special reserve shall revert to the retained earnings and be made available for distribution when the items that are accounted for as deductions from shareholders' equity are reversed in subsequent periods.

3) Earnings distribution

The Company's Articles of Incorporation stipulate that at least 10% of annual net income, after deducting accumulated deficit, if any, must be retained as legal reserve until such retention equals the amount of paid in capital. In addition, a special reserve shall be set aside in accordance with applicable laws and regulations. The remaining balance, together with the unappropriated earnings from the previous years, after retaining a certain portion of it for business considerations, can be distributed as dividends to shareholders. Except for the distribution of capital surplus and legal reserve in accordance with applicable laws and regulations, the Company cannot distribute any earnings when there are no retained earnings.

Since the Company operates in an industry experiencing rapid change and development, earnings are distributed in consideration of the current year's earnings, the overall economic environment, related laws and decrees, as well as the Company's long term development and stability in its financial position. The Company has adopted a balance dividend policy, in which a cash dividend comprises at least 10% of the total dividend distribution.

(Continued)

The appropriation of 2017 and 2016 earnings were approved by the shareholders at the meeting on May 30, 2018 and May 26, 2017, respectively. The resolved appropriation of the dividend per share were as follows:

	2017		2016	
	Dividends per share (in dollars)	Amount	Dividends per share (in dollars)	Amount
Dividends per share:				
Cash dividends	$ 2.60	**262,334**	2.40	**242,155**

(iv) Other equity items (net after tax)

1) Foreign currency translation differences

	2018	2017
Balance at January 1	$ (49,321)	(30,971)
Foreign exchange differences arising from translation of foreign operations	8,260	(18,350)
Balance at December 31	**$ (41,061)**	**(49,321)**

2) Unrealized gains (losses) on financial assets measured at fair value through other comprehensive income

	2018
Balance at January 1 (per IAS 39)	$ -
Adjustment on initial application of IFRS 9	(37,614)
Balance at January 1 (per IFRS 9)	(37,614)
Unrealized gains from investments in equity instruments measured at fair value through other comprehensive income	11,135
Balance at December 31	**$ (26,479)**

(v) Non-controlling interests

	2018	2017
Balance at January 1	$ 185	4,443
Equity attributable to non-controlling interest		
Net loss	(9)	(461)
Exchange differences on translation of foreign operations	(3)	253
Changes in non-controlling interests	-	(4,050)
Balance at December 31	**$ 173**	**185**

(Continued)

(r) Earnings per share ("EPS")

(i) Basic earnings per share

	2018	2017
Net income attributable to shareholders of the Company	$ 358,839	405,418
Weighted-average number of ordinary shares outstanding (in thousands)	100,898	100,898
Basic earnings per share (in dollars)	$ 3.56	4.02

(ii) Diluted earnings per share

	2018	2017
Net income attributable to shareholders of the Company	$ 358,839	405,418
Weighted-average number of ordinary shares outstanding (in thousands)	100,898	100,898
Effect of dilutive potential common stock (in thousand):		
Remuneration to employees	1,771	1,321
Weighted-average number of ordinary shares outstanding (including effect of dilutive potential common stock)	102,669	102,219
Diluted earnings per share (in dollars)	$ 3.50	3.97

(s) Revenue from contracts with customers

(i) Disaggregation of revenue

	2018		
	Segment		
	Asia	America and Europe	Total
Major products:			
Flash memory cards	$ 3,544,338	1,249,041	4,793,379
Memory modules	3,308,038	1,336,642	4,644,680
Others	3,484	75	3,559
	$ 6,855,860	2,585,758	9,441,618

(ii) Contract balances

	December 31, 2018	January 1, 2018
Notes and accounts receivable (including related parties)	$ 1,179,415	1,296,783
Less: loss allowance	(4,270)	(2,756)
	$ 1,175,145	1,294,027

For details on notes and accounts receivable and its loss allowance, please refer to note 6(f).

(t) Revenue

	2017
Revenue from sale of goods	**10,043,476**

For details on revenue for the year ended December 31, 2018, please refer to note 6(s).

(u) Remuneration to employees, and directors and supervisors

The Company's article of incorporation requires that earnings shall first to be offset against any deficit, then, a minimum of 4% will be distributed as remuneration to its employees and no more than 1.4% to its directors. Employees who are entitled to receive the abovementioned employee remuneration, in shares or cash, include the employees of the subsidiaries of the Company who meet certain specific requirement. The Company no longer has supervisors since the reelection of directors at the shareholders' meeting on May 30, 2018. The required duties of supervisors are being fulfilled by the Audit Committee.

For the years ended December 31, 2018 and 2017, the Company estimated its remuneration to employees amounting to $44,047 and $44,818, respectively, and the remuneration to directors and supervisors amounting to $6,852 and $7,130, respectively. The abovementioned estimated amounts are calculated based on the net profits before tax of each period (excluding the remuneration to employees, and directors and supervisors), multiplied by a certain percentage of the remuneration to employees, and directors and supervisors. The estimations are recognized as operating expenses. If the actual amounts differ from the estimated amounts, the differences shall be accounted as changes in accounting estimates and recognized as profit or loss in following year.

The abovementioned estimated remuneration to employees, and directors and supervisors is the same as the amount approved by the Board of Directors and will be paid in cash. Related information is available on the Market Observation Post System website of the Taiwan Stock Exchange.

(v) Non-operating income and loss

(i) Other income

	2018	2017
Interest income from bank deposits	$ 1,776	1,267
Rental income	3,156	4,208
	$ 4,932	**5,475**

(ii) Other gains and losses－net

	2018	2017
Gain on disposal of property, plant and equipment	$ 343	4,999
Foreign currency exchange loss	(6,993)	(11,305)
Gain (loss) on financial assets and liabilities at fair value through profit or loss	(2,828)	6,650
Impairment loss on non-financial assets	(127)	(6,994)
Others	15,473	12,913
	$ 5,868	**6,263**

(Continued)

(iii) Finance costs

	2018	2017
Interest expense from bank loans	$ 7,655	10,372

(w) Financial instruments

(i) Categories of financial instruments

1) Financial assets

	December 31, 2018	December 31, 2017
Financial assets at fair value through profit or loss:		
Financial assets mandatorily measured at fair value through profit or loss	$ 454	-
Held for trading	-	688
Subtotal	454	688
Financial assets at fair value through other comprehensive income	44,937	-
Available-for-sale financial assets:		
Financial assets at fair value	-	12,117
Financial assets carried at cost	-	5,359
Subtotal	-	17,476
Financial assets measured at amortized cost (note)		
Cash and cash equivalents	741,561	591,613
Notes and accounts receivable (including related parties)	1,175,145	1,294,104
Other receivables	43,760	76,614
Other financial assets (including current and non-current)	7,062	10,750
Subtotal	1,967,528	1,973,081
Total	$ 2,012,919	1,991,245

Note: classified as loans and receivables as of December 31, 2017.

(Continued)

2) Financial liabilities

	December 31, 2018	December 31, 2017
Financial liabilities at fair value through profit or loss:		
Held for trading	$ 289	354
Financial liabilities measured at amortized cost:		
Short-term borrowings	138,218	492,240
Notes and accounts payable (including related parties)	952,763	1,091,974
Other payables (including related parties)	157,251	136,065
Guarantee deposits	15,357	31,099
Subtotal	1,263,589	1,751,378
Total	**$ 1,263,878**	**1,751,732**

(ii) Fair value information

1) Financial instruments not measured at fair value

The Group considers that the carrying amounts of financial assets and financial liabilities measured at amortized cost approximate their fair values.

2) Financial instruments measured at fair value

The fair value of financial assets and liabilities at fair value through profit and loss, financial assets at fair value through other comprehensive income, and available-for-sale financial assets are measured on a recurring basis.

The table below analyzes financial instruments that are measured at fair value subsequent to initial recognition, grouped into Levels 1 to 3 based on the degree to which the fair value is observable. The different levels have been defined as follows:

a) Level 1: quoted prices (unadjusted) in active markets for identified assets or liabilities.

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

c) Level 3: inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).

(Continued)

	December 31, 2018				
		Fair Value			
	Carrying amount	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss－current:					
Financial assets mandatorily measured at fair value through profit or loss－foreign currency forward contracts	$ 454	-	454	-	454
Financial assets at fair value through other comprehensive income－non-current:					
Domestic unlisted stocks	$ 44,520	-	-	44,520	44,520
Foreign unlisted stocks	417	-	-	417	417
	$ 44,937	-	-	44,937	44,937
Financial liabilities at fair value through profit or loss－current:					
Foreign currency forward contracts	$ 289	-	289	-	289

	December 31, 2017				
		Fair Value			
	Carrying amount	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss－current:					
Held for trading－foreign currency forward contracts	$ 688	-	688	-	688
Available-for-sale financial assets－non-current:					
Unlisted stocks	$ 12,117	-	-	12,117	12,117
Financial liabilities at fair value through profit or loss－current:					
Held for trading－foreign currency forward contracts	$ 354	-	354	-	354

(Continued)

(iii) Valuation techniques used in fair value measurement

1) Non-derivative financial instruments

The fair value of financial instruments traded in active liquid markets is determined with reference to quoted market prices.

Except for the abovementioned financial instruments traded in an active market, the fair value of other financial instruments are based on the valuation techniques or the quotation from counterparty. The fair value using valuation techniques refers to the current fair value of other financial instruments with similar conditions and characteristics, or using a discounted cash flow method, or other valuation techniques which include model calculating with observable market data at the reporting date.

The fair value of unlisted stock held by the Group is estimated by using the market approach and is determined by reference to valuations of similar companies, third-party quotation, net worth and recent operating activities. The significant unobservable inputs is primarily the liquidity discounts. No quantitative information is disclosed due to that the possible changes in liquidity discounts would not cause significant potential financial impact.

2) Derivative financial instruments

The fair value of derivative financial instruments is determined using a valuation technique, with estimates and assumptions consistent with those used by market participants and that are readily available to the Group. The fair value of foreign currency forward contracts is computed individually by each contract using the valuation technique.

(iv) Transfers between levels of the fair value hierarchy

There were no transfers among fair value hierarchies for the years ended December 31, 2018 and 2017.

(v) Movement in financial assets included in Level 3 of fair value hierarchy (classified as financial assets at fair value through other comprehensive income for the year ended December 31, 2018 and available-for-sale financial assets for the year ended December 31, 2017, respectively):

		2018	**2017**
Balance, beginning of year	$	29,862	12,117
Purchased		3,940	-
Gains recognized in other comprehensive income, and presented in unrealized gains on financial assets measured at fair value through other comprehensive income		11,135	-
Balance, end of year	**$**	**44,937**	**12,117**

(Continued)

(x) Financial risk management

The Group is exposed to credit risk, liquidity risk, and market risk (including currency risk, interest rate risk, and other market price risk). The Group has disclosed the information on exposure to the aforementioned risks and the Group's policies and procedures to measure and manage those risks as well as the quantitative information below.

The Group's management monitors and reviews financial activities in accordance with procedures required by relevant regulations and internal controls. Internal auditors undertake both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Group's Board of Directors.

The Group's Board of Directors is responsible for developing and monitoring the Group's risk management policies. The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls, and to monitor adherence to the controls. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's operations.

(i) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty of a financial instrument fails to meet its contractual obligations, and arises principally from the Group's cash and cash equivalents, derivative instruments, receivables from customers, and other receivables. The maximum exposure to credit risk is equal to the carrying amount of the Company' s financial assets. As of December 31, 2018 and 2017,, the Group's maximum exposure to credit risk amounted to $2,012,919 and $1,991,245, respectively.

The Group maintains cash and enters into derivative transactions with various reputable financial institutions; therefore, the exposure related to potential default by those counter-parties is not considered significant.

In order to reduce credit risk of accounts receivable, the Group has established a credit policy under which each customer is analyzed individually for creditworthiness for the purpose of setting the credit limit. Additionally, the Group continuously evaluates the credit quality of its customers and utilizes its insurance to minimize the credit risk. As of December 31, 2018 and 2017, the Group has insured credit insurance that cover accounts receivable amounting to $569,908 and $354,249, respectively. When the debtors are in default, the Company will receive 90% of the credit insurance.

The Group believes that there is no significant concentration of credit risk due to the Group's large number of customers and their wide geographical spread.

(ii) Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in settling its financial liabilities by delivering cash or other financial assets. The Group manages liquidity risk by monitoring regularly the current and mid- to long-term cash demand, maintaining adequate cash and banking facilities, and ensuring compliance with the terms of the loan agreements. As of December 31, 2018 and 2017, the Group had unused credit facilities of $2,491,803 and $1,778,440, respectively.

(Continued)

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

		Carrying amount	Contractual cash flows	Within 1 year	More than 1 year
December 31, 2018					
Non-derivative financial liabilities:					
Short-term borrowings	$	138,218	138,560	138,560	-
Notes and accounts payable (including related parties)		952,763	(952,763)	(952,763)	-
Other payables (including related parties)		157,251	(157,251)	(157,251)	-
Guarantee deposits		15,357	(15,357)	-	(15,357)
Derivative financial instruments:					
Foreign currency forward contracts:					
Inflow		-	58,920	58,920	-
Outflow		289	(59,209)	(59,209)	-
December 31, 2017					
Non-derivative financial liabilities:					
Short-term borrowings	$	492,240	(493,312)	(493,312)	-
Notes and accounts payable (including related parties)		1,091,974	(1,091,974)	(1,091,974)	-
Other payables (including related parties)		136,065	(136,065)	(136,065)	-
Guarantee deposits		31,099	(31,099)	-	(31,099)
Derivative financial instruments:					
Foreign currency forward contracts:					
Inflow		-	141,107	141,107	-
Outflow		354	(141,461)	(141,461)	-

The Group does not expect that the cash flows included in the maturity analysis would occur significantly earlier or at significantly different amounts.

(iii) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates, and equity prices, will affect the Group's income or the value of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

The Group utilizes derivative financial instruments to manage market risk. All such transactions are carried out within the guidelines set by the Group's Board of Directors.

1) Foreign currency risk

The Group utilizes foreign currency forward contracts to hedge its foreign currency exposure with respect to its sales and purchases. The maturity dates of derivative financial instruments the Group entered into were less than six months and did not conform to the criteria for hedge accounting. These financial instruments help to reduce, but do not eliminate, the impact of foreign currency exchange rate movements.

(Continued)

The Group's exposure to foreign currency risk arises from cash and cash equivalents, notes and accounts receivable (including related parties), notes and accounts payable (including related parties), other receivables (including related parties), other payables (including related parties), and loans and borrowings that are denominated in a currency other than the functional currencies of the Group entities. At the reporting date, the carrying amounts of the Group's significant monetary assets and liabilities denominated in a currency other than the functional currencies of the Group entities and their respective sensitivity analysis were as follows (including the monetary items that have been eliminated in the accompanying consolidated financial statements):

(Amounts in Thousands of New Taiwan Dollars)

	December 31, 2018				
	Foreign currency (in thousands)	Exchange rate	TWD (in thousands)	Change in magnitude	Pre-tax effect on profit or loss (in thousands)
Financial assets					
Monetary items					
USD	$ 35,300	30.715	1,084,240	1 %	10,842
Financial liabilities					
Monetary items					
USD	31,059	30.715	953,977	1 %	9,540

	December 31, 2017				
	Foreign currency (in thousands)	Exchange rate	TWD (in thousands)	Change in magnitude	Pre-tax effect on profit or loss (in thousands)
Financial assets					
Monetary items					
USD	$ 46,499	29.760	1,383,810	1 %	13,838
Financial liabilities					
Monetary items					
USD	41,549	29.760	1,236,498	1 %	12,365

As the Group deal in diverse foreign currencies, gains and losses on foreign exchange were summarized as a single amount. The aggregate of realized and unrealized foreign exchange loss for the years ended December 31, 2018 and 2017 were $6,993 and $11,305, respectively.

(Continued)

2) Interest rate risk

The Group's bank loans carried floating interest rates. To manage the interest rate risk, the Group periodically assesses the interest rates of bank loans and maintains good relationships with financial institutions to obtain lower financing costs. The Group also strengthens the management of working capital to reduce the dependence on bank loans, as well as the risk arising from fluctuation of interest rates.

If interest rates had been 100 basis points (1%) higher/lower, with all other variables held constant, pre-tax income for the years ended December 31, 2018 and 2017 would have been $1,382 and $4,922, respectively, lower/higher, which mainly resulted from the borrowings with floating interest rates.

3) Other market price risk

The Group has long-term investments in unlisted stocks, which the Group does not actively participate in trading. The Group anticipates that there is no significant market risk related to the investments.

(y) Capital management

In consideration of the industry dynamics and future developments, as well as external environment factors, the Group maintains an optimal capital structure to enhance long-term shareholder value by managing its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, research and development expenses, dividend payments, and other business requirements for continuing operations and to reward shareholders and take into consideration the interests of other shareholders. The Group monitors its capital through reviewing the liability-to-equity ratio periodically.

The Group's liability-to-equity ratio at the end of each reporting period was as follows:

	December 31, 2018	December 31, 2017
Total liabilities	$ 1,580,063	2,064,665
Total equity	$ 2,695,456	2,568,140
Liability-to-equity ratio	58.62 %	80.40 %

In 2018, the Group decreased its bank loans and accounts payable due to the decrease of stock level. It also resulted in the decreasing of liability-to-equity ratio.

(z) Changes in liabilities from financing activities

Reconciliation of liabilities arising from financing activities were as follows:

	January 1, 2018	Cash flows	December 31, 2018
Short-term borrowings	$ 492,240	(354,022)	138,218
Guarantee deposits	31,099	(15,742)	15,357
	$ 523,339	(369,764)	153,575

(Continued)

7. Related-party transactions:

(a) Name and relationship with related parties

The following are the entities that have had transactions with the Group during the periods covered in the consolidated financial statements.

Name of related parties	Relationship with the Group
JoiiUp Technology Inc. (“JoiiUp”)	The Group’s associate
Ecolumina Technologies Inc. (“Ecolumina”)	The Group’s other related party
Phison Electronics Corporation (“Phison”)	The Company’s director (Phison became the Company’s director since the Company’s reelection of directors on May 30, 2018)
Directors, general manager and vice general managers	The Group’s key management personnel

(b) Significant related-party transactions

(i) Revenue

	2018	2017
The Group’s key management personnel (the Company’s director)	$ 7,725	-
Other related parties	227	210
Associates	-	9
	$ 7,952	219

The sales prices and payment terms of sales to related parties depend on the economic environment and market competition, and are not different from those with third-party customers. The payment terms for related parties and third-party customers are EOM 45～60 days and 30～90 days calculated from the delivery date, respectively. The Group does not receive any collateral for the receivables from related parties. The Group has not recognized a specific allowance for doubtful receivables after assessment.

(ii) Purchases

	2018	2017
The Group’s key management personnel (the Company’s director)	$ 614,510	-

There are no significant differences between the purchase prices for related parties and those for third-party vendors. The payment terms of EOM 30 days shows no significant difference between related parties and third-party vendors.

(Continued)

(iii) Receivables

Account	Related-party categories	December 31, 2018	December 31, 2017
Accounts receivable	The Group's key management personnel (the Company's director)	$ 929	-
	Other related parties	110	4
		$ 1,039	**4**

(iv) Payables

Account	Related-party categories	December 31, 2018	December 31, 2017
Accounts payable	The Group's key management personnel－Phison (the Company's director)	$ 132,755	-
Other payables	The Group's key management personnel (the Company's director)	17	-
		$ 132,772	**-**

(v) Operating expenses

The operating expenses related to the after-sale service provided by related parties were as follows:

Account	Related-party categories	2018	2017
Operating expenses	The Group's key management personnel (the Company's director)	**$ 291**	**-**

(c) Compensation for key management personnel

	2018	2017
Short-term employee benefits	$ 33,323	35,823
Post-employment benefits	216	324
	$ 33,539	**36,147**

8. Pledged assets: None

9. Significant commitments and contingencies:

In addition to those in note 6(n), the Group had the following unrecognized commitments:

(a) Significant unrecognized commitments

	December 31, 2018	December 31, 2017
Unused letters of credit	$ 10,000	-

(b) As of December 31, 2018 and 2017, the Group had outstanding letters of guarantee amounting to $20,000 and $15,000, respectively for the purpose of the payment of customs duties.

10. Significant loss from casualty: None

11. Significant subsequent events: None

12. Others:

(a) Employee benefits, depreciation and amortization expenses categorized by function were as follows:

	2018			2017		
	Cost of revenue	Operating expenses	Total	Cost of revenue	Operating expenses	Total
Employee benefits:						
Salaries	128,748	456,179	584,927	126,325	439,957	566,282
Insurance	12,346	37,532	49,878	11,954	37,553	49,507
Pension	5,138	18,343	23,481	5,115	16,478	21,593
Remuneration to directors	-	9,171	9,171	-	6,004	6,004
Others	8,526	25,162	33,688	8,354	21,788	30,142
Depreciation	16,603	19,671	36,274	14,755	20,664	35,419
Amortization	2,211	7,333	9,544	714	6,839	7,553

13. Additional disclosures

(a) Information on significant transactions:

In accordance with the requirements of the Regulations Governing the Preparation of Financial Reports by Securities Issuers, the Group discloses the following information on significant transactions for the year ended December 31, 2018:

(i) Financing provided to other parties: None

(ii) Guarantee and endorsement provided to other parties: None

(Continued)

(iii) Marketable securities held at the reporting date (excluding investments in subsidiaries and associates):

(In Thousands of Shares/Amounts in Thousands of New Taiwan Dollars)

Investing Company	Marketable Securities Type and Name	Relationship with the Securities Issuer	Financial Statement Account	December 31, 2018				Maximum percentage of ownership during 2018		Note
				Shares/ Units	Carrying Value	Percentage of Ownership	Fair value	Shares/ Units	Percentage of Ownership	
The Company	Stock: Formosa Golf and Country Club Corp.	-	Financial assets at fair value through other comprehensive income－non-current	3.6	9,643	0.01 %	9,643	3.6	0.01 %	Including stocks and memberships
The Company	Stock: OTO Photonics Inc.	-	Financial assets at fair value through other comprehensive income－non-current	3,266	34,877	12.78 %	34,877	3,266	12.78 %	-
AMS	Stock: Futurepath Technology (Shenzhen) co., ltd	-	Financial assets at fair value through other comprehensive income－non-current	30	417	1.75 %	417	30	1.75 %	-

(iv) Marketable securities for which the accumulated purchase or sale amounts exceed $300 million or 20% of the paid-in capital: None

(v) Acquisition of real estate which exceeds $300 million or 20% of the paid-in capital: None

(vi) Disposal of real estate which exceeds $300 million or 20% of the paid-in capital: None

(vii) Total purchases from and sales to related parties which exceed $100 million or 20% of the paid-in capital:

Company Name	Related Party	Nature of Relationship	Transaction Details				Transactions with Terms Different from Others		Notes/Accounts Receivable or (Payable)		Note
			Purchases/ (Sales)	Amount	% of Total Purchases/ (Sales)	Payment Terms	Unit Price	Payment Terms	Ending Balance	% of Total Notes/Accounts Receivable or (Payable)	
The Company	AMA	The Company's subsidiary	(Sales)	(1,813,223)	(20)%	OA45	-	-	82,795	8 %	Note 1
The Company	AMK	The Company's subsidiary	(Sales)	(455,581)	(5)%	OA30	-	-	14,846	1 %	Note 1
The Company	AMH	The Company's subsidiary	(Sales)	(459,377)	(5)%	OA45	-	-	11,678	1 %	Note 1
The Company	AMC	The Company's subsidiary	(Sales)	(271,582)	(3)%	M30	-	-	47,443	4 %	Note 1
The Company	AMJ	The Company's subsidiary	Purchases	(108,209)	(1)%	M60	-	-	14,084	1 %	Note 1

(Continued)

Company Name	Related Party	Nature of Relationship	Transaction Details				Transactions with Terms Different from Others		Notes/Accounts Receivable or (Payable)		Note
			Purchases/ (Sales)	Amount	% of Total Purchases/ (Sales)	Payment Terms	Unit Price	Payment Terms	Ending Balance	% of Total Notes/Accounts Receivable or (Payable)	
The Company	Phison	The Company's director	Purchases	614,510	8 %	M30			(132,755)	(14)%	
AMA	The Company	AMA's parent company	Purchases	1,813,223	92 %	OA45	-	-	(82,795)	100 %	Note 1
AMK	The Company	AMK's parent company	Purchases	455,581	100 %	OA30	-	-	(14,846)	100 %	Note 1
AMH	The Company	AMH's parent company	Purchases	459,377	100 %	OA45	-	-	(11,678)	100 %	Note 1
AMC	The Company	AMC's parent company	Purchases	271,582	100 %	M30	-	-	(47,443)	100 %	Note 1
AMJ	The Company	AMJ's parent company	Purchases	108,209	100 %	M60	-	-	(14,084)	100 %	Note 1

Note 1: The above intercompany transactions have been eliminated when preparing the consolidated financial statements.

(viii) Receivables from related parties which exceed $100 million or 20% of the paid-in capital:None.

(ix) Transactions about derivative instruments: Please refer to note 6(b)

(i) Business relationships and significant intercompany transactions:

Number (Note 1)	Company Name	Counterparty	Nature of Relationship (Note 2)	Transaction Details			
				Account	Amount	Payment Terms	Percentage of Consolidated Operating Revenue or Total Assets
0	The Company	AMA	1	Sales	1,813,223	OA45	19 %
0	The Company	AMK	1	Sales	455,581	OA30	5 %
0	The Company	AMH	1	Sales	459,377	OA45	5 %
0	The Company	AMC	1	Sales	271,582	M30	3 %
0	The Company	AMJ	1	Sales	108,209	M60	1 %
0	The Company	AMA	1	Accounts receivable	82,795	OA45	2 %
0	The Company	AMK	1	Accounts receivable	14,846	OA30	-
0	The Company	AMH	1	Accounts receivable	11,678	OA45	-
0	The Company	AMC	1	Accounts receivable	47,443	M30	1 %
0	The Company	AMJ	1	Accounts receivable	14,084	M60	-

Note 1: Parties to the intercompany transactions are identified and numbered as follows:
1. "0" represents the Company.
2. Subsidiaries are numbered from "1".

Note 2: The relationships with counterparties are as follows:
No. “1” represents the transactions from the Company to subsidiary.
No. “2” represents the transactions from subsidiary to the Company.

Note 3:Intercompany relationships and significant intercompany transactions are disclosed only for sales and accounts receivable. The corresponding purchases and accounts payable are not disclosed.

(Continued)

(b) Information on investees:

(In Thousands of Shares)

Investor	Investee	Location	Main Businesses and Products	Original Investment Amount: December 31, 2018	Original Investment Amount: December 31, 2017	Balance as of December 31, 2018: Shares	Balance as of December 31, 2018: Percentage of Ownership	Balance as of December 31, 2018: Carrying Value	Maximum percentage of Ownership during 2018: Shares	Maximum percentage of Ownership during 2018: Percentage of Ownership	Net Income (Loss) of the Investee	Investment Income (Loss)	Note
The Company	AMA	USA	Trading of memory modules	610	610	20	100.00 %	222,842	20	100.00 %	7,881	7,881	Note 1
The Company	ACYB	British Virgin Islands	Investment and holding activity	18,542	18,542	2,636	100.00 %	16,411	2,636	100.00 %	(750)	(750)	Note 1
The Company	AMJ	Japan	Trading of memory modules	2,918	2,918	0.2	100.00 %	15,921	0.2	100.00 %	1,203	1,203	Note 1
The Company	ATPL	India	Trading of memory modules	915	915	29	100.00 %	1,461	29	100.00 %	91	91	Note 1
The Company	AMK	Hong Kong	Trading of memory modules	20,917	20,917	5,000	100.00 %	12,165	5,000	100.00 %	(463)	(463)	Note 1
The Company	AMH	Netherlands	Trading of memory modules	130,469	130,469	80	100.00 %	27,830	80	100.00 %	11,628	11,628	Note 1
The Company	JoiiUp	Taiwan	Cloud services and software development	15,000	15,000	1,500	16.65 %	884	1,500	17.78 %	(14,434)	(2,522)	-

Note 1: The above intercompany transactions have been eliminated when preparing the consolidated financial statements.

(c) Information on investments in Mainland China:

(i) Name and main businesses and products of investee companies in Mainland China:

(Amounts In Thousands of New Taiwan Dollars)

Investee Company Name	Main Businesses and Products	Total Amount of Paid-in Capital	Method of Investment (Note 1)	Accumulated Outflow of Investment from Taiwan as of January 1, 2018	Investment Flows: Outflow	Investment Flows: Inflow	Accumulated Outflow of Investment from Taiwan as of December 31, 2018	Net Income (Loss) of Investee	% of Ownership of Direct or Indirect Investment	Maximum percentage of ownership during 2018: Shares	Maximum percentage of ownership during 2018: Percentage of Ownership	Investment Income (Loss) (Note 2)	Carrying Value as of December 31, 2018	Accumulated Inward Remittance of Earnings as of December 31, 2018
Apacer Electronic (Shanghai) Co., Ltd (AMC)	Trading of memory modules	15,358 (USD500 thousand)	Type 2	15,358 (USD500 thousand)	-	-	15,358 (USD500 thousand)	(662)	100.00 %	(Note 3)	100.00 %	(662)	12,102	-
Shenzhen Kylinesports Technology Co. (AMS)	Trading of gaming products	22,975 (USD748 thousand)	Type 2	18,368 (USD598 thousand)	-	-	18,368 (USD598 thousand) (Note 5)	(929)	99.00 %	(Note 3)	99.00 %	(929)	17,144	-

Note 1: Method of investments:

Type 1: Direct investment in Mainland China.

Type 2: Indirect investment in Mainland China through a holding company established in a third country.

Type 3: Others.

Note 2: Investment income or loss recognized based on the unaudited financial statements of investee companies.

Note 3: There was no shares as the investee company is a limited liability company.

Note 4: The above amounts were translated into New Taiwan dollars at the exchange rate of US$1=NT$30.715.

Note 5: The amount of AMK reinvestments amounting to US$134,000 were excluded.

Note 6: The above intercompany transactions have been eliminated when preparing the consolidated financial statements.

(Continued)

(ii) Limits on investments in Mainland China:

Investor	Accumulated Investment in Mainland China as of December 31, 2018	Investment Amounts Authorized by Investment Commission, MOEA	Upper Limit on Investment Authorized by Investment Commission, MOEA
The Company	33,726 (USD 1,098 thousand)	37,841 (USD 1,232 thousand)	1,617,170

(iii) Significant transactions with investee companies in Mainland China:

The transactions between parent and investee companies in Mainland China (the intercompany transaction) have been eliminated when preparing the consolidated financial statements. Please refer to section " Information on significant transactions" and " Business relationships and significant intercompany transactions" for detail description.

14. Segment information:

(a) General information

The Group has two reportable segments: Asia segment and America and Europe segment. The Asia segment engages in the manafacturing, maintenance, research and development, and sale of the Group's products. The America and Europe segment engages in the sale of the Group's products.

The Group's reportable segments are separated by geographical segments. Each segment provides different organizational functions and marketing strategies, and thus should be managed separately.

(b) Reportable segments, profit or loss, segment assets, basis of measurement, and reconciliation

The Group uses income before income tax as the measurement for segment profit and the basis of resource allocation and performance assessment. There was no material inconsistency between the accounting policies adopted for the operating segments and the accounting policies described in note 4. The reporting amount is consistent with the report used by chief operating decision maker.

The Group's operating segment information and reconciliation are as follows:

	2018			
	Asia	**America and Europe**	**Adjustments and eliminations**	**Total**
External revenue	$ 6,855,860	2,585,758	-	9,441,618
Intra-group revenue	3,116,690	-	(3,116,690)	-
Total segment revenue	**$ 9,972,550**	**2,585,758**	**(3,116,690)**	**9,441,618**
Segment profit (loss)	**$ 439,278**	**18,818**	**(19,590)**	**438,506**

(Continued)

	2017			
	Asia	**America and Europe**	**Adjustments and eliminations**	**Total**
External revenue	$ 7,070,506	2,972,970	-	10,043,476
Intra-group revenue	3,801,809	-	(3,801,809)	-
Total segment revenue	**$ 10,872,315**	**2,972,970**	**(3,801,809)**	**10,043,476**
Segment profit (loss)	**$ 461,561**	**49,220**	**(37,741)**	**473,040**

(c) Product information

Revenues from external customers are detailed below:

Region	**2018**	**2017**
Flash memory products	$ 4,793,379	5,308,406
Memory modules	4,644,680	4,734,572
Others	3,559	498
	$ 9,441,618	**10,043,476**

(d) Geographic information

In presenting information on the basis of geography, segment revenue is based on the geographical location of customers, and segment assets are based on the geographical location of the assets.

Revenues from external customers are detailed below:

Region	**2018**	**2017**
Taiwan	$ 1,863,323	2,294,510
Americas	2,211,779	2,416,205
Hong Kong	760,659	1,440,715
Japan	642,576	472,119
Mainland China	590,928	421,879
Others	3,372,353	2,998,048
	$ 9,441,618	**10,043,476**

Non-current assets:

Region	**2018**	**2017**
Taiwan	$ 950,075	944,179
Japan	1,550	-
Netherland	165	232
Americas	918	-
Others	1,421	2,759
	$ 954,129	**947,170**

(Continued)

Non-current assets include property, plant and equipment, intangible assets, and other assets, but do not include financial instruments and deferred income tax assets.

(e) Major customer information

	2018	2017
Revenue from Asia segment－Customer A	$ 409,184	746,754
Rrevenue from America and Europe segment－Customer B	284,705	592,333
Revenue from Asia segment－Customer C	342,033	496,398
	$ 1,035,922	**1,835,485**

安侯建業聯合會計師事務所
KPMG
台北市11049信義路5段7號68樓(台北101大樓)
68F., TAIPEI 101 TOWER, No. 7, Sec. 5,
Xinyi Road, Taipei City 11049, Taiwan (R.O.C.)
Telephone 電話 + 886 2 8101 6666
Fax 傳真 + 886 2 8101 6667
Internet 網址 kpmg.com/tw

Independent Auditors' Report

To the Board of Directors
Apacer Technology Inc.:

Opinion

We have audited the parent-company-only financial statements of Apacer Technology Inc. (the "Company"), which comprise the balance sheets as of December 31, 2018 and 2017, and the statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes to the 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, 2018 and 2017, and its financial performance and its cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Certification of Financial Statements by Certified Public Accountants and the auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditor's 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 Certified Public Accountants Code of Professional Ethics in Republic of China (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis of 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 of the current period. These matters were addressed in the context of our audit of 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.

Key audit matters for the Company's financial statements for the year ended December 31, 2018 are stated as follows:

1. Revenue recognition

   Please refer to notes 4(o) and 6(s) for the accounting policy on "Revenue recognition" and "Revenue from contracts with customers" for the related disclosures, respectively, of the notes to parent-company-only financial statements.

   Description of key audit matter:

   The Company engages primarily in the manufacturing and sales of memory modules and flash memory products, with product diversification and market channels spread globally. The Company recognizes its revenue depending on the various trade terms in each individual sale transaction and the transfer of control of the goods, which are considered to be complex in determining the timing of revenue recognition. Consequently, the revenue recognition has been identified as one of the key audit matters.

KPMG

How the matter was addressed in our audit:

In relation to the key audit matter above, our principal audit procedures included understanding and testing the design and operating effectiveness of the Company' s internal controls over revenue recognition; assessing whether the accounting policy of the timing of revenue recognition is appropriate through understanding the main types of revenues of the Company, and reviewing the sales contracts and the related trade terms with customers; assessing whether the accounting treatment of revenue recognition is appropriate through performing a sample test of the original documents of sales transaction; performing sample tests of sales transactions that took place before and after the balance sheet date, and reviewing the related documents to understand and analyze the reason for any identified sales returns and allowances that took place after the balance sheet date, to assess whether the revenue is recognized within the proper period.

2. Valuation of inventories

Please refer to notes 4(g), 5 and 6(h) for the inventory accounting policy, "Critical accounting judgments and key sources of estimation uncertainty" for estimation uncertainty of inventory valuation, and "Inventories" for the related disclosures, respectively, of the notes to parent-company-only financial statements.

Description of key audit matter:

The Company' s inventories are measured at the lower of cost and net realizable value. Management is required to make judgments and estimates in determining the net realizable value of inventories on the reporting date. The market prices of main raw materials of the Company, constituting the majority amount of product cost, fluctuate rapidly and the life cycle of certain products of the Company are short, which could possibly result in a price decline and obsolescence of inventories, wherein the inventories cost may exceed its net realizable value, as the Company fails to timely respond to market changes. Therefore, the valuation of inventories has been identified as one of the key audit matters.

How the matter was addressed in our audit:

In relation to the key audit matter above, our principal audit procedures included obtaining and understanding the Company's accounting policy of valuation of inventories, performing a retrospective test to understand the reasonableness of estimations of allowance for inventory valuation loss with reference to actual write-off of inventories in a subsequent period, and evaluating the reasonableness of the accounting policy of valuation of inventories; as well as performing a sample test of the estimated selling price provided by Management to assess the reasonableness of the net realizable value and allowance for inventory valuation 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 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.

KPMG

Auditor's Responsibilities for the Audit of the Parent-Company-Only Financial Statements

Our objectives are to obtain reasonable assurance about whether the parent-company-only financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with 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 auditing standards generally accepted in the Republic of China, we exercised professional judgment and maintained professional skepticism throughout the audit. We also:

1. Identified and assessed 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. Obtained 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. Evaluated the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Concluded 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 auditor's report to the related disclosures in the parent-company-only financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

5. Evaluated 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. Obtained sufficient and appropriate audit evidence regarding the financial information of the investees accounted for using equity method to express an opinion on the parent-company-only financial statements. We are responsible for the direction, supervision and performance of the audit. We remained solely responsible for our audit opinion.

We communicated 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 identified during our audit.

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

From the matters communicated with those charged with governance, we determined those matters that were of most significance in the audit of the parent-company-only financial statements for the year ended December 31, 2018 and are therefore the key audit matters. We described these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determined 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 Tzu-Chieh Tang and Mei-Yen Chen.

KPMG

Taipei, Taiwan (Republic of China)
February 21, 2019

Notes to Readers

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

The independent auditors' report and the accompanying financial statements are the English translation of the Chinese version prepared and used in the Republic of China. If there is any conflict between, or any difference in the interpretation of the English and Chinese language independent auditors' report and financial statements, the Chinese version shall prevail.

(English Translation of Parent-Company-Only Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC.

Balance Sheets

December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

	Assets	December 31, 2018 Amount	%	December 31, 2017 Amount	%
	Current assets:				
1100	Cash and cash equivalents (note 6(a))	$ 604,931	14	387,513	8
1110	Financial assets at fair value through profit or loss—current (note 6(b))	454	-	688	-
1170	Notes and accounts receivable, net (notes 6(f) and (s))	882,638	21	946,059	21
1180	Accounts receivable from related parties (notes 6(f), (s) and 7)	171,885	4	395,808	9
1200	Other receivables (notes 6(g) and 7)	42,914	1	76,260	2
1310	Inventories (note 6(h))	1,129,945	27	1,445,617	32
1470	Other current assets	11,155	-	8,736	-
	Total current assets	2,843,922	67	3,260,681	72
	Non-current assets:				
1523	Available-for-sale financial assets—non-current (note 6(d))	-	-	12,117	-
1543	Financial assets carried at cost—non-current (note 6(e))	-	-	5,359	-
1517	Financial assets at fair value through other comprehensive income (note 6(c))	44,520	1	-	-
1550	Investments accounted for using equity method (note 6(i))	297,514	7	263,246	6
1600	Property, plant and equipment (note 6(j))	883,660	21	896,601	20
1780	Intangible assets (note 6(k))	66,024	2	24,158	1
1840	Deferred income tax assets (note 6(p))	89,124	2	66,097	1
1980	Other financial assets—non-current	3,308	-	3,308	-
1990	Other non-current assets	391	-	23,420	-
	Total non-current assets	1,384,541	33	1,294,306	28
	Total assets	$ 4,228,463	100	4,554,987	100

	Liabilities and Equity	December 31, 2018 Amount	%	December 31, 2017 Amount	%
	Current liabilities:				
2100	Short-term borrowings (note 6(l))	$ 138,218	3	492,240	11
2120	Financial liabilities at fair value through profit or loss—current (note 6(b))	289	-	354	-
2170	Notes and accounts payable	819,047	20	1,089,675	24
2180	Accounts payable to related parties (note 7)	132,755	3	58	-
2200	Other payables (notes 6(o) and (u))	315,021	8	277,193	6
2220	Other payables to related parties (note 7)	2,543	-	1,519	-
2230	Current income tax liabilities	55,313	1	64,591	1
2250	Provisions—current (note 6(m))	12,625	-	15,695	-
2300	Other current liabilities	30,896	1	21,142	1
	Total current liabilities	1,506,707	36	1,962,467	43
	Non-current liabilities:				
2570	Deferred income tax liabilities (note 6(p))	903	-	867	-
2640	Net defined benefit liabilities (note 6(o))	25,570	-	22,359	1
2645	Guarantee deposits	-	-	1,339	-
	Total non-current liabilities	26,473	-	24,565	1
	Total liabilities	1,533,180	36	1,987,032	44
	Equity (note 6(q)):				
3100	Common stock	1,008,978	24	1,008,978	22
3200	Capital surplus	359,910	9	358,225	8
3300	Retained earnings	1,393,935	33	1,250,073	27
3400	Other equity	(67,540)	(2)	(49,321)	(1)
	Total equity	2,695,283	64	2,567,955	56
	Total liabilities and equity	$ 4,228,463	100	4,554,987	100

See accompanying notes to parent-company-only financial statements.

(English Translation of Parent-Company-Only Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC.

Statements of Comprehensive Income

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars, Except for Earnings Per Share)

		2018		2017	
		Amount	%	Amount	%
4000	**Revenue (notes 6(m), (s), (t) and 7)**	$ 9,064,195	100	9,844,821	100
5000	**Cost of revenue (notes 6(h), (j), (k), (m), (n), (o) 7 and 12)**	8,009,188	88	8,810,725	90
	Gross profit before unrealized gross profit	1,055,007	12	1,034,096	10
5920	Realized (unrealized) gross profit	7,255	-	(6,024)	-
	Gross profit	1,062,262	12	1,028,072	10
	Operating expenses (notes 6(f), (j), (k), (n), (o), (u), 7 and 12):				
6100	Selling expenses	362,029	4	358,565	4
6200	Administrative expenses	161,770	2	144,472	1
6300	Research and development expenses	120,479	1	99,120	1
6450	Expected credit loss	1,514	-	-	-
6000	**Total operating expenses**	645,792	7	602,157	6
	Operating income	416,470	5	425,915	4
	Non-operating income and loss (notes 6(i), (j), (n) and (v)):				
7010	Other income	4,195	-	4,835	-
7020	Other gains and losses－net	8,431	-	2,389	-
7050	Finance costs	(7,650)	-	(10,367)	-
7070	Share of profits of subsidiaries and associates	17,068	-	34,573	1
	Total non-operating income and loss	22,044	-	31,430	1
	Income before income tax	438,514	5	457,345	5
7950	**Income tax expense (note 6(p))**	79,675	1	51,927	1
	Net income	358,839	4	405,418	4
	Other comprehensive income:				
8310	**Items that will not be reclassified subsequently to profit or loss:**				
8311	Remeasurements of defined benefit plans (note 6(o))	(3,207)	-	(87)	-
8316	Unrealized gains from investments in equity instruments measured at fair value through other comprehensive income (note 6(q))	11,135	-	-	-
8349	Less: income tax related to items that will not be reclassified subsequently to profit or loss (notes 6(p) and (w))	641	-	15	-
		8,569	-	(72)	-
8360	**Items that may be reclassified subsequently to profit or loss**				
8361	Exchange differences on translation of foreign operations (note 6 (q))	8,260	-	(18,350)	-
8399	Less: income tax related to items that may be reclassified subsequently to profit or loss	-	-	-	-
		8,260	-	(18,350)	-
8300	**Other comprehensive income for the year, net of income tax**	16,829	-	(18,422)	-
	Total comprehensive income for the year	$ 375,668	4	386,996	4
	Earnings per share (in New Taiwan dollars) (note 6(r)) :				
9750	Basic earnings per share	$	3.56		4.02
9850	Diluted earnings per share	$	3.50		3.97

See accompanying notes to parent-company-only financial statements.

(English Translation of Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC.

Statements of Changes in Equity

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

			Retained earnings				Total other equity			
	Common stock	Capital Surplus	Legal reserve	Special reserve	Unappropriated earnings	Total	Exchange differences on translation of foreign operations	Unrealized gains (losses) on financial assets measured at fair value through other comprehensive income	Total	Total equity
Balance at January 1, 2017	$ 1,008,978	359,203	232,743	26,750	827,389	1,086,882	(30,971)	-	(30,971)	2,424,092
Appropriation of earnings:										
Legal reserve	-	-	34,947	-	(34,947)	-	-	-	-	-
Special reserve	-	-	-	4,221	(4,221)	-	-	-	-	-
Cash dividends distributed to shareholders	-	-	-	-	(242,155)	(242,155)	-	-	-	(242,155)
Net income in 2017	-	-	-	-	405,418	405,418	-	-	-	405,418
Other comprehensive income in 2017	-	-	-	-	(72)	(72)	(18,350)	-	(18,350)	(18,422)
Total comprehensive income in 2017	-	-	-	-	405,346	405,346	(18,350)	-	(18,350)	386,996
Changes in equity of associates accounted for using equity method	-	(978)	-	-	-	-	-	-	-	(978)
Balance at December 31, 2017	1,008,978	358,225	267,690	30,971	951,412	1,250,073	(49,321)	-	(49,321)	2,567,955
Effects of retrospective application	-	-	-	-	49,923	49,923	-	(37,614)	(37,614)	12,309
Balance at January 1, 2018 after adjustments	1,008,978	358,225	267,690	30,971	1,001,335	1,299,996	(49,321)	(37,614)	(86,935)	2,580,264
Appropriation of earnings:										
Legal reserve	-	-	40,542	-	(40,542)	-	-	-	-	-
Special reserve	-	-	-	18,350	(18,350)	-	-	-	-	-
Cash dividends distributed to shareholders	-	-	-	-	(262,334)	(262,334)	-	-	-	(262,334)
Net income in 2018	-	-	-	-	358,839	358,839	-	-	-	358,839
Other comprehensive income in 2018	-	-	-	-	(2,566)	(2,566)	8,260	11,135	19,395	16,829
Total comprehensive income in 2018	-	-	-	-	356,273	356,273	8,260	11,135	19,395	375,668
Changes in equity of associates accounted for using equity method	-	1,685	-	-	-	-	-	-	-	1,685
Balance at December 31, 2018	**$ 1,008,978**	**359,910**	**308,232**	**49,321**	**1,036,382**	**1,393,935**	**(41,061)**	**(26,479)**	**(67,540)**	**2,695,283**

See accompanying notes to parent-company-only financial statements.

(English Translation of Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC.

Statements of Cash Flows

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

		2018	2017
Cash flows from operating activities:			
Income before income tax	$	438,514	457,345
Adjustments:			
Depreciation		35,013	34,401
Amortization		9,520	7,509
Expected credit loss / provision for bad debt expense		1,514	1,189
Interest expense		7,650	10,367
Interest income		(1,039)	(627)
Share of profits of subsidiaries and associates		(17,068)	(34,573)
Gain on disposal of property, plant and equipment		-	(4,999)
Impairment loss on non-financial assets		127	6,994
Unrealized (realized) gross profit on sales to subsidiaries and associates		(7,255)	6,024
Subtotal		28,462	26,285
Changes in operating assets and liabilities:			
Changes in operating assets:			
Financial assets at fair value through profit or loss		234	(521)
Notes and accounts receivable		61,830	(217,743)
Accounts receivable from related parties		223,923	(247,768)
Other receivables		33,340	(21,089)
Inventories		315,672	(187,374)
Other current assets		(2,419)	(7,117)
Net changes in operating assets		632,580	(681,612)
Changes in operating liabilities:			
Financial liabilities at fair value through profit or loss		(65)	(1,924)
Notes and accounts payable		(60,519)	238,560
Accounts payable to related parties		(76,285)	(93)
Other payables		38,045	38,243
Other payables to related parties		1,024	374
Provisions		(3,070)	164
Other current liabilities		9,754	(7,974)
Net defined benefit liabilities		4	(9)
Net changes in operating liabilities		(91,112)	267,341
Total changes in operating assets and liabilities		541,468	(414,271)
Total adjustments		569,930	(387,986)
Cash provided by operations		1,008,444	69,359
Interest received		1,045	627
Interest paid		(7,867)	(10,262)
Income taxes paid		(111,303)	(50,657)
Net cash provided by operating activities		890,319	9,067

See accompanying notes to parent-company-only financial statements.

(English Translation of Financial Statements and Report Originally Issued in Chinese)

APACER TECHNOLOGY INC.

Statements of Cash Flows (Continued)

For the years ended December 31, 2018 and 2017

(Expressed in Thousands of New Taiwan Dollars)

		2018	2017
Cash flows from investing activities:			
Acquisition of financial assets at fair value through other comprehensive income		(3,523)	-
Acquisition of financial assets carried at cost		-	(5,359)
Acquisition of property, plant and equipment		(23,326)	(47,844)
Proceeds from disposal of property, plant and equipment		-	4,999
Increase in refundable deposits		-	(95)
Acquisition of intangible assets		(45,313)	(11,520)
Decrease (increase) in other non-current assets		16,956	(23,420)
Net cash used in investing activities		(55,206)	(83,239)
Cash flows from financing activities:			
Increase (decrease) in short-term loans		(354,022)	363,240
Decrease in guarantee deposits		(1,339)	(15,554)
Cash dividends distributed to shareholders		(262,334)	(242,155)
Net cash provided by (used in) financing activities		(617,695)	105,531
Net increase in cash and cash equivalents		217,418	31,359
Cash and cash equivalents at beginning of year		387,513	356,154
Cash and cash equivalents at end of year	$	**604,931**	**387,513**

See accompanying notes to parent-company-only financial statements.

(Expressed in Thousands of New Taiwan Dollars, Unless Otherwise Specified)

1. Organization and business

Apacer Technology Inc. (the "Company") was incorporated on April 16, 1997, as a company limited by shares under the laws of the Republic of China ("R.O.C.") and registered under the Ministry of Economic Affairs, R.O.C. The address of the Company's registered office is 1F, No.32, Zhongcheng Rd., Tucheng Dist., New Taipei City, Taiwan. The Company is engaged in the research and development, design, manufacturing, processing, maintenance and sales of memory modules, flash memory cards and consumer electronic products.

2. Authorization of parent-company-only financial statements

These parent-company-only financial statements were authorized for issuance by the Board of Directors on February 21, 2019.

3. Application of new, revised or amended accounting standards and interpretations

(a) The impact of the International Financial Reporting Standards ("IFRSs") endorsed by the Financial Supervisory Commission, R.O.C. ("FSC") which have already been adopted.

The following new standards, interpretations and amendments have been endorsed by the FSC and are effective for annual periods beginning on or after January 1, 2018.

New, Revised or Amended Standards and Interpretations	Effective date per IASB
Amendment to IFRS 2 "Classification and Measurement of Share-based Payment Transactions"	January 1, 2018
Amendments to IFRS 4 "Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts"	January 1, 2018
IFRS 9 "Financial Instruments"	January 1, 2018
IFRS 15 "Revenue from Contracts with Customers"	January 1, 2018
Amendment to IAS 7 "Statement of Cash Flows—Disclosure Initiative"	January 1, 2017
Amendment to IAS 12 "Income Taxes—Recognition of Deferred Tax Assets for Unrealized Losses"	January 1, 2017
Amendments to IAS 40 "Transfers of Investment Property"	January 1, 2018
Annual Improvements to IFRS Standards 2014–2016 Cycle:	
Amendments to IFRS 12	January 1, 2017
Amendments to IFRS 1 and Amendments to IAS 28	January 1, 2018
IFRIC 22 "Foreign Currency Transactions and Advance Consideration"	January 1, 2018

(Continued)

Except for the following items, the Company assessed that the initial application of the above IFRSs would not have any material impact on its parent-company-only financial statements. The extent and impact of changes are as follows:

(i) IFRS 15 “Revenue from Contracts with Customers”

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognized. It replaces the existing revenue recognition guidance, including IAS 18 “Revenue” and IAS 11 “Construction Contracts”. The Company applies this standard retrospectively with the cumulative effect, it need not restate those contracts, but instead, continues to apply IAS 11, IAS 18 and the related Interpretations for comparative reporting period. The Company recognizes the cumulative effect upon the initially application of this Standard as an adjustment to the opening balance of retained earnings on January 1, 2018. The Company uses the practical expedients for completed contracts, which means it need not restate those contracts that have been completed on January 1, 2018.

The following are the nature and impacts on changing of accounting policies:

1) Sales of goods

In the past, for the sale of goods, revenue was recognized based on the individual sales agreement and trade terms of each sales of goods when the related significant risks and rewards of ownership are transferred to customers; meanwhile, the revenue and costs can be measured reliably, the recovery of the consideration is probable and there is no continuing management involvement with the goods. Under IFRS 15, revenue is recognized when a customer obtains control of the goods.

2) Impacts on parent-company-only financial statements

The changes in accounting policies above did not have any material impact on the Company’s parent-company-only financial statements.

(ii) IFRS 9 “Financial Instruments”

IFRS 9 replaces IAS 39 “ Financial Instruments: Recognition and Measurement” which contains classification and measurement of financial instruments, impairment and hedge accounting.

As a result of the adoption of IFRS 9, the Company adopted the consequential amendments to IAS 1 “Presentation of Financial Statements” which requires impairment of financial assets to be presented in a seperate line item in the statements of comprehensive income. Previously, the Company’s approach was to include the impairment of accounts receivable in selling expenses. Additionally, the Company adopted the consequential amendments to IFRS 7 “ Financial Instruments: Disclosures” that are applied to disclosures about 2018 but generally have not been applied to comparative information.

(Continued)

The detail of new significant accounting policies and the nature and effect of the changes to IFRS 9 are as follows:

1) Classification of financial assets and financial liabilities

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL). The classification of financial assets under IFRS 9 is generally based on the business model in which financial assets are managed and their contractual cash flow characteristics. The standard eliminates the previous IAS 39 categories of held to maturity, loans and receivables and available for sale. For an explanation of how the Company classifies and measures financial assets and accounts for related gains and losses under IFRS 9, please refer to note 4(f).

The adoption of IFRS 9 did not have any significant impact on its accounting policies on financial liabilities.

2) Impairment of financial assets

IFRS 9 replaces the ‘incurred loss’ model in IAS 39 with a forward-looking ‘expected credit loss’ (ECL) model. The new impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVOCI, but not to investments in equity instruments. Under IFRS 9, credit losses are recognized earlier than under IAS 39. Please refer to note 4(f) for more details.

3) Transition

The adoption of IFRS 9 have generally been applied retrospectively, except as described below:

- Differences in the carrying amounts of financial assets resulting from the adoption of IFRS 9 are recognized in retained earnings and other equity on January 1, 2018. Accordingly, the information presented for 2017 does not generally reflect the requirements of IFRS 9 and therefore is not comparable to the information presented for 2018 under IFRS 9.

- The following assessments have been made on the basis of the facts and circumstances that existed at the date of initial application.

  — The determination of the business model within which a financial asset is held.

  — The designation and revocation of previous designations of certain financial assets and financial liabilities as measured at FVTPL.

  — The designation of certain investments in equity instruments not held for trading as at FVOCI.

(Continued)

4) Classification of financial assets on the date of initial application of IFRS 9

The following table shows the original measurement categories under IAS 39 and the new measurement categories under IFRS 9 for each class of the Company's financial assets as of January 1, 2018. (The measurement categories and carrying amount of financial liabilities are not changed.)

	IAS39		IFRS9	
	Measurement categories	**Carrying Amount**	**Measurement categories**	**Carrying Amount**
Financial Assets				
Cash and cash equivalents	Loans and receivables (Note 1)	387,513	Amortized cost	387,513
Derivative instruments	Held-for-trading	688	Mandatorily at FVTPL	688
Equity instruments	Available-for-sale financial assets (Note 2)	17,476	FVOCI	29,862
Notes and accounts receivable and other receivables	Loans and receivables (Note 1)	1,418,127	Amortized cost	1,418,050
Other financial assets (Refundable deposits)	Loans and receivables (Note 1)	3,308	Amortized cost	3,308

Note1: Cash and cash equivalents, notes and accounts receivable, other receivables and other financial assets that were classified as loans and receivables under IAS 39 are now classified at amortized cost. An increase of $77 thousand in the allowance for impairment of accounts receivable was recognized in opening retained earnings upon transition to IFRS 9 on January 1, 2018.

Note2: These equity instruments (including financial assets carried at cost) represent investments that the Company intends to hold for long-term strategic purposes. As permitted by IFRS 9, the Company has designated these investments at the date of initial application as measured at FVOCI, resulting in an increase of $12,386 thousand in those assets recognized, and a decrease of $37,614 thousand in other equity, as well as an increase of $50,000 thousand in retained earnings were recognized on January 1, 2018.

The following table reconciles the carrying amounts of financial assets under IAS 39 to the carrying amounts under IFRS 9 upon transition to IFRS 9 on 1 January, 2018.

(Continued)

	December 31, 2017 IAS 39 Carrying Amount	Reclassifications	Remeasurements	January 1, 2018 IFRS 9 Carrying Amount	January 1, 2018 Retained earnings	January 1, 2018 Other equity
Financial assets at fair value through other comprehensive income:						
Beginning balance of available for sale (including carried at cost) (IAS 39)	$ 17,476	-	-		-	-
Available for sale to FVOCI	-	-	12,386		50,000	(37,614)
Total	$ 17,476	-	12,386	29,862	50,000	(37,614)
Financial assets measured at amortized cost:						
Beginning balance of cash and cash equivalents, notes and accounts receivable, other receivables and other financial assets (IAS 39)	$ 1,808,948	-	-		-	-
Adjustments for allowance of impairment for financial assets measured at amortized cost	-	-	(77)		(77)	-
Total	$ 1,808,948	-	(77)	1,808,871	(77)	-

There is no material impact on the Company's basic and diluted earnings per share for the year ended December 31, 2018.

(iii) Amendments to IAS 7 "Disclosure Initiative"

The amendments require disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flow and non-cash changes.

To satisfy the new disclosure requirements, the Company presents a reconciliation between the opening and closing balances for liabilities with changes arising from financing activities as note 6(z).

(b) The impact of IFRSs endorsed by the FSC but not yet effective

The following new standards, interpretations and amendments have been endorsed by the FSC and are effective for annual periods beginning on or after January 1, 2019 in accordance with Ruling No. 1070324857 issued by the FSC on July 17, 2018:

New, Revised or Amended Standards and Interpretations	Effective date per IASB
IFRS 16 "Leases"	January 1, 2019
IFRIC 23 "Uncertainty over Income Tax Treatments"	January 1, 2019
Amendments to IFRS 9 "Prepayment features with negative compensation"	January 1, 2019
Amendments to IAS 19 "Plan Amendment, Curtailment or Settlement"	January 1, 2019
Amendments to IAS 28 "Long-term interests in associates and joint ventures"	January 1, 2019
Annual Improvements to IFRS Standards 2015–2017 Cycle	January 1, 2019

(Continued)

Except for the following items, the Company assessed that the initial adoption of the above IFRSs would not have any material impact on its parent-company-only financial statements. The extent and impact of signification changes are as follows:

(i) IFRS 16"Leases"

IFRS 16 replaces the existing leases guidance, including IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases – Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

IFRS 16 introduces a single and an on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. In addition, the nature of expenses related to those leases will now be changed since IFRS 16 replaces the straight-line operating lease expense with a depreciation charge for right-of-use assets and interest expense on lease liabilities. There are recognition exemptions for short-term leases and leases of low-value items. The lessor accounting remains similar to the current standard – i.e. the lessors will continue to classify leases as finance or operating leases.

1) Determining whether an arrangement contains a lease

On transition to IFRS 16, the Company can choose to apply either of the following:

- IFRS 16 definition of a lease to all its contracts; or

- a practical expedient that does not need any reassessment whether a contract is, or contains, a lease.

The Company plans to apply the practical expedient to grandfather the definition of a lease upon transition. This means that the Company will apply IFRS 16 to all contracts entered into before January 1, 2019 and identified as leases in accordance with IAS 17 and IFRIC 4.

2) Transition

As a lessee, the Company can apply the standard using either of the following:

- retrospective approach; or

- modified retrospective approach with optional practical expedients.

The lessee applies the election consistently to all of its leases.

On January 1, 2019, the Company plans to initially apply IFRS 16 using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019, not to restate comparative information.

(Continued)

When applying the modified retrospective approach to leases previously classified as operating leases under IAS 17, the lessee can elect, on a lease-by-lease basis, whether to apply a number of practical expedients on transition. The Company plans to use these practical expedients as below:

- apply a single discount rate to a portfolio of leases with reasonably similar characteristics;

- exclude initial direct costs from the measurement of the right-of-use asset at the date of initial application;

3) So far, the most significant impact identified is that the Company will have to recognize right-of-use assets and lease liabilities for the operating leases of its offices and warehouses. The Company estimates that the right-of-use assets and the lease liabilities to increase by $12,215 thousand and $12,376 thousand, respectively, as well as the retained earnings to decrease by $161 thousand on January 1, 2019.

The actual impacts of adopting the new standards may change depending on the economic conditions and events which may occur in the future.

(c) The impact of IFRS issued by IASB but not yet endorsed by the FSC

The following IFRSs that have been issued by the IASB, but have yet to be endorsed by the FSC:

New, Revised or Amended Standards and Interpretations	Effective date per IASB
Amendments to IFRS 3 “Definition of a Business”	January 1, 2020
Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets Between an Investor and Its Associate or Joint Venture”	Effective date to be determined by IASB
IFRS 17 “Insurance Contracts”	January 1, 2021
Amendments to IAS 1 and IAS 8 “Definition of Material”	January 1, 2020

Those which may be relevant to the Company are set out below:

Issuance / Release Dates	Standards or Interpretations	Content of amendment
October 31, 2018	Amendments to IAS 1 and IAS 8 “Definition of Material”	The amendments clarify the definition of material and how it should be applied by including in the definition guidance that until now has featured elsewhere in IFRS Standards. In addition, the explanations accompanying the definition have been improved. Finally, the amendments ensure that the definition of material is consistent across all IFRS Standards.

(Continued)

The Company is evaluating the impact on its financial position and financial performance upon the initial adoption of the abovementioned standards or interpretations. The results thereof will be disclosed when the Company completes its evaluation.

4. Summary of significant accounting policies:

The significant accounting policies presented in the parent-company-only financial statements are summarised as follows. Except for those specifically indicated, the following accounting policies were applied consistently throughout the periods presented in the Company's parent-company-only financial statements.

(a) Statement of compliance

The Company's accompanying parent-company-only financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers (the "Regulations").

(b) Basis of preparation

(i) Basis of measurement

The accompanying parent-company-only financial statements have been prepared on a historical cost basis except for the following items in the balance sheets:

1) Financial instruments measured at fair value through profit or loss (including derivative financial instruments);
2) Financial assets at fair value through other comprehensive income (available-for-sale financial assets); and
3) Defined benefit liabilities are recognized as the present value of the defined benefit obligation less fair value of the plan assets and the effect of the asset ceiling mentioned in note 4(p).

(ii) Functional and presentation currency

The functional currency of the Company is determined based on the primary economic environment in which the Company operates. The Company's parent-company-only financial statements are presented in New Taiwan dollars, which is the Company's functional currency. Except when otherwise indicated, all financial information presented in New Taiwan dollars has been rounded to the nearest thousand.

(c) Foreign currency

(i) Foreign currency transactions

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at exchange rates at the end of the period ("the reporting date") of monetary assets and liabilities denominated in foreign currencies are recognized in profit or loss.

(Continued)

Non-monetary assets and liabilities denominated in foreign currencies which are measured at fair value are retranslated at the exchange rate prevailing at the date when the fair value is determined. Exchange differences arising on the translation of non-monetary items are recognized in profit or loss, except for exchange differences arising 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 denominated in a foreign currency that are measured at historical cost are not retranslated.

(ii) Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising from acquisition, are translated into the presentation currency of the Company's parent-company-only financial statements at the exchange rates at the reporting date. The income and expenses of foreign operations are translated into the presentation currency of the Company's parent-company-only financial statements at the average exchange rates for the period. All resulting exchange differences are recognized in other comprehensive income.

On the disposal of a foreign operation which involves a loss of control over a subsidiary or a loss of significant influence over an associate that includes a foreign operation, all of the exchange differences accumulated in equity in respect of that operation attributable to the shareholders of the Company are entirely reclassified to profit or loss. In the case of a partial disposal that does not result in the Company losing control over a subsidiary, the proportionate share of accumulated exchange differences is reclassified to non-controlling interests. For a partial disposal of the Company's ownership interest in an associate, the proportionate share of the accumulated exchange differences in equity is reclassified to profit or loss.

When the settlement of a monetary receivable from or payable to a foreign operation is neither planned nor likely to occur in the foreseeable future, the monetary item is, in substance, a part of net investment in that foreign operation, and the related foreign exchange gains and losses thereon are recognized as other comprehensive income.

(d) Classification of current and non-current assets and liabilities

An asset is classified as current when one of following criteria is met; all other assets are classified as non-current assets.

(i) It is expected to be realized, or sold or consumed in the normal operating cycle;
(ii) It is held primarily for the purpose of trading;
(iii) It is expected to be realized within twelve months after the reporting date; or
(iv) The asset is cash or a cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting date.

A liability is classified as current when one of following criteria is met; all other liabilities are classified as non-current liabilities:

(i) It is expected to be settled in the normal operating cycle;
(ii) It is held primarily for the purpose of trading;
(iii) It is due and to be settled within twelve months after the reporting date; or

(Continued)

(iv) The Company does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting date.

(e) Cash and cash equivalents

Cash consists of cash on hand, checking deposits, and demand deposits. Cash equivalents consist of short-term and highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value. Time deposits that meet the aforesaid criteria and are held for meeting short-term cash commitments instead of helding for investing and other purposes are also classified as cash equivalents.

(f) Financial instruments

(i) Financial assets (applicable from January 1, 2018)

Financial assets are classified into the following categories: measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL). Regular way purchases or sales of financial assets are recognized or derecognized on a trade-date basis.

The Company shall reclassify all affected financial assets only when it changes its business model for managing its financial assets.

1) Financial assets measured at amortized cost

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A financial asset measured at amortized cost is initially recognized at fair value, plus any directly attributable transaction costs. These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses, and impairment loss, are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

2) Financial assets at fair value through other comprehensive income (Financial assets at "FVOCI")

A debt investment is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and

(Continued)

- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Company may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an instrument-by-instrument basis.

A financial asset measured at FVOCI is initially recognized at fair value, plus any directly attributable transaction costs. These assets are subsequently measured at fair value. Foreign exchange gains and losses, interest income calculated using the effective interest method and impairment losses, deriving from debt investments are recognized in profit or loss; whereas dividends deriving from equity investments are recognized as income in profit or loss, unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses of financial assets measured at FVOCI are recognized in OCI. On derecognition, gains and losses accumulated in OCI of debt investments are reclassified to profit or loss. However, gains and losses accumulated in OCI of equity investments are reclassified to retain earnings instead of profit or loss.

Dividend income derived from equity investments is recognized on the date that the Company's right to receive payment is established, which in the case of quoted securities is normally the ex-dividend date.

3) Financial assets at fair value through profit or loss (Financial assets at "FVTPL")

All financial assets not classified as amortized cost or FVOCI described as above are measured at FVTPL, including derivative financial assets. On initial recognition, the Company may irrevocably designate a financial asset, which meets the requirements to be measured at amortized cost or at FVOCI, as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets in this category are measured at fair value at initial recognition. Attributable transaction costs are recognized in profit or loss as incurred. Subsequent changes that are measured at fair value, which take into account any dividend and interest income, are recognized in profit or loss.

4) Assessment whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, 'principal' is defined as the fair value of the financial assets on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs, as well as a profit margin.

(Continued)

In assessing whether the contractual cash flows are solely payments of principal and interest, the Company considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Company considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable rate features;
- prepayment and extension features; and
- terms that limit the Company' s claim to cash flows from specified assets (e.g. non-recourse features)

5) Impairment of financial assets

The Company recognizes loss allowances for expected credit losses on financial assets measured at amortized cost (including cash and cash equivalents, notes and accounts receivable, other receivables and other financial assets).

The Company measures loss allowances at an amount equal to lifetime expected credit loss (ECL), except for the following which are measured as 12-month ECL:

- bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition.

Loss allowance for accounts receivables are always measured at an amount equal to lifetime ECL.

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument. 12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 month after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The maximum period considered when estimating ECLs is the maximum contractual period over which the Company is exposed to credit risk.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis based on the Company' s historical experience and informed credit assessment as well as forward-looking information.

(Continued)

ECLs are probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the Company in accordance with the contract and the cash flows that the Company expects to receive). ECLs are discounted at the effective interest rate of the financial asset.

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.

The gross carrying amount of a financial asset is written off, either partially or in full, to the extent that there is no realistic prospect of recovery. This is generally the case when the Company determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Company's procedures for recovery of amounts due.

6) Derecognition of financial assets

Financial assets are derecognized when the contractual rights to the cash flows from the assets expire, or when the Company transfers substantially all the risks and rewards of ownership of the financial assets.

On derecognition of a debt instrument in its entirety, the Company recognizes the difference between its carrying amount and the sum of the consideration received or receivable and any cumulative gain or loss that had been recognized in other comprehensive income and presented in "other equity–unrealized gains or losses on fair value through other comprehensive income", in profit or loss, and presents it in the line item of non-operating income and expenses.

On derecognition of a financial asset other than in its entirety, the Company allocates the previous carrying amount of the financial asset between the part it continues to recognize under continuing involvement, and the part it no longer recognizes on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognized and the sum of the consideration received for the part no longer recognized and any cumulative gain or loss allocated to it that had been recognized in other comprehensive income is recognized in profit or loss, and presented in the line item of non-operating income and expenses. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is no longer recognized on the basis of the relative fair values of those parts.

(ii) Financial assets (applicable before January 1, 2018)

Financial assets are classified into the following categories: financial assets at fair value through profit or loss, loans and receivables, and available-for-sale financial assets. Regular way purchases or sales of financial assets are recognized or derecognized on a trade-date basis.

(Continued)

1) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss consist of financial assets held for trading and those designated as at fair value through profit or loss at inception. A financial asset is classified in this category if acquired principally for the purpose of selling and repurchasing in the short term. Derivatives are also categorized as financial assets at fair value through profit or loss unless they are designated as hedges.

At initial recognition, financial assets carried at fair value through profit or loss are recognized at fair value. Any attributable transaction costs are recognized in profit or loss as incurred. Subsequent to the initial recognition, changes in fair value (including dividend income and interest income) are recognized in profit or loss.

2) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in a non-active market. Loans and receivables comprise accounts receivable and other receivables. At initial recognition, such assets are recognized at fair value, plus, any directly attributable transaction cost. Subsequent to initial recognition, loans and receivables other than insignificant interest on short-term receivables are measured at amortized cost using the effective interest method, less, any impairment losses. Interest income is recognized as non-operating income in profit or loss.

3) Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are designated as available-for-sale or are not classified in any of the other categories of financial assets. At initial recognition, available-for-sale financial assets are recognized at fair value plus any directly attributable transaction cost. Subsequent to initial recognition, these assets are measured at fair value, and changes therein, other than impairment losses, interest income calculated using the effective interest method, dividend income, and foreign currency differences on monetary financial assets, are recognized in other comprehensive income and presented in "unrealized gain/loss from available-for-sale financial assets" in equity. When the financial asset is derecognized, the gain or loss previously accumulated in equity is reclassified to profit or loss.

Investments in equity instruments that do not have a quoted market price in a non-active market and whose fair value cannot be reliably measured are measured at cost less impairment loss and are reported as financial assets measured at cost.

Dividends received from equity investments are recognized as non-operating income on the date of entitlement to receive dividends (usually the ex-dividend date).

(Continued)

4) Impairment of financial assets

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

Evidence of impairment may include indications that the debtor is experiencing significant financial difficulty, default or delinquency in interest or principal payments, indications that the debtor or issuer will probably enter bankruptcy or other financial reorganization, and the disappearance of an active market for that financial asset because of financial difficulties. For available-for-sale equity investments, a significant or prolonged decline in the fair value of the security below its cost is also evidence that the assets are impaired.

If the Company determines that no objective evidence of impairment exists for an individually assessed accounts receivables, whether significant or not, such asset is included in a group of accounts receivables with similar credit risk characteristics which are then collectively assessed for impairment. Objective evidence that receivables are impaired includes the Company' s collection experience in the past, an increase in delayed payments, and national or local economic conditions that correlate with overdue receivables. The Company assesses the collectability of receivables by performing the accounts receivable aging analysis and evaluating the credit quality of its customers.

An impairment loss is recognized by reducing the carrying amount of the respective financial assets with the exception of receivables, where the carrying amount is reduced through an allowance account. Changes in the amount of the allowance account are recognized in profit or loss.

An impairment loss in respect of a financial asset measured at amortized cost is measured as the excess of the asset's carrying amount over the present value of the estimated future cash flows discounted at the financial asset' s original effective interest rate. If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed to the extent that the carrying amount of the financial assets at the date the impairment loss is reversed does not exceed what the amortized cost would have been had the impairment loss not been recognized.

An impairment loss in respect of a financial asset measured at cost is measured as the excess of the asset's carrying amount over the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. A subsequent reversal of the impairment loss is prohibited.

When an impairment loss is recognized for an available-for-sale asset, the cumulative gains or loss that had been recognized in other comprehensive income is reclassified from equity to profit or loss. Any subsequent recovery in the fair value of an impaired available-for-sale equity security is recognized in other comprehensive income, and accumulated in other equity.

(Continued)

The impairment loss and the reversal gain for accounts receivable are recognized as selling expenses, and as non-operating income and loss for financial assets other than accounts receivable.

5) Derecognition of financial assets

Financial assets are derecognized when the contractual rights of the cash inflow from the asset are terminated, or when the Company transfers out substantially all the risks and rewards of ownership of the financial assets to other enterprises.

On derecognition of a financial asset in its entirety, the difference between the carrying amount and the sum of the consideration received or receivable and any cumulative gain or loss that had been recognized in other comprehensive income and accumulated in other equity – unrealized gains or losses from available-for-sale financial assets is recognized in profit or loss, and included in the non-operating income and loss of the statement of comprehensive income.

On derecognition of part of a financial asset, the previous carrying amount of the financial asset shall be allocated between the part that continues to be recognized and the part that is derecognized, on the basis of relative fair values of those parts on the date of transfer. The difference between the carrying amount allocated to the part derecognized and the sum of the consideration received or receivable for the part of the financial asset derecognized and the cumulative gain or loss that had been recognized in other comprehensive income allocated to the part derecognized is charged to profit or loss. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is derecognized, based on the relative fair values of those parts.

(iii) Financial liabilities

1) Financial liabilities at fair value through profit or loss

A financial liability is classified in this category if it is classified as held for trading or is designated as a financial liability at fair value through profit or loss on initial recognition. A financial liability is classified as held for trading if it is acquired principally for the purpose of selling or repurchasing in the short term. Derivatives are also categorized as financial liabilities at fair value through profit or loss unless they are designated as hedges.

At initial recognition, this type of financial liability is recognized at fair value, and the attributable transaction costs are recognized in profit or loss as incurred. Subsequent to initial recognition, the financial liabilities are measured at fair value, and changes therein, which take into account any interest expense, are recognized in profit or loss.

(Continued)

2) Financial liabilities measured at amortized cost

Financial liabilities not classified as held for trading or not designated as at fair value through profit or loss, which comprise short-term borrowings, notes and accounts payable, and other payables, are measured at fair value plus any directly attributable transaction cost at initial recognition. Subsequent to initial recognition, these financial liabilities are measured at amortized cost using the effective interest method. Interest expense which is not capitalized as asset is recognized in profit or loss, and included in non-operating income and loss of the statement of comprehensive income.

3) Derecognition of financial liabilities

The Company derecognizes a financial liability when its contractual obligation has been fulfilled or cancelled, or has expired. The difference between the carrying amount of a financial liability derecognized and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss and included in the non-operating income and loss of the statement of comprehensive income.

4) Offsetting of financial assets and liabilities

Financial assets and liabilities are presented on a net basis only when the Company has the legally enforceable right to offset and intends to settle such financial assets and liabilities on a net basis or to realize the assets and settle the liabilities simultaneously.

(iv) Derivative financial instruments

Derivative financial instruments such as foregin currency forward contracts are held to hedge the Company's foreign currency exposures. Derivatives are recognized initially at fair value, and attributable transaction costs are recognized in profit or loss as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are recognized in profit or loss, and included in non-operating income and loss. If the valuation of a derivative instrument results in a positive fair value, it is classified as a financial asset; otherwise, it is classified as a financial liability.

(g) Inventories

Inventories are measured at the lower of cost and net realizable value. The cost of inventories is calculated based on the weighted-average method and includes expenditure incurred in acquiring the inventories, production or conversion costs, and other costs incurred in bringing them to the location and condition ready for sale. Fixed manufacturing overhead is allocated to finished products and work in process based on the higher of normal capacity or actual capacity; variable manufacturing overhead is allocated based on the actual capacity of machinery and equipment. Net realizable value represents the estimated selling price in the ordinary course of business, less all estimated costs of completion and necessary selling expenses.

(h) Investment in associates

Associates are those entities in which the Company has significant influence, but not control or joint venture, over the financial and operating policies.

(Continued)

Investments in associates are accounted for using the equity method and are recognized initially at cost, plus, any transaction costs. The carrying amount of the investment in associates includes goodwill identified on acquisition, net of any accumulated impairment losses. When necessary, the entire carrying amount of the investment (including goodwill) will be tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Company's share of its associates' post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized as other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When changes in an associate's equity are not recognized in profit or loss or other comprehensive income of the associate, and such changes do not affect the Company's ownership percentage of the associate, the Company recognizes the change in ownership interests of its associate as "capital surplus" in proportion to its ownership.

Unrealized profits resulting from transactions between the Company and an associate are eliminated to the extent of the Company's interest in the associate. Unrealized losses on transactions with associates are eliminated in the same way, except to the extent that the underlying asset is impaired.

When the Company's share of losses in an associate equals or exceeds its interest in the associate, the recognition of further losses is discontinued. Additional losses are provided for, and a liability is recognized, only to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of the associate.

When an associate issues new shares and the Company does not subscribe to the new shares in proportion to its original ownership percentage, the Company's interest in the associate's net assets will be changed. The change in the equity interest is adjusted through the capital surplus and investment accounts. If the Company's capital surplus is insufficient to offset the adjustment to investment accounts, the difference is charged as a reduction of retained earnings. If the Company's interest in an associate is reduced due to the additional subscription to the shares of associate by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate shall be reclassified to profit or loss on the same basis as would be required if the associate had directly disposed of the related assets or liabilities.

Adjustments are made to associates' financial statements to conform to the accounting polices applied by the Company.

(i) Investment in subsidiaries

When preparing the parent-company-only financial statements, investment in subsidiaries which are controlled by the Company is accounted for using equity method. Under the equity method, the net income, other comprehensive income and equity in the parent-company-only financial statement are the same as those attributable to shareholders of the Company in the consolidated financial statements.

Changes in the Company's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

(Continued)

(j) Property, plant and equipment

(i) Recognition and measurement

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. Cost includes expenditure that is directly attributed to the acquisition of the asset and bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and any borrowing cost that is eligible for capitalization.

The gain or loss arising from the disposal of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item, and is recognized in other gains and losses－net.

(ii) Subsequent costs

Subsequent costs are capitalized only when it is probable that future economic benefits associated with the costs will flow to the Company and the cost of the item can be measured reliably. The carrying amount of a replaced part is derecognized in profit or loss. All other repairs and maintenance are charged to expense as incurred.

(iii) Depreciation

Depreciation is provided for property, plant and equipment over the estimated useful lives using the straight-line method. When an item of property, plant and equipment comprises significant individual components for which different depreciation methods or useful lives are appropriate, each component is depreciated separately. Land is not depreciated. The depreciation is recognized in profit or loss.

The estimated useful lives for property, plant and equipment are as follows: buildings and improvements: 6 to 47 years; machinery and equipment: 2 to 11 years; transportation equipment: 4 years; and other equipment: 3 to 15 years.

Depreciation methods, useful lives, and residual values are reviewed at each financial year-end, with the effect of any changes in estimate accounted for on a prospective basis.

(k) Leases

(i) The Company as lessor

Lease income from an operating lease is recognized in profit or loss on a straight-line basis over the lease term. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized as expense over the lease term on a straight-line basis.

(ii) The Company as lessee

Payments made under an operating lease (excluding insurance and maintenance expenses) are charged to expense over the lease term on a straight-line basis.

(Continued)

(l) Intangible assets

The Company's intangible assets are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized in profit or loss using the straight-line method over the following estimated useful lives: acquired computer software: 2 to 7 years; royalties for the use of patents: 13 to 17 years.

The residual value, amortization period, and amortization method are reviewed at least at each financial year-end, with the effect of any changes in estimate accounted for on a prospective basis.

(m) Impairment of non-financial assets

Non-financial assets other than inventories, deferred income tax assets, and assets arising from employee benefits are reviewed for impairment at each reporting date to determine whether there is any indication of impairment. When there exists an indication of impairment for an asset, the recoverable amount of the asset is estimated. If the recoverable amount of an individual asset cannot be determined, the Company estimates the recoverable amount of the cash-generating units ("CGU") to which the asset has been allocated.

The recoverable amount for an individual asset or a CGU is the higher of its fair value less costs to sell or its value in use. When the recoverable amount of an asset or a CGU is less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount, and an impairment loss is recognized in profit or loss immediately.

The Company assesses at each reporting date whether there is any evidence that an impairment loss recognized in prior periods for an asset other than goodwill may no longer exist or may have decreased. If so, an impairment loss recognized in prior periods for an asset other than goodwill is reversed, and the carrying amount of the asset or CGU is increased to its revised estimate of recoverable amount. The increased carrying amount shall not exceed the carrying amount (net of amortization or depreciation) that would have been determined had no impairment loss been recognized in prior years.

(n) Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that the Company will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

(i) Warranties

A provision for warranties is recognized when the underlying products or services are sold. This provision reflects the historical warranty claim rate and the weighting of all possible outcomes against their associated probabilities.

(ii) Sales return and allowances provision

A provision for sales returns and allowances is recognized when the underlying products are sold. This provision is estimated based on historical sales return and allowances data.

(Continued)

(o) Revenue recognition

(i) Revenue from contracts with customers (applicable from January 1, 2018)

Revenue is measured based on the consideration to which the Company expects to be entitled in exchange for transferring goods to a customer. The Company recognizes revenue when it satisfies a performance obligation by transferring control of a good to a customer.

1) Sale of goods

The Company recognizes revenue when control of the goods has been transferred to the customer, being when the goods have been delivered to the customer, and there is no unfulfilled obligation that could affect the customer's acceptance of the goods. Delivery occurs when the customer has accepted the goods in accordance with the terms of sales, the risks of obsolescence and loss have been transferred to the customer, and the Company has objective evidence that all criteria for acceptance have been satisfied.

A receivable is recognized when the goods are delivered as this is the point in time that the Company has a right to an amount of consideration that is unconditional.

2) Financing components

The Company does not expect that the period between the transfer of the promised goods to the customer and payment by the customer exceeds one year. As a consequence, the Company does not adjust any of the transaction prices for the time value of money.

(ii) Revenue recognition (applicable before January 1, 2018)

1) Sale of goods

Revenue from the sale of goods is recognized when all the following conditions have been satisfied: (a) the significant risks and rewards of ownership of the goods have been transferred to the buyer; (b) the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold; (c) the amount of revenue can be measured reliably; (d) it is probable that the economic benefits associated with the transaction will flow to the Company; and (e) the cost incurred or to be incurred in respect of the transaction can be measured reliably.

The timing of the transfers of risks and rewards varies depending on the individual terms of the sales agreement. Revenue is not recognized for the sale of key components to an original design manufacturer for manufacture or assembly as the significant risks and rewards of the ownership of materials are not transferred.

2) Interest income and dividend income

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

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

(Continued)

(p) Employee benefits

(i) Defined contribution plans

Obligations for contributions to defined contribution pension plans are expensed during the year in which employees render services.

(ii) Defined benefit plans

The liability recognized in respect of defined benefit pension plans is the present value of the defined benefit obligation at the reporting date less the fair value of plan assets. The discount rate for calculating the present value of the defined benefit obligation refers to the interest rate of high-quality government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the term of the related pension obligation. The defined benefit obligation is calculated annually by qualified actuaries using the projected unit credit method.

When the benefits of a plan are improved, the expense related to the increased obligations resulting from the services rendered by employees in the past years are recognized in profit or loss immediately.

The remeasurements of the net defined benefit liability (asset) comprise (i) actuarial gains and losses; (ii) return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset); and (iii) any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset). The remeasurements of the net defined benefit liabilities (asset) are recognized in other comprehensive income and then transferred to retained earnings.

The Company recognizes gains or losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs. The gain or loss on curtailment or settlement comprises any resulting change in the fair value of plan assets and any change in the present value of the defined benefit obligation.

(iii) Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed during the period in which employees render services. A liability is recognized for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Company has a present legal or constructive obligation to make such payments as a result of past service provided by the employees, and the obligation can be estimated reliably.

(q) Income taxes

Income tax expenses include both current taxes and deferred taxes. Current and deferred taxes are recognized in profit or loss unless they relate to items recognized directly in equity or other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

(Continued)

Deferred income taxes are recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred taxes are not recognized for:

(i) Temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;

(ii) Temporary differences arising from investments in subsidiaries to the extent that the Company is able to control the timing of the reversal of the temporary differences, and it is probable that the differences will not reverse in the foreseeable future; and

(iii) Temporary differences arising from initial recognition of goodwill.

Deferred tax is measured based on the expected manner of realization or settlement of the carrying amount of the assets and liabilities, using tax rates enacted or substantively enacted at the reporting date.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred tax assets and liabilities relate to income taxes levied by the same tax authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

Deferred tax assets are recognized for unused tax losses, tax credits, and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realized.

(r) Earnings per share ("EPS")

The basic and diluted EPS attributable to shareholders of the Company are disclosed in the parent-company-only financial statements. Basic EPS is calculated by dividing net income attributable to shareholders of the Company by the weighted-average number of common shares outstanding during the year. In calculating diluted EPS, the net income attributable to shareholders of the Company and weighted-average number of common shares outstanding during the year are adjusted for the effects of dilutive potential common shares. The Company's dilutive potential common shares are profit sharing for employees to be settled in the form of common stock.

(s) Operating segments

The Company discloses the operating segment information in the consolidated financial statements. Therefore, the Company does not disclose the operating segment information in the parent-company-only financial statements.

(Continued)

5. Critical accounting judgments and key sources of estimation uncertainty

The preparation of the parent-company-only financial statements in conformity with the Regulations Governing the Preparation of Financial Reports by Securities Issuers requires management to make judgments, estimates and assumptions that affect the application of the accounting policies and the reported amount of assets, liabilities, income and expenses. 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 and the future periods affected.

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year is as follows:

Inventories are measured at the lower of cost or net realizable value. The Company estimates the net realizable value of inventory, taking into account obsolescence and unmarketable items at the reporting date, 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, which could result in significant adjustments.

Refer to note 6(h) for more details of the valuation of inventories.

6. Significant account disclosures

(a) Cash and cash equivalents

	December 31, 2018	December 31, 2017
Cash on hand	$ 45	95
Demand deposits	604,886	362,918
Time deposits with original maturities less than three months	-	24,500
	$ 604,931	387,513

(b) Financial assets and liabilities at fair value through profit or loss－current

	December 31, 2018	December 31, 2017
Financial assets mandatorily measured at fair value through profit or loss－current:		
Foreign currency forward contracts	$ 454	-
Financial assets held for trading－current:		
Foreign currency forward contracts	-	688
	$ 454	688
Financial liabilities held for trading－current:		
Foreign currency forward contracts	$ (289)	(354)

Refer to note6 (v) for the detail of the changes in fair value recognized in profit or loss.

(Continued)

The Company entered into derivative contracts to manage foreign currency exchange risk resulting from its operating activities. The derivative financial instruments that did not conform to the criteria for hedge accounting and were classified as financial assets mandatorily measured at fair value through profit or loss as of December 31, 2018 and as financial assets held for trading as of December 31, 2017 consisted of the following:

	December 31, 2018				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial assets－foreign currency forward contracts	USD	6,500	$ 454	USD / TWD	2019/01/04～2019/01/25

	December 31, 2017				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial assets－foreign currency forward contracts	JPY	44,300	86	JPY / TWD	2018/01/25～2018/02/23
	USD	6,500	602	USD / TWD	2018/01/03～2018/02/02
			$ 688		

	December 31, 2018				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial liabilities－foreign currency forward contracts	JPY	48,200	(246)	JPY / TWD	2019/01/25
	USD	1,500	(43)	USD / TWD	2019/01/04～2019/01/11
			$ (289)		

	December 31, 2017				
	Contract amount (in thousands)		**Fair value**	**Currency (Sell / Buy)**	**Maturity period**
Financial liabilities－foreign currency forward contracts	TWD	81,997	(244)	TWD/ USD	2018/01/02～2018/01/29
	USD	2,000	(110)	USD / TWD	2018/02/08
			$ (354)		

(Continued)

(c) Financial assets at fair value through other comprehensive income－non-current

	December 31, 2018
Equity investments at fair value through other comprehensive income:	
Domestic unlisted stocks	$ 44,520

The Company designated the abovementioned investments as at fair value through other comprehensive income because these equity investments represent those investments that the Company intends to hold for long-term strategic purposes. These investments were classified as available-for-sale financial assets－ non-current and financial assets carried at cost－ non-current, respectively, on December 31, 2017.

No strategic investments were disposed for the year ended December 31, 2018, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

For credit risk and market risk, please refer to note 6(x).

(d) Available-for-sale financial assets－non-current

	December 31, 2017
Domestic unlisted stocks	$ 12,117

The abovementioned investments were classified as financial assets at fair value through other comprehensive income－non-current on December 31, 2018; please refer to note 6(c).

For credit risk and market risk, please refer to note 6(x).

(e) Financial assets carried at cost－non-current

	December 31, 2017
Domestic unlisted stocks	$ 5,359

To expand its business, the Company invested in OTO Photonics Inc. On December 31, 2017, this investment should be classified as available-for-sale financial assets according to the Company's intention. However, there is a wide range of estimated fair value of the abovementioned investments and the probability for each estimate of fair value cannot be reasonably determined. The Company's management concludes that its fair value cannot be measured reliably and this investment is reported as financial assets carried at cost. The abovementioned investments were classified as financial assets at fair value through other comprehensive income on December 31, 2018, please refer to note 6(c).

(f) Notes and accounts receivable

		December 31, 2018	December 31, 2017
Notes receivable	$	296	1,524
Accounts receivable		886,612	947,214
Accounts receivable from related parties		171,885	395,808
		1,058,793	1,344,546
Less: loss allowance		(4,270)	(2,679)
	$	1,054,523	1,341,867

The Company applies the simplified approach to provide for its expected credit losses, i.e. the use of lifetime expected loss provision for all receivables (including related parties) on December 31, 2018. The loss allowance provision as of December 31, 2018 was determined as follows:

		Gross carrying amount	Weighted-average loss rate	Loss allowance provision
Current	$	904,431	0.0565%	511
Past due 1-90 days		151,059	0.3019%	456
Past due over 181 days		3,303	100%	3,303
	$	1,058,793		4,270

As of December 31, 2017, the Company applied the incurred loss model to consider the loss allowance provision of notes and accounts receivable (including related parties). The aging analysis of notes and accounts receivable (including related parties) which were past due but not impaired was as follows:

		December 31, 2017
Past due 1-90 days	$	106,974

Movements of the loss allowance for notes and accounts receivable (including related parties) were as follows:

			2017	
		2018	Individually assessed impairment	Collectively assessed impairment
Balance at January 1 (per IAS 39)	$	2,679	3,192	-
Adjustment on initial application of IFRS 9		77		
Balance at January 1 (per IFRS 9)		2,756		
Impairment loss		1,514	1,189	-
Write-off		-	(1,702)	-
Balance at December 31	$	4,270	2,679	-

(Continued)

(g) Other receivables

	December 31, 2018	December 31, 2017
Other receivables	$ 42,725	76,260
Other receivables from related parties	189	-
	$ 42,914	**76,260**

There is no loss allowance provision for other receivables (including related parties) on December 31, 2018 after the assessment.

As of December 31, 2017, the Company expected other receivables could be collected within one year and no loss allowance provision was provided for after assessment.

(h) Inventories

	December 31, 2018	December 31, 2017
Raw materials	$ 500,256	687,842
Work in process	101,616	86,807
Finished goods	513,764	598,677
Inventories in transit	14,309	72,291
	$ 1,129,945	**1,445,617**

For the years ended December 31, 2018 and 2017, the amounts of inventories recognized as cost of revenue were as follows:

	2018	2017
Cost of inventories sold	$ 7,974,188	8,683,225
Write-downs of inventories	35,000	127,500
	$ 8,009,188	**8,810,725**

The above write-downs of inventories to net realizable value were included in cost of revenue.

(i) Investments accounted for using equity method

A summary of the Company's investments accounted for using the equity method at the reporting date were as follows:

	December 31, 2018	December 31, 2017
Subsidiaries	$ 296,630	261,525
Associates	884	1,721
	$ 297,514	**263,246**

(Continued)

(i) Investments in subsidiaries

Please refer to the consolidated financial statements for the year ended December 31, 2018.

(ii) Investments in associates

	December 31, 2018		December 31, 2017	
Name of Associates	**Percentage of voting rights**	**Carrying amount**	**Percentage of voting rights**	**Carrying amount**
JoiiUp Technology Inc.	16.15 %	$ 884	17.78 %	1,721

Aggregate financial information of associates that were not individually material was summarized as follows. The financial information was included in the Company' s parent-company-only financial statements.

	December 31, 2018	December 31, 2017
The aggregate carrying amount of associates that were not individually material	$ 884	1,721

	2018	2017
Attributable to the Company:		
Net loss	$ (2,522)	(3,168)
Other comprehensive income	-	-
Total comprehensive income	$ (2,522)	(3,168)

(j) Property, plant and equipment

The movements of cost, accumulated depreciation and impairment loss of the property, plant and equipment for the years ended December 31, 2018 and 2017 were as follows:

	Land	Buildings	Machinery and equipment	Transportation equipment	Other equipment	Equipment to be inspected and construction in progress	Total
Cost:							
Balance at January 1, 2018	$ 556,498	275,836	176,075	-	85,820	841	1,095,070
Additions	-	594	7,152	-	3,282	12,298	23,326
Disposals	-	-	(9,243)	-	(360)	-	(9,603)
Reclassification (Note)	-	-	1,465	-	-	(2,592)	(1,127)
Balance at December 31, 2018	$ 556,498	276,430	175,449	-	88,742	10,547	1,107,666
Balance at January 1, 2017	$ 556,498	274,407	165,623	1,500	82,145	8,029	1,088,202
Additions	-	1,429	10,825	-	3,081	32,509	47,844
Disposals	-	-	(30,197)	(1,500)	-	-	(31,697)
Reclassification (Note)	-	-	29,824	-	594	(39,697)	(9,279)
Balance at December 31, 2017	$ 556,498	275,836	176,075	-	85,820	841	1,095,070
Accumulated depreciation and impairment loss:							
Balance at January 1, 2018	$ -	27,491	114,179	-	56,799	-	198,469
Depreciation	-	7,105	17,475	-	10,433	-	35,013
Disposals	-	-	(9,243)	-	(360)	-	(9,603)
Impairment loss	-	-	127	-	-	-	127
Balance at December 31, 2018	$ -	34,596	122,538	-	66,872	-	224,006

(Continued)

	Land	Buildings	Machinery and equipment	Transportation equipment	Other equipment	Equipment to be inspected and construction in progress	Total
Balance at January 1, 2017	$ -	20,669	120,537	1,500	46,065	-	188,771
Depreciation	-	6,822	16,845	-	10,734	-	34,401
Disposals	-	-	(30,197)	(1,500)	-	-	(31,697)
Impairment loss	-	-	6,994	-	-	-	6,994
Balance at December 31, 2017	**$ -**	**27,491**	**114,179**	**-**	**56,799**	**-**	**198,469**
Carrying amount:							
Balance at December 31, 2018	**$ 556,498**	**241,834**	**52,911**	**-**	**21,870**	**10,547**	**883,660**
Balance at December 31, 2017	**$ 556,498**	**248,345**	**61,896**	**-**	**29,021**	**841**	**896,601**

Note: reclassified from property, plant and equipment to other non-current assets.

In 2018 and 2017, the Company recognized impairment loss on property, plant and equipment of $127 and $6,994, respectively, which were included in non-operating income and loss.

(k) Intangible assets

The movements of costs and accumulated amortization of intangible assets for the years ended December 31, 2018 and 2017 were as follows:

	Computer software	Royalties for the use of patents	Total
Costs:			
Balance at January 1, 2018	$ 48,131	4,104	52,235
Additions	45,313	-	45,313
Reclassification (Note)	6,073	-	6,073
Balance at December 31, 2018	**$ 99,517**	**4,104**	**103,621**
Balance at January 1, 2017	$ 31,228	763	31,991
Additions	8,179	3,341	11,520
Reclassification (Note)	9,279	-	9,279
Derecognition	(555)	-	(555)
Balance at December 31, 2017	**$ 48,131**	**4,104**	**52,235**
Accumulated amortization:			
Balance at January 1, 2018	$ 27,581	496	28,077
Amortization	9,298	222	9,520
Balance at December 31, 2018	**$ 36,879**	**718**	**37,597**
Balance at January 1, 2017	$ 20,737	386	21,123
Amortization	7,399	110	7,509
Derecognition	(555)	-	(555)
Balance at December 31, 2017	**$ 27,581**	**496**	**28,077**
Carrying amount:			
Balance at December 31, 2018	**$ 62,638**	**3,386**	**66,024**
Balance at December 31, 2017	**$ 20,550**	**3,608**	**24,158**

Note: reclassified from other non-current assets to intagible assets.

(Continued)

The amortization of intangible assets is included in the following line items of the statement of comprehensive income:

	2018	2017
Cost of revenue	$ 2,211	714
Operating expenses	$ 7,309	6,795

(l) Short-term borrowings

The details of short-term borrowings were as follows:

	December 31, 2018	December 31, 2017
Unsecured bank loans	$ 138,218	492,240
Unused credit facilities	$ 2,491,803	1,778,440
Interest rate interval	3.08%	1.13%~2.64%

(m) Provisions

	Warranties	Sales returns and allowance	Total
Balance at January 1, 2018	$ 9,965	5,730	15,695
Provisions made	252	-	252
Amount utilized	(2,864)	(458)	(3,322)
Balance at December 31, 2018	$ 7,353	5,272	12,625
Balance at January 1, 2017	$ 12,394	3,137	15,531
Provisions made	1,353	2,593	3,946
Amount utilized	(3,782)	-	(3,782)
Balance at December 31, 2017	$ 9,965	5,730	15,695

(i) Warranties

The provision for warranties is made based on the number of units sold currently under warranty, historical rates of warranty claim on those units, and cost per claim to satisfy the warranty obligation. The Company reviews the estimation basis on an ongoing basis and revises it when appropriate.

(ii) Sales returns and allowances

Expected sales returns and allowances are estimated based on historical experience.

(Continued)

(n) Operating lease

(i) Lessee

Future minimum lease payments under operating leases are as follows:

		December 31, 2018	December 31, 2017
Within 1 year	$	9,548	10,524
1 to 5 years		3,502	10,306
	$	**13,050**	**20,830**

The Company leases its offices and warehouses under operating leases. The leases typically run for a period of 1 to 3 years. Lease payments are paid based on the terms of the lease contracts.

In 2018 and 2017, the rental expense of operating leases, amounted to $14,892 and $11,993, respectively, were recognized in cost of revenue and operating expenses.

(ii) Lessor

The Company leased its offices to others under operating leases. In 2018 and 2017, the rental income amounted to $3,156 and $4,208, respectively.

(o) Employee benefits

(i) Defined benefit plans

The reconciliations between the present value of defined benefit obligations and the net defined benefit liabilities for defined benefit plans were as follows:

		December 31, 2018	December 31, 2017
Present value of defined benefit obligations	$	60,759	56,350
Fair value of plan assets		(35,189)	(33,991)
		25,570	22,359
Effects of the asset ceiling		-	-
Net defined benefit liabilities	$	**25,570**	**22,359**

The Company makes defined benefit plan contributions to the pension fund account at Bank of Taiwan that provides pension benefits for its employees upon retirement. The Company also established pension funds in accordance with the Regulations Governing the Management, Investment, and Distribution of the Employees' Retirement Fund Established by a Profit-seeking Enterprise, which are deposited monthly in the designated financial institutions. The plans entitle a retired employee to receive a payment based on years of service and average salary for the six months prior to the employee's retirement.

(Continued)

1) Composition of plan assets

In accordance with the requirements of the Labor Standards Law, the Company's pension fund account at Bank of Taiwan is managed and administered by the Bureau of Labor Funds of the Ministry of Labor (the Bureau of Labor Funds). According to the Regulations for Revenues, Expenditures, Safeguard and Utilization of the Labor Retirement Fund, with regard to the utilization of the Fund, minimum earnings shall be no less than the earnings attainable from two-year time deposits, with interest rates offered by local banks.

As of December 31, 2018 and 2017, the Company's labor pension fund account balance at Bank of Taiwan amounted to $35,189 and $33,991, respectively. Please refer to the website of the Bureau of Labor Funds for information on the labor pension fund assets including the asset portfolio and yield of the fund.

2) Movements in present value of defined benefit obligations

The movements in present value of defined benefit obligations of the Company were as follows:

	2018	2017
Defined benefit obligations at January 1	$ 56,350	55,758
Current service costs and interest expense	915	767
Remeasurement on the net defined benefit liabilities (assets)		
－Actuarial loss (gain) arising from changes in financial assumptions	2,383	(2,408)
－Actuarial loss arising from experience adjustments	1,643	2,361
Benefits paid by the plan	(532)	(128)
Defined benefit obligations at December 31	**$ 60,759**	**56,350**

3) Movements of fair value of plan assets

The movements of the fair value of plan assets of the Company were as follows:

	2018	2017
Fair value of plan assets at January 1	$ 33,991	33,477
Interest income	554	463
Remeasurement on the net defined benefit liabilities (assets)		
－Return on plan assets (excluding current interest expense)	819	(134)
Contributions by the employer	357	313
Benefits paid by the plan	(532)	(128)
Fair value of plan assets at December 31	**$ 35,189**	**33,991**

(Continued)

4) Changes in the effect of the asset ceiling

There was no effect of the asset ceiling.

5) Expenses recognized in profit or loss

The expenses recognized in profit or loss were as follows:

		2018	2017
Net interest expense on the net defined benefit liability	$	**361**	**304**
Cost of revenue	$	107	99
Selling expenses		118	106
Administrative expenses		85	61
Research and development expenses		51	38
	$	**361**	**304**

6) Remeasurement of the net defined benefit liabilities recognized in other comprehensive income

The remeasurement of the net defined benefit liabilities recognized in other comprehensive income were as follows:

		2018	2017
Cumulative amount at January 1	$	24,137	24,050
Recognized during the period		3,207	87
Cumulative amount at December 31	$	**27,344**	**24,137**

7) Actuarial assumptions

The principal assumptions of the actuarial valuation were as follows:

	December 31, 2018	December 31, 2017
Discount rate	1.375 %	1.625 %
Future salary increases rate	3.000 %	3.000 %

The Company expects to make contribution of $361 to the defined benefit plans in the year following December 31, 2018.

The weighted average duration of the defined benefit plans is 17.24 years.

8) Sensitivity analysis

When calculating the present value of the defined benefit obligations, the Company uses judgments and estimations to determine the actuarial assumptions for each measurement date, including discount rates, employee turnover rates and future salary changes. Any changes in the actuarial assumptions may significantly impact the amount of the defined benefit obligations.

(Continued)

The following table summarizes the impact of a change in the assumptions on the present value of the defined benefit obligation on December 31, 2018 and 2017.

	Increase (decrease) in present value of defined benefit obligations	
	0.25% Increase	**0.25% Decrease**
December 31, 2018		
Discount rate	(2,383)	2,486
Future salary change rate	2,409	(2,318)
December 31, 2017		
Discount rate	(2,301)	2,435
Future salary change rate	2,346	(2,249)

Each sensitivity analysis considers the change in one assumption at a time, leaving the other assumptions unchanged. This approach shows the isolated effect of changing one individual assumption but does not take into account that some assumptions are related. The method used to carry out the sensitivity analysis is the same as the calculation of the net defined benefit liabilities recognized in the balance sheets.

In 2018, the method and assumptions used to carry out the sensitivity analysis was the same as in the prior year.

(ii) Defined contribution plans

The Company contributes monthly an amount equal to 6% of each employee’s monthly wages to the employee’ s individual pension fund account at the Bureau of Labor Insurance in accordance with the provisions of the Labor Pension Act. Under this defined contribution plan, the Company has no legal or constructive obligation to pay additional amounts after contributing a fixed amount to the Bureau of the Labor Insurance.

For the years ended December 31, 2018 and 2017, the Company recognized pension expenses of $17,228 and $15,738, respectively, in relation to the defined contribution plans.

(p) Income taxes

According to the amendments to the "Income Tax Act” enacted by the office of the President of the Republic of China (Taiwan) on February 7, 2018, the corporate income tax rate was adjusted from 17% to 20% starting from 2018.

(Continued)

(i) The components of income tax expense were as follows:

		2018	2017
Current income tax expense			
Current period	$	101,114	98,183
Adjustments for prior years		911	(23,165)
		102,025	75,018
Deferred income tax benefit			
Origination and reversal of temporary differences		(11,111)	(23,091)
Adjustments in tax rate		(11,239)	-
		(22,350)	(23,091)
Income tax expense	$	**79,675**	**51,927**

The components of income tax benefit recognized in other comprehensive income were as follows:

		2018	2017
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement of defined benefit plans	$	**641**	**15**

Reconciliation of income tax expense and income before income tax was as follows:

		2018	2017
Income before income tax	$	**438,514**	**457,345**
Income tax using the Company's statutory tax rate	$	87,703	77,749
Adjustments in tax rate		(11,239)	-
Investment tax credits		(3,500)	(3,000)
Changes in unrecognized temporary differences		(8,339)	(3,296)
Prior-year adjustments		911	(23,165)
10% surtax on undistributed earnings		8,419	6,814
Others		5,720	(3,175)
	$	**79,675**	**51,927**

(ii) Deferred income tax assets and liabilities

1) Unrecognized deferred income tax assets and liabilities

		December 31, 2018	December 31, 2017
Unrecognized deferred income tax assets:			
Aggregate deductible temporary differences associated with investments in subsidiaries	$	22,801	21,206
Deductible temporary differences		788	669
	$	**23,589**	**21,875**

(Continued)

		December 31, 2018	December 31, 2017
Unrecognized deferred income tax liabilities:			
Aggregate taxable temporary differences associated with investments in subsidiaries	$	47,617	37,564

As the Company is able to control the timing of the reversal of the temporary differences associated with investments in its subsidiaries as of December 31, 2018 and 2017, and Management believes that it is probable that the temporary differences will not reverse in the foreseeable future, such temporary differences are not recognized as deferred income tax assets and liabilities.

2) Recognized deferred income tax assets and liabilities

Changes in the amount of deferred income tax assets and liabilities were as follows:

Deferred income tax assets:

		Defined benefit plans	Provision for inventory obsolescence	Warranty provision	Unrealized impairment loss on financial assets	Others	Total
Balance at January 1, 2018	$	4,913	39,842	1,694	8,500	11,148	66,097
Recognized in profit or loss		-	7,000	(522)	-	4,516	10,994
Recognized in other comprehensive income		641	-	-	-	-	641
Adjustments in tax rate		867	7,031	299	1,500	1,695	11,392
Balance at December 31, 2018	**$**	**6,421**	**53,873**	**1,471**	**10,000**	**17,359**	**89,124**
Balance at January 1, 2017	$	4,898	18,167	2,107	8,500	8,898	42,570
Recognized in profit or loss		-	21,675	(413)	-	2,250	23,512
Recognized in other comprehensive income		15	-	-	-	-	15
Balance at December 31, 2017	**$**	**4,913**	**39,842**	**1,694**	**8,500**	**11,148**	**66,097**

Deferred income tax liabilities:

		Others
Balance at January 1, 2018	$	867
Recognized in profit or loss		(117)
Adjustments in tax rate		153
Balance at December 31, 2018	**$**	**903**
Balance at January 1, 2017	$	446
Recognized in profit or loss		421
Balance at December 31, 2017	**$**	**867**

(iii) The Company’s income tax returns for the years through 2016 have been assessed by the R.O.C. income tax authorities.

(Continued)

(q) Capital and other equity

(i) Common stock

As of December 31, 2018 and 2017, the Company's authorized shares of common stock consisted of 200,000 thousand shares, of which 100,898 thousand shares were issued and outstanding. The par value of the Company's common stock is $10 (dollars) per share. The Company has reserved 15,000 thousand shares for the exercise of employee stock options.

In order to enrich the necessary working capital in response to develop long-term operations, the Company's temporary shareholders' meeting held on December 29, 2014 resolved to raise capital through private placement. The effective date of the capital increase was January 21, 2015, and the issuance of common stock has been registered with the government authorities on January 28, 2015. Details are summarized below:

1) Shares issued: 15,000 thousand shares of common stock

2) Issue price: $25.38 (dollars) per share

3) Total proceeds received by the Company: $380,700

4) Investor of the private placement: Phison Electronics Corporation

5) Rights and obligations: All the rights and obligations of shares of common stock through the private placement (the "Private Placement Shares") shall be the same as those of shares of common stock issued and outstanding. However, except for selling to specific investors defined in Article 43-8 of the Securities and Exchange Act, the Private Placement Shares cannot be resold during a three-year period from delivery date. After three years from delivery date, according to the Securities and Exchange Act, and Directions for Public Companies Conducting Private Placements of Securities, the Company shall obtain a letter issued by Taiwan Stock Exchange Corporation ("TWSE") acknowledging that the Private Placement Shares have met the standards for TWSE listing before it may file with FSC for retroactive handling of public issuance procedures. Thereafter, the Company can apply for listing in TWSE of Private Placement Shares.

6) Others: The Company recognized capital surplus of $230,700, resulting from the issuance price of Private Placement Shares in excess of common stock's par value.

On May 8, 2018, the public issuance of abovementioned Private Placement Shares was approved by and registered with FSC.

(Continued)

(ii) Capital surplus

		December 31, 2018	December 31, 2017
Paid-in capital in excess of par value	$	331,707	331,707
Employee stock options		12,901	12,901
Treasury stock transactions		3,781	3,781
Changes in equity of associates accounted for using equity method		11,521	9,836
	$	**359,910**	**358,225**

Pursuant to the Company Act, any realized capital surplus is initially used to cover an accumulated deficit, and the balance, if any, could be transferred to common stock as stock dividends based on the original shareholding ratio or distributed as cash dividends based on a resolution approved by the shareholders. Realized capital surplus includes the premium derived from the issuance of shares of stock in excess of par value and donations from shareholders received by the Company. In accordance with the Regulations Governing the Offering and Issuance of Securities by Securities Issuers, distribution of stock dividends from capital surplus in any one year shall not exceed 10% of paid-in capital.

(iii) Retained earnings

1) Legal reserve

According to the Company Act, the Company must retain 10% of its annual income as a legal reserve until such retention equals the amount of paid-in capital. If a company has no accumulated deficit, it may, pursuant to a resolution approved by the shareholders, distribute its legal reserve to its shareholders by issuing new shares or by distributing cash for the portion in excess of 25% of the paid-in capital.

2) Special reserve

In accordance with Ruling No. 1010012865 issued by the FSC on April 6, 2012, a special reserve equal to the total amount of items that were accounted for as deductions from shareholders' equity was set aside from current and prior-year earnings. This special reserve shall revert to the retained earnings and be made available for distribution when the items that are accounted for as deductions from shareholders' equity are reversed in subsequent periods.

(Continued)

3) Earnings distribution

The Company's Articles of Incorporation stipulate that at least 10% of annual net income, after deducting accumulated deficit, if any, must be retained as legal reserve until such retention equals the amount of paid in capital. In addition, a special reserve shall be set aside in accordance with applicable laws and regulations. The remaining balance, together with the unappropriated earnings from the previous years, after retaining a certain portion of it for business considerations, can be distributed as dividends to shareholders. Except for the distribution of capital surplus and legal reserve in accordance with applicable laws and regulations, the Company cannot distribute any earnings when there are no retained earnings.

Since the Company operates in an industry experiencing rapid change and development, earnings are distributed in consideration of the current year's earnings, the overall economic environment, related laws and decrees, as well as the Company's long term development and stability in its financial position. The Company has adopted a balance dividend policy, in which a cash dividend comprises at least 10% of the total dividend distribution.

The appropriation of 2017 and 2016 earnings were approved by the shareholders at the meetings on May 30, 2018 and May 26, 2017, respectively. The resolved appropriation of the dividend per share were as follows:

	2017		2016	
	Dividends per share (in dollars)	**Amount**	**Dividends per share (in dollars)**	**Amount**
Dividends per share:				
Cash dividends	$ 2.60	**262,334**	2.40	**242,155**

(iv) Other equity items (net after tax)

1) Foreign currency translation differences

	2018	2017
Balance at January 1	$ (49,321)	(30,971)
Foreign exchange differences arising from translation of foreign operations	8,260	(18,350)
Balance at December 31	**$ (41,061)**	**(49,321)**

(Continued)

2) Unrealized gains (losses) on financial assets measured at fair value through other comprehensive income

		2018
Balance at January 1 (per IAS 39)	$	-
Adjustment on initial application of IFRS 9		(37,614)
Balance at January 1 (per IFRS 9)		(37,614)
Unrealized gains from investments in equity instruments measured at fair value through other comprehensive income		11,135
Balance at December 31	**$**	**(26,479)**

(r) Earnings per share ("EPS")

(i) Basic earnings per share

		2018	2017
Net income attributable to shareholders of the Company	**$**	**358,839**	**405,418**
Weighted-average number of ordinary shares outstanding (in thousands)		**100,898**	**100,898**
Basic earnings per share (in dollars)	**$**	**3.56**	**4.02**

(ii) Diluted earnings per share

		2018	2017
Net income attributable to shareholders of the Company	**$**	**358,839**	**405,418**
Weighted-average number of ordinary shares outstanding (in thousands)		100,898	100,898
Effect of dilutive potential common stock (in thousand):			
Remuneration to employees		1,771	1,321
Weighted-average number of ordinary shares outstanding (including effect of dilutive potential common stock)		**102,669**	**102,219**
Diluted earnings per share (in dollars)	**$**	**3.50**	**3.97**

(s) Revenue from contracts with customers

(i) Disaggregation of revenue

		2018
Major products:		
Flash memory cards	$	4,653,957
Memory modules		4,406,760
Others		3,478
	$	**9,064,195**

(Continued)

(ii) Contract balances

	December 31, 2018	January 1, 2018
Notes and accounts receivable (including related parties)	$ 1,058,793	1,344,546
Less: loss allowance	(4,270)	(2,756)
	$ 1,054,523	**1,341,790**

For details on notes and accounts receivable and its loss allowance, please refer to note 6(f).

(t) Revenue

	2017
Revenue from sale of goods	**$ 9,844,821**

For details on revenue for the year ended December 31, 2018, please refer to note 6(s).

(u) Remuneration to employees, and directors and supervisors

The Company's article of incorporation requires that earnings shall first to be offset against any deficit, then, a minimum of 4% will be distributed as remuneration to its employees and no more than 1.4% to its directors. Employees who are entitled to receive the abovementioned employee remuneration, in shares or cash, include the employees of the subsidiaries of the Company who meet certain specific requirement. The Company no longer has supervisors since the reelection of directors at the shareholders' meeting on May 30, 2018. The required duties of supervisors are being fulfilled by the Audit Committee.

For the years ended December 31, 2018 and 2017, the Company estimated its remuneration to employees amounting to $44,047 and $44,818, respectively, and the remuneration to directors and supervisors amounting to $6,852 and $7,130, respectively. The abovementioned estimated amounts are calculated based on the net profits before tax of each period (excluding the remuneration to employees, and directors and supervisors), multiplied by a certain percentage of the remuneration to employees, and directors and supervisors. The estimations are recognized as operating expenses. If the actual amounts differ from the estimated amounts, the differences shall be accounted as changes in accounting estimates and recognized as profit or loss in following year.

The abovementioned estimated remuneration to employees, and directors and supervisors is the same as the amount approved by the Board of Directors and will be paid in cash. Related information is available on the Market Observation Post System website of the Taiwan Stock Exchange.

(v) Non-operating income and loss

(i) Other income

	2018	2017
Interest income from bank deposits	$ 1,039	627
Rental income	3,156	4,208
	$ 4,195	**4,835**

(Continued)

(ii) Other gains and losses－net

		2018	2017
Gain on disposal of property, plant and equipment	$	-	4,999
Foreign currency exchange loss		(3,003)	(13,471)
Gain (loss) on financial assets and liabilities at fair value through profit or loss		(2,828)	6,650
Impairment loss on non-financial assets		(127)	(6,994)
Others		14,389	11,205
	$	**8,431**	**2,389**

(iii) Finance costs

		2018	2017
Interest expense from bank loans	$	**7,650**	**10,367**

(w) Financial instruments

(i) Categories of financial instruments

1) Financial assets

		December 31, 2018	December 31, 2017
Financial assets at fair value through profit or loss:			
Financial assets mandatorily measured at fair value through profit or loss	$	454	-
Held for trading		-	688
Subtotal		454	688
Financial assets at fair value through other comprehensive income		44,520	-
Available-for-sale financial assets:			
Financial assets at fair value		-	12,117
Financial assets carried at cost		-	5,359
Subtotal		-	17,476
Financial assets measured at amortized cost (note)			
Cash and cash equivalents		604,931	387,513
Notes and accounts receivable (including related parties)		1,054,523	1,341,867
Other receivables (including related parties)		42,914	76,260
Other financial assets—non-current		3,308	3,308
Subtotal		1,705,676	1,808,948
Total	$	**1,750,650**	**1,827,112**

Note: classified as loans and receivables as of December 31, 2017.

(Continued)

2) Financial liabilities

	December 31, 2018	December 31, 2017
Financial liabilities at fair value through profit or loss:		
Held for trading	$ 289	354
Financial liabilities measured at amortized cost:		
Short-term borrowings	138,218	492,240
Notes and accounts payable (including related parties)	951,802	1,089,733
Other payables (including related parties)	142,161	106,525
Guarantee deposits	-	1,339
Subtotal	1,232,181	1,689,837
Total	**$ 1,232,470**	**1,690,191**

(ii) Fair value information

1) Financial instruments not measured at fair value

The Company considers that the carrying amounts of financial assets and financial liabilities measured at amortized cost approximate their fair values.

2) Financial instruments measured at fair value

The fair value of financial assets and liabilities at fair value through profit and loss, financial assets at fair value through other comprehensive income, and available-for-sale financial assets are measured on a recurring basis.

The table below analyzes financial instruments that are measured at fair value subsequent to initial recognition, grouped into Levels 1 to 3 based on the degree to which the fair value is observable. The different levels have been defined as follows:

a) Level 1: quoted prices (unadjusted) in active markets for identified assets or liabilities.

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

c) Level 3: inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).

(Continued)

	December 31, 2018				
		Fair Value			
	Carrying amount	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss－current:					
Financial assets mandatorily measured at fair value through profit or loss－foreign currency forward contracts	$ 454	-	454	-	454
Financial assets at fair value through other comprehensive income－non-current:					
Unlisted stocks	$ 44,520	-	-	44,520	44,520
Financial liabilities at fair value through profit or loss－current:					
Foreign currency forward contracts	$ 289	-	289	-	289

	December 31, 2017				
		Fair Value			
	Carrying amount	Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss－current:					
Held for trading－foreign currency forward contracts	$ 688	-	688	-	688
Available-for-sale financial assets－non-current:					
Unlisted stocks	$ 12,117	-	-	12,117	12,117
Financial liabilities at fair value through profit or loss－current:					
Held for trading－foreign currency forward contracts	$ 354	-	354	-	354

(Continued)

(iii) Valuation techniques used in fair value measurement

1) Non-derivative financial instruments

The fair value of financial instruments traded in active liquid markets is determined with reference to quoted market prices.

Except for the abovementioned financial instruments traded in an active market, the fair value of other financial instruments are based on the valuation techniques or the quotation from counterparty. The fair value using valuation techniques refers to the current fair value of other financial instruments with similar conditions and characteristics, or using a discounted cash flow method, or other valuation techniques which include model calculating with observable market data at the reporting date.

The fair value of the unlisted stock held by the Company is estimated by using the market approach and is determined by reference to valuations of similar companies, third-party quotation, net worth and recent operating activities. The significant unobservable inputs is primarily the liquidity discounts. No quantitative information is disclosed due to that the possible changes in liquidity discounts would not cause significant potential financial impact.

2) Derivative financial instruments

The fair value of derivative financial instruments is determined using a valuation technique, with estimates and assumptions consistent with those used by market participants and that are readily available to the Company. The fair value of foreign currency forward contracts is computed individually by each contract using the valuation technique.

(iv) Transfers between levels of the fair value hierarchy

There were no transfers among fair value hierarchies for the years ended December 31, 2018 and 2017.

(v) Movement in financial assets included in Level 3 of fair value hierarchy (classified as financial assets at fair value through other comprehensive income for the year ended December 31, 2018 and available-for-sale financial assets for the year ended December 31, 2017, respectively):

	2018	2017
Balance, beginning of year	$ 29,862	12,117
Purchased	3,523	-
Gains recognized in other comprehensive income, and presented in unrealized losses on financial assets measured at fair value through other comprehensive income	11,135	-
Balance, end of year	**$ 44,520**	**12,117**

(Continued)

(x) Financial risk management

The Company is exposed to credit risk, liquidity risk, and market risk (including currency risk, interest rate risk, and other market price risk). The Company has disclosed the information on exposure to the aforementioned risks and the Company’s policies and procedures to measure and manage those risks as well as the quantitative information below.

The Company’s management monitors and reviews financial activities in accordance with procedures required by relevant regulations and internal controls. Internal auditors undertake both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Company’s Board of Directors.

The Company’s Board of Directors is responsible for developing and monitoring the Company’s risk management policies. The Company’s risk management policies are established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor adherence to the controls. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company’s operations.

(i) Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty of a financial instrument fails to meet its contractual obligations, and arises principally from the Company’s cash and cash equivalents, derivative instruments, receivables from customers, and other receivables. The maximum exposure to credit risk is equal to the carrying amount of the Company’s financial assets. As of December 31, 2018 and 2017, the Company's maximum exposure to credit risk amounted to $1,750,650 and $1,827,112, respectively.

The Company maintains cash and enters into derivative transactions with various reputable financial institutions; therefore, the exposure related to potential default by those counter-parties is not considered significant.

In order to reduce credit risk of accounts receivable, the Company has established a credit policy under which each customer is analyzed individually for creditworthiness for the purpose of setting the credit limit. Additionally, the Company continuously evaluates the credit quality of its customers and utilizes its insurance to minimize the credit risk. As of December 31, 2018 and 2017, the Company has insured credit insurance that cover accounts receivable amounting to $382,610 and $201,252, respectively. When the debtors are in default, the Company will receive 90% of the credit insurance.

The Company believes that there is no significant concentration of credit risk due to the Company's large number of customers and their wide geographical spread.

(Continued)

(ii) Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in settling its financial liabilities by delivering cash or other financial assets. The Company manages liquidity risk by monitoring regularly the current and mid- to long-term cash demand, maintaining adequate cash and banking facilities, and ensuring compliance with the terms of the loan agreements. As of December 31, 2018 and 2017, the Company had unused credit facilities of $2,491,803 and $1,778,440, respectively.

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

	Carrying amount	Contractual cash flows	Within 1 year	More than 1 year
December 31, 2018				
Non-derivative financial liabilities:				
Short-term borrowings	$ 138,218	(138,560)	(138,560)	-
Notes and accounts payable (including related parties)	951,802	(951,802)	(951,802)	-
Other payables (including related parties)	142,161	(142,161)	(142,161)	-
Derivative financial instruments:				
Foreign currency forward contracts：				
Inflow	-	58,920	58,920	-
Outflow	289	(59,209)	(59,209)	-
December 31, 2017				
Non-derivative financial liabilities:				
Short-term borrowings	$ 492,240	(493,312)	(493,312)	-
Notes and accounts payable (including related parties)	1,089,733	(1,089,733)	(1,089,733)	-
Other payables (including related parties)	106,525	(106,525)	(106,525)	-
Guarantee deposits	1,339	(1,339)	-	(1,339)
Derivative financial instruments:				
Foreign currency forward contracts：				
Inflow	-	141,107	141,107	-
Outflow	354	(141,461)	(141,461)	-

The Company does not expect that the cash flows included in the maturity analysis would occur significantly earlier or at significantly different amounts.

(iii) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates, and equity prices, will affect the Company's income or the value of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

(Continued)

The Company utilizes derivative financial instruments to manage market risk. All such transactions are carried out within the guidelines set by the Company's Board of Directors.

1) Foreign currency risk

The Company utilizes foreign currency forward contracts to hedge its foreign currency exposure with respect to its sales and purchases. The maturity dates of derivative financial instruments the Company entered into were less than six months and did not conform to the criteria for hedge accounting. These financial instruments help to reduce, but do not eliminate, the impact of foreign currency exchange rate movements.

The Company's exposure to foreign currency risk arises from cash and cash equivalents, notes and accounts receivable (including related parties), notes and accounts payable (including related parties), other receivables (including related parties), other payables (including related parties), and loans and borrowings that are denominated in a currency other than the functional currency of the Company. At the reporting date, the carrying amounts of the Company's significant monetary assets and liabilities denominated in a currency other than the functional currency of the Company and their respective sensitivity analysis were as follows:

(Amounts in Thousands of New Taiwan Dollars)

	December 31, 2018				
	Foreign currency (in thousands)	**Exchange rate**	**TWD (in thousands)**	**Change in magnitude**	**Pre-tax effect on profit or loss (in thousands)**
Financial assets					
Monetary items					
USD	$ 35,300	30.715	1,084,240	1 %	10,842
Financial liabilities					
Monetary items					
USD	31,059	30.715	953,977	1 %	9,540

	December 31, 2017				
	Foreign currency (in thousands)	**Exchange rate**	**TWD (in thousands)**	**Change in magnitude**	**Pre-tax effect on profit or loss (in thousands)**
Financial assets					
Monetary items					
USD	$ 46,499	29.760	1,383,810	1 %	13,838
Financial liabilities					
Monetary items					
USD	41,549	29.760	1,236,498	1 %	12,365

(Continued)

As the Company deal in diverse foreign currencies, gains and losses on foreign exchange were summarized as a single amount. The aggregate of realized and unrealized foreign exchange loss for the years ended December 31, 2018 and 2017 were \$3,003 and \$13,471, respectively.

2) Interest rate risk

The Company' s bank loans carried floating interest rates. To manage the interest rate risk, the Company periodically assesses the interest rates of bank loans and maintains good relationships with financial institutions to obtain lower financing costs. The Company also strengthens the management of working capital to reduce the dependence on bank loans, as well as the risk arising from fluctuation of interest rates.

If interest rates had been 100 basis points (1%) higher/lower, with all other variables held constant, pre-tax income for the years ended December 31, 2018 and 2017 would have been \$1,382 and \$4,922, respectively, lower/higher, which mainly resulted from the borrowings with floating interest rates.

3) Other market price risk

The Company has long-term investments in unlisted stocks, which the Company does not actively participate in trading. The Company anticipates that there is no significant market risk related to the investments.

(y) Capital management

In consideration of the industry dynamics and future developments, as well as external environment factors, the Company maintains an optimal capital structure to enhance long-term shareholder value by managing its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, research and development expenses, dividend payments, and other business requirements for continuing operations and to reward shareholders and take into consideration the interests of other shareholders. The Company monitors its capital through reviewing the liability-to-equity ratio periodically.

The Company's liability-to-equity ratio at the end of each reporting period was as follows:

	December 31, 2018	December 31, 2017
Total liabilities	$ 1,533,180	1,987,032
Total equity	$ 2,695,283	2,567,955
Liability-to-equity ratio	56.88 %	77.38 %

In 2018, the Company decreased its bank loans and accounts payable due to the decrease of stock level. It also resulted in the decreasing of liability-to-equity ratio.

(Continued)

(z) Changes in liabilities from financing activities

Reconciliation of liabilities arising from financing activities were as follows:

		January 1, 2018	Cash flows	December 31, 2018
Short-term borrowings	$	492,240	(354,022)	138,218
Guarantee deposits		1,339	(1,339)	-
	$	**493,579**	**(355,361)**	**138,218**

7. Related-party transactions:

(a) Name and relationship with related parties

The following are the entities that have had transactions with the Company during the periods covered in the parent-company-only financial statements and the Company's subsidiaries.

Name of related parties	Relationship with the Company
Apacer Memory America Inc. (AMA)	The Company's subsidiary
Apacer Technology B.V. (AMH)	The Company's subsidiary
Kingdom Corp. Limited (AMK)	The Company's subsidiary
Apacer Technology Japan Corp. (AMJ)	The Company's subsidiary
Apacer Technologies Private Limited (ATPL)	The Company's subsidiary
Apacer Technology (BVI) Inc. (ACYB)	The Company's subsidiary
Apacer Electronic (Shanghai) Co., Ltd (AMC)	ACYB's subsidiary
Shenzhen Kylinesports Technology Co. (AMS)	AMK's subsidiary
JoiiUp Technology Inc. (JoiiUp)	The Company's associate
Ecolumina Technologies Inc. (Ecolumina)	The Company's other related party
Phison Electronics Corporation (Phison)	The Company's director (Phison became the Company's director since the Company's reelection of directors on May 30, 2018)
Directors, general manager and vice general managers	The Company's key management personnel

(Continued)

(b) Significant related-party transactions

(i) Revenue

		2018	2017
Subsidiaries:			
AMA	$	1,813,223	2,320,652
Others		1,294,749	1,469,087
Associates		-	9
The Company's key management personnel (the Company's director)		7,725	-
Other related parties		227	210
	$	**3,115,924**	**3,789,958**

The sales prices and payment terms of sales to related parties depend on the economic environment and market competition, and are not different from those with third-party customers. The payment terms of 30～90 days calculated from the delivery date shows no significant difference between related parties and third-party customers. The Company does not receive any collateral for the receivables from related parties. The Company has not recognized a specific allowance for doubtful receivables after assessment.

(ii) Purchases

		2018	2017
Subsidiaries	$	23	5,841
The Company's key management personnel (the Company's director)		614,510	-
	$	**614,533**	**5,841**

There are no significant differences between the purchase prices for related parties and those for third-party vendors. The payment terms of EOM 30 days shows no significant difference between related parties and third-party vendors.

(iii) Receivables

Account	Related-party categories		December 31, 2018	December 31, 2017
Accounts receivable	Subsidiaries:			
	AMA	$	82,795	274,484
	Others		88,051	121,320
	Other related parties		110	4
	The Company's key management personnel (the Company's director)		929	-
Other receivables	Subsidiaries		189	-
		$	**172,074**	**395,808**

(Continued)

(iv) Payables

Account	Related-party categories	December 31, 2018	December 31, 2017
Accounts payable	Subsidiaries	$ -	58
	The Company's key management personnel (the Company's director)	132,755	-
Other payables	Subsidiaries	2,526	1,519
	The Company's key management personnel (the Company's director)	17	-
		$ 135,298	1,577

(v) Operating expenses

The operating expenses related to consulting service for market development, business promotion and after-sale service provided by related parties were as follows:

Account	Related party categories	2018	2017
Operating expenses	Subsidiaries	$ 9,350	6,749
	The Company's key management personnel (the Company's director)	291	-
		$ 9,641	6,749

(c) Compensation for key management personnel

	2018	2017
Short-term employee benefits	$ 33,323	35,823
Post-employment benefits	216	324
	$ 33,539	36,147

8. Pledged assets: None

9. Significant commitments and contingencies:

In addition to those in note 6(n), the Company had the following unrecognized commitments:

(a) Significant unrecognized commitments

	December 31, 2018	December 31, 2017
Unused letters of credit	$ 10,000	-

(b) As of December 31, 2018 and 2017, the Company had outstanding letters of guarantee amounting to $20,000 and $15,000, respectively, for the purpose of the payment of customs duties.

10. Significant loss from casualty: None

11. Significant subsequent events:None

12. Others:

Employee benefits, depreciation and amortization expenses categorized by function were as follows:

	2018			2017		
	Cost of revenue	Operating expenses	Total	Cost of revenue	Operating expenses	Total
Employee benefits:						
Salaries	128,748	335,187	463,935	126,325	316,893	443,218
Insurance	12,346	23,106	35,452	11,954	20,419	32,373
Pension	5,138	12,451	17,589	5,115	10,927	16,042
Remuneration to directors	-	9,171	9,171	-	6,004	6,004
Others	8,526	13,700	22,226	8,354	10,967	19,321
Depreciation	16,603	18,410	35,013	14,755	19,646	34,401
Amortization	2,211	7,309	9,520	714	6,795	7,509

As of December 31, 2018 and 2017, the number of the Company' employees were 510 and 477, respectively, including 6 non-employee directors for both years.

(Continued)

13. Additional disclosures

(a) Information on significant transactions:

In accordance with the requirements of the Regulations Governing the Preparation of Financial Reports by Securities Issuers, the Company discloses the following information on significant transactions for the year ended December 31, 2018:

(i) Financing provided to other parties: None

(ii) Guarantee and endorsement provided to other parties: None

(iii) Marketable securities held at the reporting date (excluding investments in subsidiaries and associates):

(In Thousands of Shares/Amounts in Thousands of New Taiwan Dollars)

Investing Company	Marketable Securities Type and Name	Relationship with the Securities Issuer	Financial Statement Account	December 31, 2018				Note
				Shares/ Units	Carrying Value	Percentage of Ownership	Fair value	
The Company	Stock: Formosa Golf and Country Club Corp.	-	Financial assets at fair value through other comprehensive income－non-current	3.6	9,643	0.01 %	9,643	Including stocks and memberships
The Company	Stock: OTO Photonics Inc.	-	Financial assets at fair value through other comprehensive income－non-current	3,266	34,877	12.78 %	34,877	-
AMS	Stock: Futurepath Technology(Shenzhen)co., ltd.	-	Financial assets at fair value through other comprehensive income－non-current	30	417	1.75 %	417	-

(iv) Marketable securities for which the accumulated purchase or sale amounts for the year exceed $300 million or 20% of the paid-in capital: None

(v) Acquisition of real estate which exceeds $300 million or 20% of the paid-in capital: None

(vi) Disposal of real estate which exceeds $300 million or 20% of the paid-in capital: None

(vii) Total purchases from and sales to related parties which exceed $100 million or 20% of the paid-in capital:

Company Name	Related Party	Nature of Relationship	Transaction Details				Transactions with Terms Different from Others		Notes/Accounts Receivable or (Payable)		Note
			Purchases/ (Sales)	Amount	% of Total Purchases/ (Sales)	Payment Terms	Unit Price	Payment Terms	Ending Balance	% of Total Notes/Accounts Receivable or (Payable)	
The Company	AMA	The Company's subsidiary	(Sales)	(1,813,223)	(20)%	OA45	-	-	82,795	8 %	
The Company	AMK	The Company's subsidiary	(Sales)	(455,581)	(5)%	OA30	-	-	14,846	1 %	
The Company	AMH	The Company's subsidiary	(Sales)	(459,377)	(5)%	OA45	-	-	11,678	1 %	
The Company	AMC	The Company's subsidiary	(Sales)	(271,582)	(3)%	M30	-	-	47,443	4 %	
The Company	AMJ	The Company's subsidiary	(Sales)	(108,209)	(1)%	M60	-	-	14,084	1 %	
The Company	Phison	The Company's director	Purchases	614,510	8 %	M30	-	-	(132,755)	(14)%	
AMA	The Company	AMA's parent company	Purchases	1,813,223	92 %	OA45	-	-	(82,795)	100 %	
AMK	The Company	AMK's parent company	Purchases	455,581	100 %	OA30	-	-	(14,846)	100 %	
AMH	The Company	AMH's parent company	Purchases	459,377	100 %	OA45	-	-	(11,678)	100 %	
AMC	The Company	AMC's parent company	Purchases	271,582	100 %	M30	-	-	(47,443)	100 %	
AMJ	The Company	AMJ's parent company	Purchases	108,209	100 %	M60	-	-	(14,084)	100 %	

(viii) Receivables from related parties which exceed $100 million or 20% of the paid-in capital: None.

(Continued)

(ix) Transactions about derivative instruments: Please refer to note 6(b)

(b) Information on investees:

(In Thousands of Shares)

Investor	Investee	Location	Main Businesses and Products	Original Investment Amount: December 31, 2018	Original Investment Amount: December 31, 2017	Balance as of December 31, 2018: Shares	Balance as of December 31, 2018: Percentage of Ownership	Balance as of December 31, 2018: Carrying Value	Net Income (Loss) of the Investee	Investment Income (Loss)	Note
The Company	AMA	USA	Trading of memory modules	610	610	20	100.00 %	222,842	7,881	7,881	
The Company	ACYB	British Virgin Islands	Investment and holding activity	18,542	18,542	2,636	100.00 %	16,411	(750)	(750)	
The Company	AMJ	Japan	Trading of memory modules	2,918	2,918	0.2	100.00 %	15,921	1,203	1,203	
The Company	ATPL	India	Trading of memory modules	915	915	29	100.00 %	1,461	91	91	
The Company	AMK	Hong Kong	Trading of memory modules	20,917	20,917	5,000	100.00 %	12,165	(463)	(463)	
The Company	AMH	Netherlands	Trading of memory modules	130,469	130,469	80	100.00 %	27,830	11,628	11,628	
The Company	JoiiUp	Taiwan	Cloud services and software development	15,000	15,000	1,500	16.15 %	884	(14,434)	(2,522)	

(c) Information on investments in Mainland China:

(i) Name and main businesses and products of investee companies in Mainland China:

Investee Company Name	Main Businesses and Products	Total Amount of Paid-in Capital	Method of Investment (Note 1)	Accumulated Outflow of Investment from Taiwan as of January 1, 2018	Investment Flows: Outflow	Investment Flows: Inflow	Accumulated Outflow of Investment from Taiwan as of December 31, 2018	Net Income (Loss) of Investee	% of Ownership of Direct or Indirect Investment	Investment Income (Loss) (Note 2)	Carrying Value as of December 31, 2018	Accumulated Inward Remittance of Earnings as of December 31, 2018
Apacer Electronic (Shanghai) Co., Ltd (AMC)	Trading of memory modules	15,358 (USD500, thousand)	Type 2	15,358 (USD500 thousand)	-	-	15,358 (USD500 thousand)	(662)	100.00 %	(662)	12,102	-
Shenzhen Kylinesports Technology Co. (AMS)	Trading of gaming products	22,975 (USD748 thousand)	Type 2	18,368 (USD598 thousand)	-	-	18,368 (USD598 thousand) (Note 4)	(929)	99.00 %	(929)	17,144	-

Note 1: Method of investments:
Type 1: Direct investment in Mainland China.
Type 2: Indirect investment in Mainland China through a holding company established in a third country.
Type 3: Others.
Note 2: Investment income or loss recognized based on the unaudited financial statements of investee companies.
Note 3: The above amounts were translated into New Taiwan dollars at the exchange rate of US$1=NT$30.715.
Note 4: The amount of AMK reinvestments amounting to US$134 thousand was excluded.

(ii) Limits on investments in Mainland China:

Investor	Accumulated Investment in Mainland China as of December 31, 2018	Investment Amounts Authorized by Investment Commission, MOEA	Upper Limit on Investment Authorized by Investment Commission, MOEA
The Company	33,726 (USD 1,098 thousand)	37,841 (USD 1,232 thousand)	1,617,170

(iii) Significant transactions with investee companies in Mainland China:

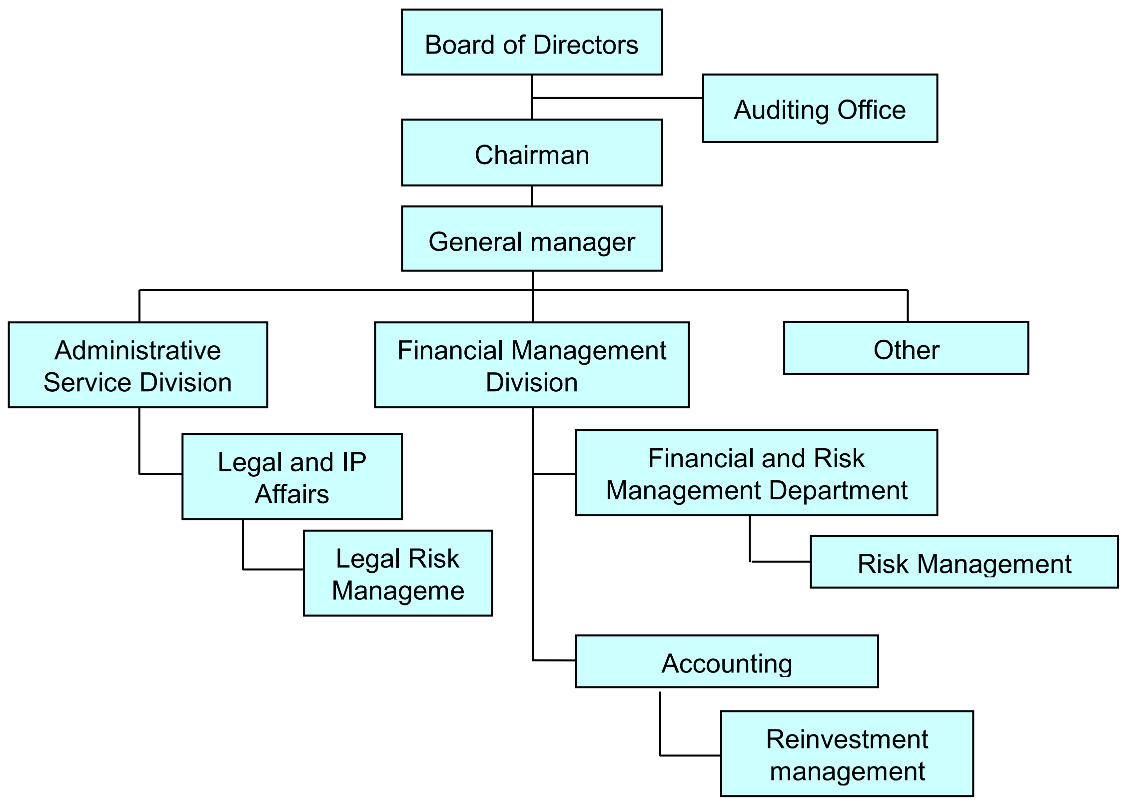
Please refer to section "Information on significant transactions" for detail description.

14. Segment information:

Please refer to the consolidated financial statements for the years ended December 31, 2018 and 2017 for disclosure of segment information.

Review and analysis of the financial status and financial performance and risk issues

Risk management organization structure:



- The Board of Directors reviews and supervises the implementation of risk management and control
- The General Manager and other senior executives are in charge of supervising the implementation of risk management decisions, and regularly controlling and evaluating the effectiveness of the risk management implementation.
- The Auditing Office regularly review and supervise the actual implementation of internal control processes and annual audit programs
- The Legal and IP Affairs Office is in charge of legal risk management, contract reviews, and litigation to reduce legal risks
- The Finance and Risk Management Department is in charge of financial hedge planning and hedging transactions
- The Accounting Department is responsible for the confirmation of the hedging transactions and the checking related accounts to ensure the accuracy of the transactions and the reliability of the financial statements.

I. Financial status

Unit: TWD 1,000

Item \ Year	2018	2017	Difference	
			Amount	%
Current assets	3,175,676	3,589,477	(413,801)	(11.53)
Long-term investments	45,821	19,197	26,624	138.69
Real estate, plant and equipment	887,458	899,387	(11,929)	(1.33)
Intangible assets	66,280	24,363	41,917	172.05
Other assets	100,284	100,381	(97)	(0.10)
Total assets	4,275,519	4,632,805	(357,286)	(7.71)
Current liabilities	1,538,233	2,010,340	(472,107)	(23.48)
Non-current liabilities	41,830	54,325	(12,495)	(23.00)
Total liabilities	1,580,063	2,064,665	(484,602)	(23.47)
Share capital	1,008,978	1,008,978	0	0.00
Capital reserve	359,910	358,225	1,685	0.17
Reserve surplus	1,393,935	1,250,073	143,862	11.51
Other equities	(67,540)	(49,321)	(18,219)	36.94
Treasury shares	-	-	-	-
Attributed to stockholders of the company	2,695,283	2,567,955	127,328	4.96
Non-controlling interests	173	185	(12)	(6.49)
Total equity	2,695,456	2,568,140	127,316	4.96

Changes of more than 20%, or more than TWD 10 million are described below:

1. The increase in "Intangible assets" is due to the purchase of software.
2. The decrease in "current liabilities" is due to the repayment of the short-term loans.
3. The decrease in “Non-current liabilities” is due to an decrease in deposits.
4. The increase in "Other assets" is due to the recognition of conversion differences in the financial statements of overseas business entities.

II. Financial performance

(I) Analysis of financial performance over the past two years

Unit: TWD 1,000

Year / Item	2018	2017	Difference	
			Amount	%
Operating revenue	9,441,618	10,043,476	(601,858)	5.99
Gross operating profit	1,309,289	1,298,790	10,499	0.81
Operating income	437,883	474,842	(36,959)	7.78
Non-operating income and expenses	623	(1,802)	2,425	134.57
Net profit before tax	438,506	473,040	(34,534)	7.30
Net profit for the current period	358,830	404,957	(46,127)	11.39
Other comprehensive income for the current period (net after tax)	16,826	(18,169)	34,995	192.61
Total consolidated income for the current period	375,656	386,788	(11,132)	2.88
Changes of more than 20% or more than TWD 10 million are described below: 1. The decrease in “Non-operating income and expenses” is due to decreased financial cost from the repayment in 2018.				

(II) The main factors influencing the expected sales volume in the coming year and the main factors for our company's expected continued growth or decline of our sales volme:

Our company is rooted in core technologies for storage and focuses on vertical industry applications, grasps consumer market trends, and develops an integrated ecosystem for services around information storage, reception, analysis, control, and sharing. We lead in the continuous development of solutions for the cloud and the Internet of Things. On the basis of our solid production and marketing mechanisms and a comprehensive distribution system that serves regional markets with a full range of and diversified products and services, our company expects to achieve its sales target for 2018.

III. Cash flow

(I) Analysis of changes in cash flow over the past two years (consolidated):

Unit: TWD 1,000

Item \ Year	2018	2017	Difference	
			Amount	%
Operating activity	829,711	39,209	790,502	2,016.12
Investment activity	(57,003)	(85,714)	28,711	33.50
Financing activity	(632,098)	131,241	(763,339)	(581.63)

Changes of more than 20%, or more than TWD 10 million are described below:

1. The increase in net cash inflow is due to an increase in inventory caused by the mass stock up previously in 2017.
2. The decrease in net cash outflow from investing activity is due to an increase in purchasing software in 2017.
3. The increase in net cash outflow from financing activity is due to the loan repayment in 2018.

(II) Improvement plan for lack of liquidity: None.

(III) Cash flow analysis for the coming year:

Unit: TWD 1,000

	All year from business	All year from business	Cash surplus	Remedy for cash shortage	
Cash balance at beginning of period	Net cash flow from activities	Cash inflow	(insufficient) amount	Investment plan	Financial plan
741,561	384,611	(297,902)	828,270	-	-

IV. Impacts on financial operations from major capital expenditures in the coming year: None.

V. The reinvestment policy of the past year, reasons for profits or losses, the improvement plan and investment plan for the coming year:

(I) The reinvestment policy of the past year: Our company's reinvestment policy mainly aimed to increase revenue and profit.

(II) Reasons for the major losses on the reinvestments: Our subsidiaries have already demonstrated their profitability, but due to rapid changes in the market and fierce competition, the current business growth rate of these reinvestments has slowed down. In the future, we will exert tighter control on certain processes to ensure higher profits.

(III) Investment plan for the coming year: Our company will leverage its accumulated advantages of deep R&D in core technologies to develop potential applications in information reception, analysis, control, and sharing, and integrate these high-tech information services into an ecosystem to seize early opportunities in cloud business and the Internet of Things.

VI. Risk matters requiring analysis and evaluation

(I) The effects of changes in interest rates and exchange rates and inflation on the profit and loss of the Company as well as future countermeasures

1. Changes in interest rates
Our company's liquidity is sufficient, and short-term bank borrowings are used for operational turnover. Interest rate fluctuations have a limited impact on our company. Short-term investments are mainly in deposits to increase revenue and reduce risk.
If the annual interest rate on bank borrowings increases or decreases by 1%, ceteris paribus, the Company's consolidated income before tax of 2018 would be reduced or increased by TWD 1,382,000.

2. Changes in exchange rates
The foreign exchange positions of our company are mainly in US Dollar. Exchange rate risks stem from commercial transactions, and recognized assets and liabilities. We will maintain our consistent and stable strategy and actively avoid foreign exchange risks to reduce the impact of exchange rate fluctuations on our company's income.

Units: TWD 1,000; %

Year / Item	2017
Consolidated net operating income (A)	9,441,618
Consolidated net operating profit (B)	437,883
Consolidated net gains (losses) from foreign exchange (C)	(6,993)
(C)/(A)	(0.07%)
(C)/(B)	(1.6%)

3. Inflation
The operating status of our company last year and this year to the date has not been significantly affected by inflation.

(II) Policies on high-risk, high-leverage investments, capital lending, third-party or endorsed guarantees, and derivative commodity transactions, and the main reasons for profits or losses from these and future response measures

1. Our company engagement in high-risk, high-leverage investments: None. None.
2. Lending of capital, endorsements and guarantees: Our company has not lent out, endorsed, or guaranteed any third-party funding.
3. Derivative financial commodity transactions: Our transactions in derivative products are mainly hedging transactions, which are handled in accordance with the provisions regarding trading procedures for derivative financial products in the "Criteria for

Handling Acquisition and Disposal of Assets".

(III) Future R&D projects and expected R&D expenses

1. Our research and development plan for 2019 covers the following:

(1) Technology for high speed transmission

This year we will continue to invest in the development of industrial SSD for PCI-Express (PCIe) high-speed transmission interfaces. We expect PCIe to become the next-generation of high-speed memory interfaces and the mainstream standard for transmission interfaces. The development of this SSD hardware, software and firmware architecture will be crucial in this development, which is why we will continue to invest in R&D for this technology. We plan to invest TWD 20,000,000 in R&D in this area in 2019.

(2) Flash memory products for industrial applications

Based on our technologies for related solid-state hard-disk storage products, we research and develop embedded SATA, PCIe and USB products and related value-added application software and hardware. The main use of these industrial storage modules is to replace traditional hard disk storage products to ensure high reliability of data transmission and provide value-added applications. We continuously develop solid-state hard disk application technologies and products geared to customer and market needs. We plan to invest TWD 10,000,000 in R&D in this area in 2019.

(3) Random dynamic memory storage devices

In response to the era of big data analysis and the server storage market, the demand for high-speed data access will increase, which is why we invest research and development of random dynamic memory devices. We plan to invest TWD 5,000,000 in R&D in this area in 2018.

(4) Industrial and intelligent IoT architecture technology

In response to the development of Industry 4.0 era and the Internet of Things, wired and wireless transmission technologies and applications will continue to expand. Thus we will continue to research and develop transmission interface technologies for application in industrial modules. We will also invest in research and development in connection technologies,such as the connection between terminals and the central server and a complete platform system architecture. We plan to invest TWD 6,000,000 in R&D in this area in 2019.

2. Estimated investments in research and development

Our company is a specialized manufacturer of dynamic random access memory modules and a leading provider of embedded digital storage and related consumer and industrial applications. Our research and development expenses in 2018 were TWD 120,479,000. We plan to invest TWD 135,162,000 in research and development in 2019. Competition in the market for consumer and embedded storage and application products is fierce. To keep our products competitive and stay ahead in the industry, we have become a manufacturer that continuously launches innovative products. We intend to annually increase our R&D expenditures as a proportion of total revenue as one of our key expenditures.

Looking into the future, our company, while continuing to invest in research and development of consumer products, will develop a stronger focus on the rapidly increasing demand from the industrial control market. We have served the memory and storage market of industrial control for many years and have a deep understanding of customer needs there. Thus we will aggressively develop our R&D capabilities in embedded solid-state hard disk storage modules and industrial IoT architecture technologies, gradually increase collaborations in these core technologies, hire more R&D engineers specialized in firmware, software, and hardware, annually increase our in R&D investments including R&D personnel, tools, and testing hardware and software. This will enable us to develop and provide the industrial control market with diverse applications and customized services that are competitive, differentiated, and optimized.

3. The main factors affecting the success of R&D in the future
   (1) Mastery and R&D of core technologies.
   (2) R&D personnel experienced in software, hardware, system and system architecture.
   (3) Electromechanical integration capabilities for firmware, hardware, mechanisms, and systems.
   (4) Capabilities in storage testing and verification technologies.

(IV) Changes in important policies and laws in Taiwan and abroad impacting our finances, and response measures

Our company has not been affected by changes in important policies and laws in Taiwan or abroad last year that have affected our finances or business. Our main sales markets are in Asia, Europe, and the Americas. The European region consists mostly of developed countries, whose laws and major policies are more stable than other regions, while the Americas are dominated by the United States, which in the short term should have no military or political risks. Therefore we do not expect that our company will be adversely impacted by changes in important policies and laws in Taiwan or abroad in the future.

(V) Impacts from changes in technology and the industry, and response measures

Our company closely follows changes and developments in technologies in our industry. Thus over the past year there was no significant impact on our company's finances or business arising from changes in technology or the industry.

(VI) Impacts from changes in corporate or corporate crisis management, and response measures

For many years our company has taken great care of maintaining a good corporate image and complying with statutory requirements. In the event of any situation that may affect our corporate image or legal compliance, a task force will be set up to formulate response measures.

To date, there have been no incidents that could affect the corporate image.

(VII) Expected benefits and potential risks from a merger or acquisition: None.

(VIII) Expected benefits and potential risks from expanding our plant:

Our company has completed the integration of the management of our factory in Tucheng and the headquarters of our company. We have established company milestones and objectives for our company's sustainable business. As of the printing date of this annual report, our company has no plans to expand the factory.

(IX) Risks of concentrated procurement of or sales of goods, and response measures: None.

(X) Impacts and risks from large transfers of shares held by our company’s directors, supervisors, and large shareholders holding more than 10% of shares, and response measures: None.

(XI) Impacts and risks from changes our company’s operating rights, and response measures: None.

(XII) Litigation and non-litigious events

1. Outcomes of major litigious, non-litigious, or administrative disputes last year or this year to date that have been determined or are still proceeding and that may have serious impact on shareholder income or share prices: None.
2. Outcomes of major litigious, non-litigious, or administrative disputes last year or this year to date involving our company’s directors, supervisors, and large shareholders holding more than 10% of shares, that have been resolved or are still proceeding and that may have serious impact on shareholder income or share prices: None.

(XIII) Other major risks and response measures: None.

VII. Other important issues: None.

Special items

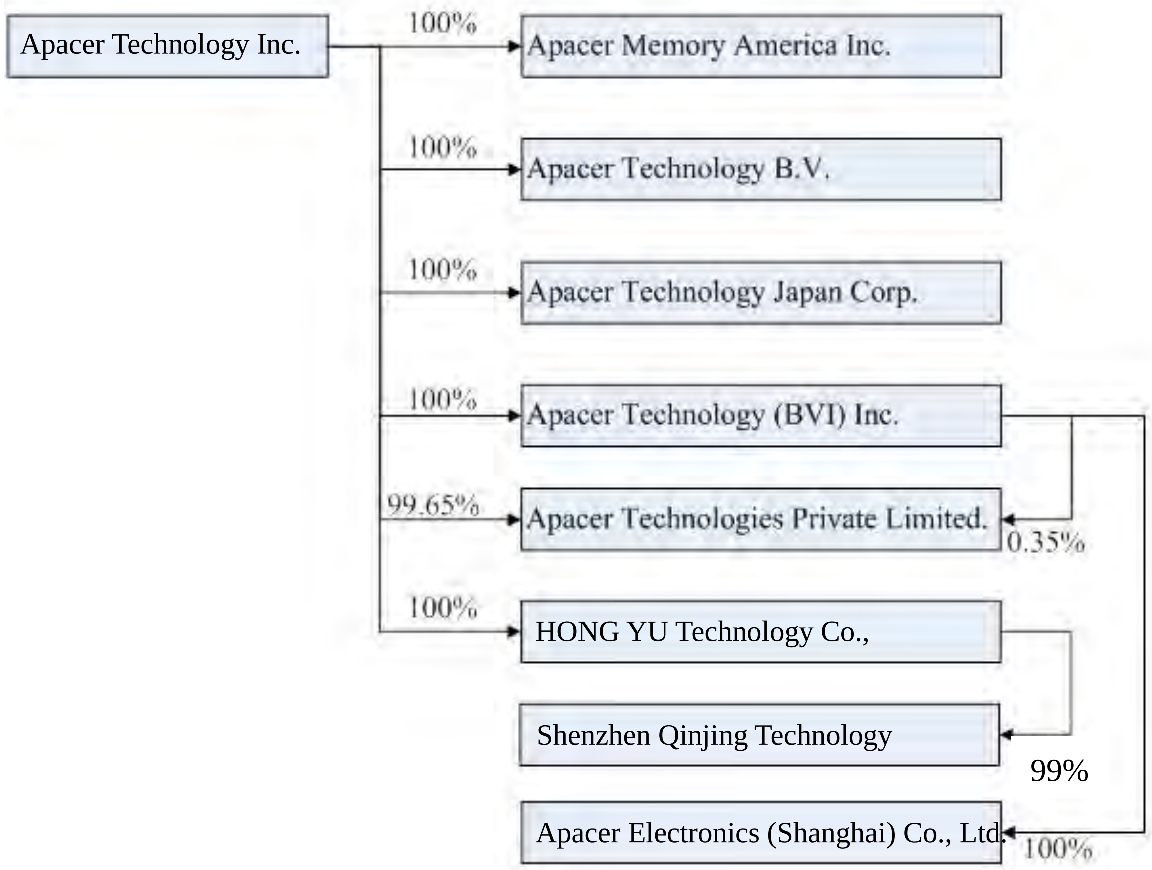
I. Information on affiliated enterprises

(I) Consolidated business report of affiliated enterprises

1. Overview of affiliated enterprises

(1) Organization chart of affiliated enterprises

31 December 2018



(2) Basic information of each enterprise

31 December 2018

Company Name	Date of establishment	Address	Actual amount of capital	Main business items
Apacer Memory America Inc.	10.14.1997	46732 Lakeview Blvd., Fremont, CA 94538	USD 20,000 (USD:TWD=1:30.50)	Memory modules and small storage memory cards
Apacer Technology (BVI) Inc.	2.17.1997	3rd Floor, J & C Building, Wickhams Cay 1, Road Town, Tortola, British Virgin Islands	USD 550,000 (USD:TWD=1:33.71)	Investment holding
Apacer Technology Japan Corp.	7.21.2000	5F, Matsura Bldg., 1-9-6 Shiba, Minato-Ku, Tokyo, 105-0014, Japan	JPY 10,000,000 (JPY:TWD=1:0.292)	Memory modules and small storage memory cards
Apacer Technologies Private Limited	2.6.2007	No.201, "Brigade Corner", 7th Block Jayanagar, Yediyur Circle, Bangalore-560082,India	INR 1,387,022 (INR:TWD=1:0.66)	Memory modules and small storage memory cards
HONG YU Technology Co., Ltd.	1.2.2001	Room 901, Yip Fung Building, No. 2-12, D'Aguilar Street, Cnetral, Hong Kong.	HKD 5,000,000 (HKD:TWD=1:4.18)	Memory modules and small storage memory cards
Apacer Technology B.V.	2.17.1998	Science Park Eindhoven 5051 5692 EB Son en Breugel The Netherlands	USD 79,513 (USD:TWD=1:32.44)	Memory modules and small storage memory cards
Apacer Electronics (Shanghai) Co., Ltd.	10.16.2001	Room 207, No.80 Xinling Road, Shanghai Pilot Free Trade Zone, China	USD 500,000 (USD:TWD=1:30.72)	Memory modules and small storage memory cards
Shenzhen Qijing Technology Co., Ltd.	6.03.2016	Room 2505, Block A, World Trade Plaza, Fuhong Road, Futian Avenue, Futian District, Shenzhen, China	RMB 5,000,000 (RMB:TWD=1:4.85)	Trade in gaming products

(3) Information on the same shareholders involved with or controlling affiliated enterprises: None.

(4) Operating activity of the affiliated enterprises

Our company's main business activities are the manufacture and sale of memory modules and small storage memory cards. The main business activities of our reinvested companies are the purchase and sale of memory modules and small storage memory cards.

(5) Information on directors, supervisors, and general managers of the affiliated enterprises:

31 December 2018

Company Name	Title	Name or representative	Holding shares	
			Number of shares	Shareholding ratio
Apacer Technology (BVI) Inc.	Director	Apacer Technology Inc. Representative: Austin Chen	2,635,775 shares	100%
Apacer Memory America Inc.	Director	Apacer Technology Inc. Representative: Xu Qin-Yi	20,000 shares	100%
Apacer Technology B.V.	Director	Apacer Technology Inc. Representatives: Chang Chia-Kun and Zheng Cui-Wen	79,513 shares	100%
Apacer Technology Japan Corp.	Director	Apacer Technology Inc. Representatives: Chang Chia-Kun, Luo Rong-Fa, Lin Xia-Yun	200 shares	100%
HONG YU Technology Co., Ltd.	Director	Apacer Technology Inc. Representatives: Lai Zi-Wen, Luo Xue Ru	100,000 shares	100%
Apacer Electronics (Shanghai) Co., Ltd.	Director	Apacer Technology Inc. Representatives: Chang Chia-Kun, Lai Zi-Wen, Quan Sen-Yu	Contribution USD 500,000	100%
Apacer Technologies Private Limited	Director	Apacer Technology Inc. Representatives: Lin Wan-Yuan, Chen Zhu-Ming,Naveen	28,799 shares	100%
Shenzhen Qinjing Technology Co., Ltd.	Director	Apacer Technology Inc. Representative: Luo Xue-Ru	Contribution RMB 4,985,714	99%

2. Business status of the affiliated enterprises

Unit: TWD 1,000

Company name	Capital amount	Total assets	Total liabilities	Net worth	Operating revenue	Operating income	Income for the current period (after tax)	Earnings per share (TWD)
Apacer Memory America Inc.	610	319,186	96,344	222,842	2,041,019	9,532	7,881	394.03
Apacer Technology (BVI) Inc.	18,542	16,411	0	16,411	0	(61)	(750)	(0.24)
Apacer Technology Japan Corp.	2,918	34,002	18,081	15,921	125,353	1,808	1,203	6,013.38
Apacer Technologies Private Limited	915	1,657	196	1,461	2,317	158	91	3.14
HONG YU Technology Co., Ltd.	20,917	42,682	30,517	12,165	469,308	740	(463)	(0.10)
Apacer Technology B.V.	130,469	50,551	22,721	27,830	544,739	9,519	11,628	146.25
Apacer Electronics (Shanghai) Co., Ltd.	15,358	64,530	54,428	12,102	312,957	1,645	(662)	-
Shenzhen Qinjing Technology Co., Ltd	22,975	17,299	155	17,144	1,283	(1,904)	(929)	-

(II) Consolidated financial statements of the affiliated enterprises: Please refer to pages 137 - 198.

(III) Affiliates reports: Not applicable.

II. Private equity securities transactions during last year and this year to date:
None.

III. Shares of this (parent) company held or handled by subsidiaries:
None.

IV. Other necessary additional statements:
None.

V. Matters that have a significant impact on shareholders' income or securities prices as set forth in Article 36, paragraph 3, subparagraph 2 of the Securities and Exchange Act during last year and this year to date:
None.

Apacer Technology Inc.

Chairman of the board: Austin Chen

Date of publication: 26 April 2019

Apacer

Access the best

Apacer Technology Inc.
2018 Annual Report
Taiwan Stock Exchange Market Observation Post System: http://mops.twse.com.tw
Apacer annual report is available at http://www.apacer.com
Printed on April 26th, 2019

www.apacer.com