Stock Code: 5483

Sino-American Silicon Products Inc.

2019 Annual Report

Issue Date: May 15, 2020

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Translation –In case of any discrepancy between the Chinese and English versions, the Chinese version shall prevail.

I. Spokesperson of the Company

Name: C.W. Lee
Title: Vice President of Corporate Development
Tel: 886-3-577-2233
E-mail: CWLee@saswafer.com

Acting Spokesperson

Name: Jennifer Chen
Title: Vice President of Sales
Tel: 886-3-577-2233
E-mail: JenniferChen@saswafer.com

II. Address and Telephone Number of the Company Headquarter, Subsidiaries, and Plants

Headquarters and Plant
Address: 4F, No.8, Industrial East Road 2, Science Based Industrial Park, Hsinchu, Taiwan, R.O.C.
Tel: 886-3-577-2233
Fax: 886-3-578-1706

Zhunan Branch and Plant
Address: No. 6, Kezhong Road, Zhunan Town, Miaoli County, Hsinchu Science Industrial Park
Tel: 886-37-582-533
Fax: 886-37-580-206

Yilan Branch and Plant
Address: No. 1, Section 2, Ligong First Road, Wujie Township, Yilan County
Tel: 886-3-990-5511
Fax: 886-3-990-3141

Hsu-Hsin Branch and Plant
Address: No. 6, Kezhong Rd., Zhunan Township, Miaoli County
Tel: 886-37-582-533
Fax: 886-37-580-206

Subsidiaries and Plants
Name: GlobalWafers Co., Ltd.
Address: No. 8, Industrial East Second Road, Hsinchu Science Industrial Park
Tel: 886-3-577-2255
Fax: 866-3-578-1706

III. Stock Transfer Agency

Name: Stock Agency Department of Yuanta Securities Co., Ltd.
Address: B1, No. 210, Section 3, Chengde Road, Taipei City
Tel: 886-2-2586-5859
Website: http://www.yuanta.com.tw

IV. External Auditor

Name of Accounting Firm: KPMG Taiwan
Name of CPAs: Cheng-Chien Chen, An-Chih Cheng
Address: 68F, No. 7, Sec. 5, Hsinyi Rd., Taipei, Taiwan
Tel: 886-2-8101-6666
Website: http://www.kpmg.com

V. Global Depositary Receipt (GDR) Agency

Luxembourg Stock Exchange

Method of inquiring about overseas securities information

http://www.bourse.lu

VI. Company Website

http://www.saswafer.com

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I. Letter to Shareholders

Dear Shareholders,

Thank you for attending the 2020 Shareholders' Meeting of Sino-American Silicon Products Inc. and for your support and love for the Company.

Impacted by the trade tension in-between China and the United States as well as the subsidy program of Chinese Government, the sluggish multicrystal market had gotten worse. Domestic solar system makers were facing severe challenges such as monocrystal domination, dropping selling price, the monopolization of major players, they aimed to strengthen and improve operating structure by turning sales from abroad to domestic and even layoff. Moreover, with the frustrating domestic installation only about 1.3 GW in 2019, SAS also prevented and decreased the risk by lowering the inventory and adjusting the combinations of the products as well as rational deployment of manpower. Though the onerous contract provision on the solar polysilicon LTA totaled NT$4.35 billion loss SAS made in 2019 Q2 has impacted its earning, with the contribution by its semiconductor subsidiary, GlobalWafers (GWC), SAS managed to reach NT$ 65.51 billion for the group's consolidated revenue in 2019, which decreased 5.39% compared to NT$ 69.24 billion in 2018; net income after tax attributed to the parent company reached NT$ 2.25 billion and EPS after tax reached NT$3.86.

The operating results in 2019 and the business plan in 2020 are reported as follows:

I. Operation Performance in 2019

(I) Operation Performance

Unit: NT$ thousands

Year / Item	2019 (IFRSs)	2018 (IFRSs)	Percent Change (%)
Revenue	65,510,225	69,238,945	-5.39
Operating Costs	46,242,686	50,597,092	-8.61
Gross Profit	19,267,539	18,641,853	3.36
Operating Expenses	5,752,118	5,464,348	5.27
Operating Income (loss)	13,515,421	13,177,505	2.56
Profit Before Tax (loss)	13,924,169	13,318,233	4.55
Net Income (loss)	8,895,345	8,635,480	3.01
Net Income (loss) attributable to the parent company	2,248,386	1,950,503	15.27

2019 was a challenging year for solar industry resulted by the capacity migrating to monocrystal and geopolitical tariff issue, application also shifted to achieve the connection to grid at an equal price sooner, product size and conversion efficiency were extensive and abundant in monocrsralline application. The decreasing subsidy and demand shifting to monocrystal urged multicrystal makers to focus on monocrystal instead, and turning sales target from abroad to domestic, prices were impacted by oversupply. However, in such condition, SAS continuously worked on enhancing conversion efficiency of the high-efficiency solar cell, differentiating multicrstal ingot application from peers, aggressive cost control, phasing out uncompetitive products, improving finance structure and actively yet cautiously selecting customers and alliances to escalate the SAS' operating efficiency and competitiveness. On the other hand, the semiconductor subsidiary of SAS, GlobalWafers, ended 2019 on a high note with NT$ 58.09 billion of consolidation revenue, NT$13.64 billion of net income attributed to the parent company and NT$31.35 EPS after tax.

(II) Budget Implementation: No financial forecast for 2019.

(III) Financial Income and Expenditure and Profitability Analysis

Item			2019	2018
Financial structure	Debt to asset ratio (%)		55.55	53.92
	Long-term capital to property, plant and equipment (%)		196.70	197.21
Profitability analysis	Return on assets (%)		8.45	9.11
	Return on equity (%)		18.43	18.84
	Percentage in paid-up capital (%)	Operating profit	230.55	224.75
		Pre-tax net profit	237.52	227.15
	Net Profit Margin (%)		13.58	12.47
	EPS (NT$)		3.86	3.36

(IV) Financial Structure

(Expressed in NT$ thousands)

2019 revenue was NT$ 65,510,225; operating cost was NT$ 46,242,686. Operating expense was NT$ 5,752,118. Non-business expenditure was NT$ 408,748. Net profit before tax was NT$ 13,924,169. Net profit after tax was NT$ 8,895,345. The financial structure is healthy.

(V)Research & Development

1. 2019 Research & Development Expenditure

Unit: NT$ thousands

Item/Year	2019	2018
Research and Development Expenses	1,844,789	1,849,867
Sales Revenue	65,510,225	69,238,945
R&D expenses as a percentage of net revenue (%)	2.82	2.67

2. 2019 Achievement

Technology/Product

(1) Products of Silicon-Based Application

(2) Ultra High Efficiency Mono-Si Solar Cell

3. Future Plan:

(1) Ultra High Efficiency P-Type Mono-Si Solar Cell

II. 2020 Business Plan

(I) Business Guideline

(1) Actively seek the blue ocean market, and use excellent materials and process technology to develop a niche application market.

(2) The Company is the leader in manufacturing and supplying monocrystal PERC P-type cells and will simplify product types and develop low-cost and high-efficiency cells to maintain market competitiveness.

(3) Strive to accelerate the development of the next-generation new products with high efficiency and cost-effectiveness.

(4) Utilize the Group's resources for vertical integration to expand the market and make profitable investment plans for power plants.

(II) Sales Forecast

As the price of solar modules decreases, the global demand for solar power grid parity will continue to grow. Pv info Link analysts estimate that global solar power demand will reach 134.3GW in 2020 with 10.7% growth, and monocrystal high-efficiency products will become the mainstream trend. However, the out spread of COVID-19 brings much uncertainty to the market and industry which predict the market impact in China for 20% and 10% for the global market. As the result, under conservative estimate the growth would reach 116.7GW instead. In view of this, the Company will closely grasp market and industry trends, adjust business strategies simultaneously, and develop the next generation super-efficient products to enhance the Company's operation competitiveness.

(III) Production & Marketing Strategy

(1) Develop new customers and strengthen cooperation with non-Chinese market regions to improve the ability to respond to market changes.

(2) Strengthen R&D links with downstream customers to develop efficient niche products with core technological capabilities.

(3) Enhancing the added value and actively reduce manufacturing costs to increase profit margins.

(4) Explore the downstream system business, strengthen vertical integration and global layout, further expand the product market, and increase operating profit margin.

((IV)Future Strategy

(1) Continuously develop and enhance the quality-price ratio of solar products.

(2) Build a solid competitive position through resource integration, cost reduction, and technology and product differentiation strategies.

(3) Actively give play to the strategic layout of solar power plants, develop new solar energy system investment partners, and create the Group's terminal market to obtain long-term stable returns.

(4) Establish a fully integrated supply chain in the upper, middle and lower reaches, spread operational risks through vertical integration and diversified business strategies, and become the world's provider of green energy solutions with leading technologies.

(V) Influences from External Competition, Regulations and Economy

(1) In response to a number of competitors and oversupply, the Company has accelerated the exploration of new customers and continued to develop new products with high cost effectiveness. At the same time, we also accelerate the integration of downstream system power stations to strengthen the downstream market of the Group's products.

(2) In order to cope with the impact of oversupply in the market, which causes price dropping of products, the Company will strengthen its R&D links with downstream customers and develop efficient niche products through core technology capabilities to increase the added value.

(3) Enhance confidentiality control and establish global core patent distribution strategy to improve international competitiveness and respond to market changes.

As the uncertainty caused by the outbreak of COVID-19, the industry and market are facing various challenges and the rapidly changing environment. Even though the PV-info Link analysis expects to have 134 GW solar installations in 2020, considering the situation nowadays, a conservative estimate of the solar installations shall be around 116.7 GW. To enhance overall performance, SAS will continually dedicate on innovation, cost reduction, accumulating its competitiveness, synchronizing its management strategy with the ever-changing market and vertical integration via solar power plants. SAS is confident in its global deployment and resource integration in solar and semiconductor business, aiming to solidify its operation performance and contribute new summit, becoming a sustainable and green business with solid foundation of revenue and profit, creating higher value for the shareholders.

Finally, I would like to thank all shareholders for their long-term support and encouragement. I hope that all shareholders will continue to give the Company their love and support. On behalf of all our colleagues and the Board of Directors, I would like to express my sincere thanks.

I wish you good health and all the best.

Chairman Ming-Kuang Lu

President Hsiu-Lan Hsu

Chief Account Hsiu-Ling Hsu

II. Company Profile

I. Date of Incorporation:

January 21, 1981

II. Business:

CC01080 Electronic Parts and Components Manufacturing

C801990 Other Chemical Materials Manufacturing

IG03010 Energy-related Technology and Service

F119010 Electronic Materials Wholesale (restricted to areas outside Hsinchu Science Park)

F219010 Electronic Materials Retail (restricted to areas outside Hsinchu Science Park)

F401010 International Trade

Research and development, design, manufacture and sell the following products:

1. Silicon-based semiconductor materials and their components
2. Varistor
3. Photovoltaic and communication materials
4. Silicone Compound
5. The technology, management and advisory business related to the products listed above
6. Photovoltaic system integration and installation services
7. Import-export activities related to the above mentioned business

III. Company History:

- January 1981: The Company was officially established.
- August 1982: Trial production of silicon monocrystal rod and silicon wafer was successful.
- March 1984: Dr. Yan Dao served as Chairman of the Board of Directors.
- April 1990: Cash capital increase to NT$ 300 million was formally approved.
- June 1991: The mass production of automobile rectifiers was successful and they were officially sold.
- September 1991: The Company became the first company in China which independently developed and completed the mass production of zinc oxide surge absorber, namely zinc oxide rheostat.
- December 1991: The monthly production of automotive rectifiers exceeded 2 million, second only to Motorola.

- July 1995: Cash capital increase to NT$ 400 million.
- October 1995: ISO-9002 certification was obtained.
- February 1997: Phase IV plant renovation and new works were completed.
- November 1997: Ms. Sun Lingling served as Chairman of the Board.
- December 1997: Cash capital increase to NT$600 million.
- March 1998: The Company invested in Songlong Electronics Co., Ltd. to manufacture surge absorbers.
- August 1998: The capital reserve converted into capital increase was NT$630 million.
- November 1998: The Company invested in Actron Technology Corporation.
- June 1999: QS-9000 certification was passed.
- October 1999: The Company invested in Chinese Mainland and set up Kunshan Sino Silicon Technology Co., Ltd.
- December 1999: Cash capital increase to NT$ 780 million.
- March 2000: The mass production of polished wafers was successful.
- September 2000: Zhongchen completed the construction of the plant and began mass production.
- March 2001: Official listing and launching.
- October 2001: "Ultrathin Wafer Processing Technology" won the Award of Research and Development Program of Innovative Technologies in Science Industrial Parks.
- June 2002: "The High-efficiency Monocrystal Lifting Technology Development" Plan obtained the subsidy of Special Science and Technology Case of the Ministry of Economy.
- November 2002: The Company invested in Topsil, Denmark.
- December 2003: The eight-inch long crystal technology was successfully developed.
- June 2004: "The Development Plan of 2.5mohm-cm Monocrystal Substrate Material with Ultra-low Resistance and Heavy Arsenic Doped Silicon" won the Award of Research and Development Program of Innovative Technologies in Science Industrial Parks.
- July 2004: "The Large-size and High-efficiency Solar PV Silicon Monocrystal Substrate Material Development Plan" obtained the R&D Subsidy of Leading New Products of the Ministry of Economy.
- July 2004: "The Sino-American Silicon Innovation Technology Research and Development Center" was established.
- September 2004: "The High-power Power and Electronics Wafer Technology Development Plan" was awarded the Science and Technology Project of the Ministry of Economy.

- September 2004: ISO 14001 certification was passed.
- October 2004: The Company won the 12th Industrial Science and Technology Development Award.
- November 2004: "Blue Diode Sapphire Substrate Material Development Plan" won the Award of Research and Development Program of Innovative Technologies in Science Industrial Parks.
- April 2005: The research and development of thick film bonded wafer (SOI wafer) was successful.
- June 2005: Zhunan Branch was established.
- July 2005: TS16949:2002 certification was passed.
- September 2005: "Deep Diffusion Polishing Wafer Development Plan" won the Award of Research and Development Program of Innovative Technologies in Science Industrial Parks.
- November 2005: Zhunan Branch held the Beam Raising Ceremony.
- November 2005: Phase II expansion of Zhongchen Plant was completed.
- May 2006: Trial production of Zhunan Branch was successful.
- July 2006: The mass production of Zhunan Branch officially started.
- October 2006: Opening ceremony of Zhunan Branch.
- April 2007: Mr.Ming-Kuang Lu served as the Chairman of the Board.
- April 2008: Acquisition of 100% of stock equity of GlobiTech Incorporated from the US was completed.
- October 2008: The Company won the Outstanding Innovative Enterprise Award of the 16th "Industrial Science and Technology Development Award" of the Ministry of Economy.
- October 2009: The device of 100 MW Acquaviva 3 solar power plants was installed in Bari, Italy, via SilFab Spa, a reinvestment company.
- June 2010: The construction of Zhunan No. 2 Plant was completed.
- September 2010: The Company won the Excellent Industry Contribution Award for the Implementation of Industry Science and Technology Program issued by the Ministry of Economy.
- November 2010: With Solartech Energy Corp and Xindong Investment Corporation, the Company established Zhongyang PV Corporation.
- February 2011: The certification of Taiwan Intelligent Property Management System (TIPS) was passed.
- October 2011: The company division plan of three major business divisions was completed; Sino-American Silicon retained solar energy business, and newly established GlobalWafers (Semiconductor Division and Transfer)

and Sino Sapphire (Sapphire Division and Transfer).

- April 2012: GlobalWafers Corporation, a subsidiary of Sino-American Silicon, completed the acquisition of the semiconductor silicon wafer business division of Japanese company Covalent Materials Corporation.
- September 2012: Aegis® Wafer won the Solar Energy Industry Award/Silicon Material Innovation Award.
- January 2013: Sino Sapphire, a subsidiary of Sino-American Silicon, was formally merged into Crystalwise Technology Inc..
- February 2013: The further certification of Taiwan Intelligent Property Management System (TIPS) was passed.
- May 2013: Sino-American Silicon merged Zhongyang PV, and integrated solar energy business resources.
- September 2013: Sino-American Silicon was awarded the title of Top 50 Taiwan's Listed Enterprises In Terms of Patent Value of the United States.
- August 2014: The mergers and acquisition of Sunrise Global Solar Energy Co., Ltd. was completed.
- April 2015: The certification of Occupational Safety and Health Management System OHSAS 18001 was passed.
- April 2015: The Company won the title of "Top 5% of TPEx Listed Companies" of the First Corporate Governance Appraisal.
- July 2015: Sino-American Silicon was engaged in solar system, and the construction of Palo Power Plant in Philippines started.
- March 2016: The ISO 9001:2015 certification of Zhunan Plant was passed.
- March 2016: The ISO 14001:2015 certification of Zhunan and Yilan plants was passed.
- April 2016: The Company won the title of "Top 5% of TPEx Listed Companies" of the Second Corporate Governance Appraisal.
- May 2016: The 50MW solar power plant built on Wright Island in the Philippines was officially commercialized.
- August 2016: The Company won Laudise Prize of the International Organization of Crystal Growth (IOCG).
- December 2016: President Hsiu-Lan Hsu won the Award of National Outstanding Executive Award of Business Managers Association.
- December 2016: The Company won the Golden Energy Award awarded by the Energy Bureau of the Ministry of Economy.
- February 2017: The subsidiary Sunrise PV World Co. won the Integration Output Award of Smart City Exhibition System in 2017.
- April 2017: The Company won the title of "Top 5% of TPEx Listed Companies" of the

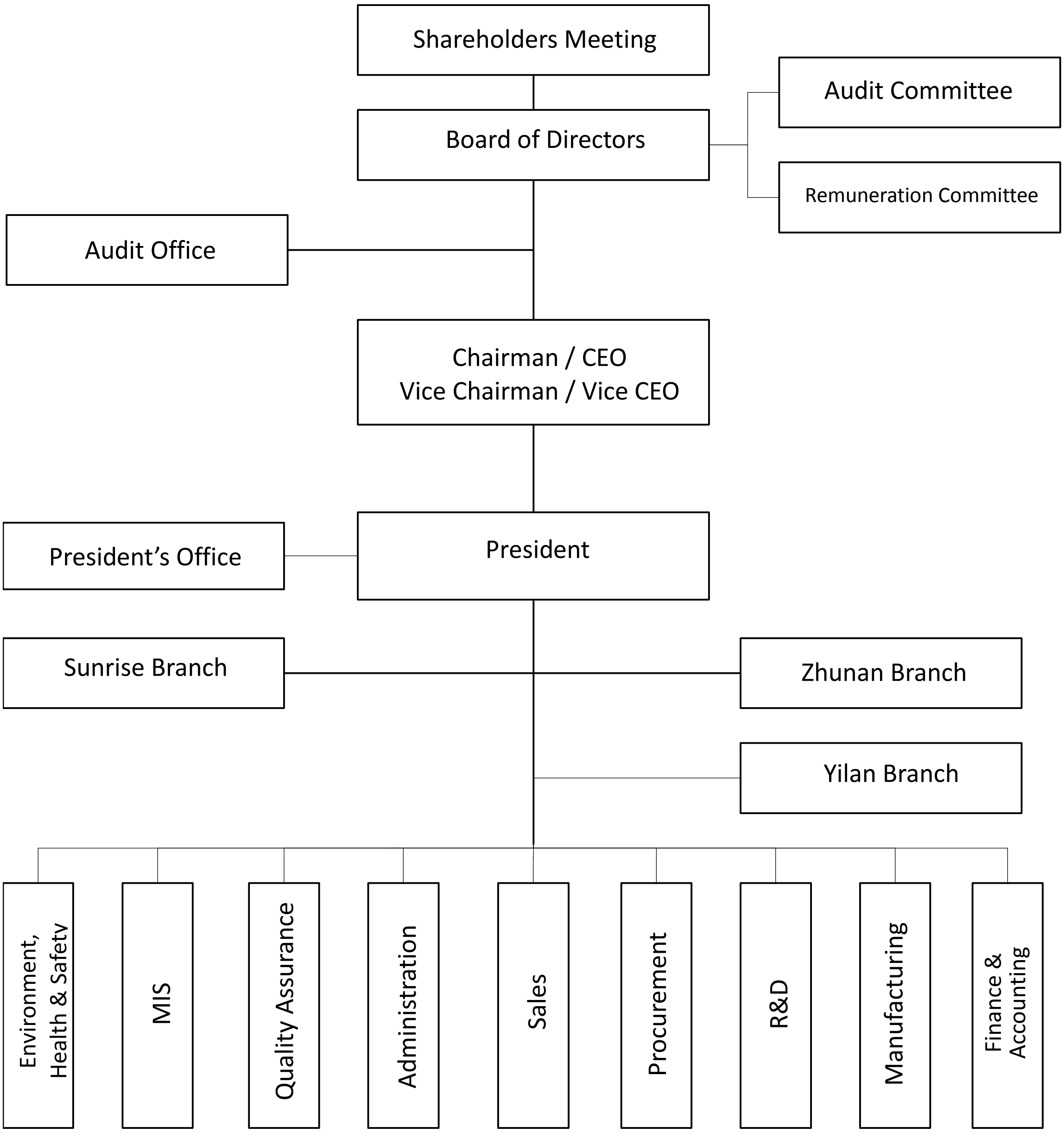
Third Corporate Governance Appraisal.

- April 2017: The Company won the National Invention and Creation Award in 2016.
- November 2017: The Company participated in the establishment of the Product Carbon Footprint Emission Coefficient Database of Environmental Protection Administration, Executive Yuan in 2017 and contributed a lot.
- November 2017: The Company won the Gold Award of Electronic and Information Manufacturing Industry Group of "Taiwan Company Sustainability Award (TCSA) in 2017".
- December 2017: The Company was selected as benchmark enterprise in Economic Daily's "Corporate Social Responsibility Yearbook in 2017".
- April 2018: The Company won the title of "Top 5% of TPEx Listed Companies" of the Fourth Corporate Governance Appraisal.
- April 2019: The Company won the title of "Top 5% of TPEx Listed Companies" of the Fifth Corporate Governance Appraisal.
- May 2019 The Solar Cell Product won The Taiwan-made Product MIT Smile logo Certification
- April 2020: The Company won the title of "Top 5% of TPEx Listed Companies" of the Sixth Corporate Governance Appraisal.

III. Corporate Governance Report

I. Organization Structure

(I) Organization Chart



(II) Responsibilities of Major Departments

Department	Responsibilities
Chairman	- Set up business plans, strategies, and targets. - Execute resolutions from Board of Directors Meeting and Shareholder Meeting
Audit Office	- Inspect and assess the soundness, adequacy and effectiveness over the Company's internal control system. - Responsible for the execution, audit and reports over the internal controls.
President and President's Office	- Perform resolutions from meetings of Board of Directors. - Execution of management and projects - Define business plans and strategies - Ensure planned business targets achieved. - Evaluate and analyze business and management performance.
MIS	1. Maintain IT hardware & software 2. Plan and execute E-working
Environment, Health & Safety	Responsible for the formulation and management of the Company's occupational safety and health management norms and systems, identify and prevent accidents and disaster risks, promote the management, and improve the promotion of staff health and safety and other related business activities.
Quality Assurance	- Establish and maintain products standards and its relevant inspection standards. - Inspect on purchased materials, tools, production process, and finished products. - Perform product quality improvement activities.
Administration	1. Plan, recruit and train human resources, plan and perform annual training courses. 2. Legal related business, including compliance of laws and regulations, contracts and lawsuits
Finance & Accounting Dept.	Capital, taxation, asset management, finance and management accounting
Sales	1. Market strategy, explore potential market, customer communication and after service 2. Collect market information, customer service and product application, assist the R&D and promotion activities of new products.
Procurement	- Procure and purchase - Evaluate new suppliers. - Manage raw materials and suppliers.
R&D	- Research, develop, test new products. - Improve production technology, yield and capacity. - Collaborate with academic institutions. - Design and improve machineries.
Manufacturing	1. Manage production and quality, abnormity, utilization of raw materials, scrap, maintain work environment and security, human resource arrangement and training, expansion preparation and execution. 2. Construct and maintain plant facilities of the Company, and execute environmental safety, sanitary and industrial safety issues 3. -Evaluate and purchase new machineries and in charge of maintenance and improvement.

II. Information on the Company's Directors, Supervisors, President, Vice President, Assistant Vice President, and the Supervisors of All the Company's Divisions and Branch Units

(I) Directors and Supervisors

1. Directors' and Supervisors' Information

April 26, 2020 Unit: share; %

Title	Nationality or Place of Registration	Name	Gender	Date Elected	Duration	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications	Positions Held Concurrently in The Company and/or in Any Other Company	Other executives, Directors and supervisors who are spouses or within second-degree relative of consanguinity			Remarks
							Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio			Title	Name	Relation	
Chairman	Republic of China	Ming-Kuang Lu	Male	June 27th, 2017	Three years	September 7th, 1998	11,600,000	2.00%	11,400,000	1.94%	991,685	0.17%	0	0	Honorary Doctor of Engineering of National Chiao Tung University/Academician of Industrial Technology Research Institute/President of Dunnan Science and Technology Corporation/President of Xuxing Science and Technology Corporation/Vice President of Xuli Corporation	Note 1	None	None	None	Note 13
Vice Chairman	Republic of China	Tang-liang Yao	Male	June 27th, 2017	Three years	November 6th, 1998	1,800,395	0.31%	3,450,395	0.59%	14,413	0	0	0	Master of Management and Research Institute of Tamjiang University/Assistant Manager of Manufacturing Department of Xuxing Technology Corporation/President of the Company	Note 2	None	None	None	None
Director	Republic of China	Hsiu-Lan Hsu	Female	June 27th, 2017	Three years	September 7th, 1998	1,706,085	0.29%	2,971,085	0.51%	0	0	0	0	Master of Computer Science, University of Illinois/Executive Vice President of the Company	Note 3	None	None	None	None

Title	Nationality or Place of Registration	Name	Gender	Date Elected	Duration	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications	Positions Held Concurrently in The Company and/or in Any Other Company	Other executives, Directors and supervisors who are spouses or within second-degree relative of consanguinity			Remarks
							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	Wen-huei Tsai	Male	June 27th, 2017	Three years	June 8th, 2006	2,976,191	0.51%	3,006,191	0.51%	30,490	0.01%	0	0	Department of Accounting, National Chengchi University/Director of Hongdian Medical Science and Technology Corporation/Director of ENE Technology Inc	Note 4	None	None	None	None
Director	Republic of China	United Renewable Energy Co., Ltd. Representative: Chuan-hsien Hong	Male	June 27th, 2017 November 30th, 2018	Three years	June 27th, 2017 November 30th, 2018	21,860,379 0	3.77% 0	21,860,379 0	3.73% 0	0 0	0 0	0 0	0 0	Doctor of Electrical Engineering, Tsinghua University/Head of Solar Cell Research Group, Institute of Industry and Research/Vice President, Guanghua Amorphous Silicon Corporation	Note 5	None None	None None	None None	None None
Director	Republic of China	Representative of Maoyang Corporation: Rong-kang Sun	Male	June 27th, 2017 June 27th, 2017	Three years Three years	June 13th, 2003 June 27th, 2017	3,333,639 0	0.57% 0	3,333,639 0	0.57% 0	0 0	0 0	0 0	0 0	Law Department, Chinese Culture University/President of Atomcinema Co., Ltd.	Note 6	None None	None None	None None	None None
Director	Republic of China	Representatives of Kaijiang Corporation: Hau Fang	Male	June 27th, 2017 June 27th, 2017	Three years Three years	June 26th, 2014 June 27th, 2017	2,000,000 0	0.34% 0	2,000,000 0	0.34% 0	0 0	0 0	0 0	0 0	Master of International Business Administration, National Chengchi University/Bachelor of Business Administration, University of Arizona, USA/Vice President, Asia Carbons & Technology Inc.	Note 7	None None	None None	None None	None None
Director	Republic of China	Representative of Kunchang Investment Corporation: Yu-da Chang	Male	June 27th, 2017 June 27th, 2017	Three years Three years	June 17th, 2011 August 3rd, 2016	2,202,100 0	0.38% 0	2,202,100 0	0.38% 0	0 0	0 0	0 0	0 0	Department of Finance, National Taiwan University/Vice President of Investment Department of Weilian Investment Co., Ltd.	Note 8	None None	None None	None None	None None

Title	Nationality or Place of Registration	Name	Gender	Date Elected	Duration	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications	Positions Held Concurrently in The Company and/or in Any Other Company	Other executives, Directors and supervisors who are spouses or within second-degree relative of consanguinity			Remarks
							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	Representative of Hongmao Investment Corporation : Chu-wang Chen	Male	June 27th, 2017 November 1st, 2018	Three years	June 27th, 2017 November 1st, 2018	10,425,000 0	1.80% 0	10,425,000 0	1.78% 0	0 0	0 0	0 0	0 0	Bachelor of Engineering , University of California, Berkeley/President in Greater China of VIA Technologies Group/Special Assistant of Chairman of VIA Technologies Group	Note 9	None None	None None	None None	None None
Independent Director	Republic of China	Ting-ko Chen	Male	June 27th, 2017	Three years	June 17th, 2011	0	0	0	0	0	0	0	0	Doctor of Business Administration, University of Michigan, USA/General Consultant of Ruentex Group/President of Charoen Pokphand Enterprise New York Company/Vice President of Formosa Plastics J-M Corporation, USA/Chairman of SinoPac Securities/Professor, Director and President of Business Administration, National Taiwan University (the current College of Management)/Dean and Professor of College of Management, Tamkang University/Dean and Chair Professor of College of Management, Asian University	Note 10	None	None	None	None

Title	Nationality or Place of Registration	Name	Gender	Date Elected	Duration	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications	Positions Held Concurrently in The Company and/or in Any Other Company	Other executives, Directors and supervisors who are spouses or within second-degree relative of consanguinity			Remarks
							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	Shing-hsien Lin	Male	June 27th, 2017	Three years	June 26th, 2014	0	0	0	0	0	0	0	0	Master of Business, Tulane University/Bachelor of Electronic Physics, National Chiao Tung University/President of LITE-ON Technology Co., Ltd. and Vice Chairman of LITE-ON Technology Group/CEO of LITE-ON Technology Co., Ltd. /President of Xuli Corporation/President of Taiwan Branch of Texas Instruments	Note 11	None	None	None	None
Independent Director	Republic of China	Mong-hua Huang	Female	June 27th, 2017	Three years	June 17th, 2011	0	0	0	0	0	0	0	0	Master of Business, Tulane University/President of Leotek Electronics Corporation/Manager of Taiwan Branch of Texas Instruments/Director of Accounting Department of Taiwan Branch of Texas Instruments/Director of President Office of Xuli Corporation (Vice President)/General Auditor of LITEON Technology Group (Vice President)/Senior Vice President Science and Technology of LITEON Technology /Member of Taiwan Olympic Education Committee	Note 12	None	None	None	None

Note 1: At present, he is concurrently the Chairman and CEO of Actron Technology Corporation, Legal Person, Director and Representative of GlobalWafers Co., Ltd., Legal Person, Director and Representative of Formerica OptoElectronics Inc., Legal Person, Chairman of Bigbest solutions, Inc., Chairman of Rec Technology Corporation, Legal Person, Director and Representative of SAS Sunrise Pte. Ltd., Legal Person, Director and Representative of SAS Sunrise Inc., Director of GlobiTech Incorporated, Director of GlobalWafers Japan Co., Ltd., and Director of GWafers Singapore Pte.Ltd.

Note 2: At present, he is concurrently the concurrently Legal Person, Director and Representative of GlobalWafers Co., Ltd., Vice Chairman and Vice CEO of Actron Technology Corporation, Chairman and CEO of Crystalwise Corporation, Director of Songlong Electronics Corporation, Director of Yuanhong (Shandong) Photoelectric Material Co., Ltd., Director of Shanghai Zhaoye Shenkai Electronic Material Co., Ltd., Director of SY Company LLC, Legal Person, Director and Representative of SAS Sunrise Pte. Ltd., Legal Person, Director and Representative of Sunrise PV Three Co., Ltd., Legal Person, Director and Representative of Taiwan Speciality Chemicals Corporation, Chairman of Kunshan Sino Silicon Technology Co., Ltd., Director of GlobiTech Incorporated, Director of GlobalWafers Japan Co., Ltd, and Director of GWafers Singapore Pte. Ltd.

Note 3: At present, she is concurrently the Chairman and CEO of GlobalWafers Co., Ltd., Legal Person, Director and Representative of Actron Technology Corporation, Direct of Crystalwise Corporation, Legal Person, Director and Representative of SAS Sunrise Inc., Legal Person, Director and Representative of SAS Sunrise Pte. Ltd., Chairman of Sunrise PV Three Co., Ltd., Chairman of Sunrise PV Four Co., Ltd., Chairman of Taiwan Speciality Chemicals Corporation, Director of GWafers Inc., Director of GlobalSemiconductor Inc., Chairman and CEO of GlobiTech Incorporated, Chairman of GlobalWafers Japan Co., Ltd., Vice Chairman of Kunshan Sino Silicon Technology Co., Ltd., Director of Shanghai GROWFAST Semiconductor Technology Co. Ltd., Chairman of Topsil GlobalWafers A/S, Director of GWafers Singapore Pte. Ltd., Director of GlobalWafers Singapore Pte. Ltd., Director of GlobalWafers B.V., Chairman of MEMC Japan Limited and Director of MEMC Korea Company.

Note 4: At present, he is concurrently Director of ENE Technology Inc. and Director of Advanced Wireless Semiconductor Company.

Note 5: At present, he is concurrently Chairman of United Renewable Energy Co., Ltd., Chairman of General Energy Solutions Inc., Chairman of Prime Energy Corp., Chairman of NSP System Development Corp., Chairman of Zhongyang Photoelectricity Corporation and Chairman of Xier Corporation.

Note 6: At present, he is concurrently Chairman of Yuanjie Investment Corporation, Chairman of Thrutek Applied Materials Co. Ltd and President of GlobalTop Technology Inc..

Note 7: At present, he is concurrently Legal Person, Director and Representative of Actron Technology Corporation.

Note 8: At present, he is concurrently Vice President of Investment Department of Weilian Technology Corporation, Legal, Director and Representative of Xander International Corp., Independent Director of Ledlink Optics Inc., Legal Person, Director and Representative of HLJ Technology Co., Ltd., Legal Person, Director and Representative of Neweb Technologies Co.,Ltd., Legal Person, Director and Representative of Renren Broadcasting Corporation, Chairman (Legal Representative) of corporate director of COMHERE Inc., and Legal Person, Director and Representative of Intumit Corporation.

Note 9: At present, he is concurrently Special Assistant to Chairman of VIA Technologies Corporation, Legal Person, Director and Representative of Weishengxin Technology Corporation, Legal Person, Director and Representative of VIA Labs, Inc, Chairman of the CatchPlay International Corporation, President of Taiwan Branch of British Cayman Islands CatchPlay International Entertainment Corporation, Director of Taiwan Weiya Digital Technology Corporation, President of Taiwan Branch of British Virgin Islands Weiya Digital Entertainment Corporation and Director of Edisons Corporation.

Note 10: At present, he is concurrently Chairman of Chinese Academy of Business, Convening Member of Salary Committee/Independent Director of Nanqiao Chemical Industry Corporation, Convening Member of Salary Committee/Independent Director of Shiny Chemical industrial Co. Ltd, and Member of Remuneration Committee of Long Bon International Co.,Ltd.

Note 11: At present, he is concurrently Independent Director of Rafael Microelectronics Inc and Chairman of Lin Zhongyu Cultural and Educational Foundation.

Note 12: At present, he is concurrently Vice CEO of Enci Social Welfare Foundation, Independent Director of YoungTek Electronics Corp., Supervisor of Global Prosperity Social Enterprise Taiwan Co., Ltd. and Supervisor of Formerica OptoElectronics Inc

Note 13: Where the chairman and the president or person of an equivalent post (the highest level manager) of a company are the same person, spouses, or relatives within the first degree of kinship, an explanation shall be given for the reason, reasonableness, necessity thereof, and the measures adopted in response thereto:

Uder the consideration of the operating scale and in order to improve overall operating efficiency, the chairman of the Company is also the CEO. Other than the positions mentioned, the Company also has a position of the President, which is having different authorities. The CEO is more focused on the planning aspect (Responsible to develop the Company's business strategy, annual budget plan, important customer relationship maintenance, strategic alliance planning, investment layout planning and annual achievement tracking, etc.) and the President is responsible for the execution aspect of the Company's operation(Focuse on coordination and supervision to achieve operational objectives, while implementing the Company's policies and the business strategy and related operational matters planned by the CEO). The two positions complement each other. By having the Chairman also working as the CEO, the board of directors can plan the Company's development blueprint much pratical for operating and managing as well as to have more clarity to the operating status of the Company. More than half of the Board members of the Company are not employees or managers of the Company at the same time, and the Board of Directors has three independent directors. The functional committee members are chaired by independent directors to make recommendations to the Board after full discussion of important issues, which strengthens the supervisory functions of the Board of Directors and implements corporate governance.

2. Major shareholders of the institutional shareholders:

(1) Major shareholders of the institutional shareholders

April 26, 2020

Name of Institutional Shareholders	Major shareholders of the institutional shareholders
United Renewable Energy Co., Ltd.	National Development Fund, Executive Yuan (6.57%), Administration Committee of Yaohua Glass Co., Ltd. (6.27%), Delta Electronics Inc.(3.44%), JPMorgan Chase Bank N.A. Taipei Branch in Custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (1.27%), Special Account for Investment of Norway Central Bank managed by Taipei Branch of JPMorgan Chase Bank (1.21%), Shen Qingxiong (1.18%), Vanguard Emerging Markets Stock Index Fund A Series Of Vanguard International Equity Index Funds (1.08%), Special Account for Investment of Core Securities of DFA Emerging Market managed by Citigroup (0.09%), Standard Chartered custodian of iShares Emerging Market ETF (0.75%), Dimensional Emerging Markets Value Fund (0.66%).
Maoyang Co., Ltd.	Zhang Fengming (76.66%), Songluo Corporation (16.24%), Xu Xuhua (4.96%), Merle Co. (1.42%), Zhang Xining (0.36%) and Zhang Anshi (0.36%).
Kaijiang Co., Ltd.	Sun Lingling (83%), Fang Kaijiang (5%), Fang Hao (7%) and Fang Hua (5%)
Kunchang Investment Co., Ltd.	Christian Chinese Trust, Hope and Love Foundation (19.13%), Cross-Strait Peace Taiwan Trust, Hope and Love Culture and Education Foundation (19.13%), Social Welfare Charitable Trust Social Welfare Foundation (19.13%) and VIA Trust, Hope and Love Charity Foundation (19.13%).
Hongmao Investment Corporation	Christian Chinese Trust, Hope and Love Foundation (19.09%), Cross-Strait Peace Taiwan Trust, Hope and Love Culture and Education Foundation (19.09%), Social Welfare Charitable Trust Social Welfare Foundation (19.09%) and VIA Trust, Hope and Love Charity Foundation (19.09%).

(2) Major Shareholder(s) to the Company Listed in The Right Hand Column of The Above Table

April 26, 2020

Name of Institutional Shareholder	Major Shareholders of Institutional Shareholders
Delta Electronics Inc.	Hong Kong Xiangda International Limited (10.30%), British Jersey Yingda Holdings Limited (8.40%), Special Account for Investment of Singapore Government managed by Citigroup (3.20%), Zheng Chonghua (3.15%), New Labor Retirement Fund (2.72%), Zheng Ping (2.14%), Zheng An (1.94%), Worker Insurance Fund (1.88%), Nanshan Life Insurance Corporation (1.73%) and JPMorgan Chase Bank N.A.Taipei Branch in custody for Vanguard Total International Stock Index Fund,a series of Vanguard Star Funds (1.46%)
Songluo Co., Ltd.	Zhang Fengming (88.50%), Xu Xuhua (7.12%), Maoyang Corporation (4.00%), Zhang Xining (0.19%) and Zhang Anshi (0.19%)

3. Information of directors and supervisors

Conditions (Note 1) / Name	Meet one of the following professional qualification requirements, together with at least five years work experience			Compliance with independence criteria (Note 1)												Selected current positions/number of other public companies concurrently serving as an independent director
	An instructor or higher position in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the company in a public or private junior college, College or University	A judge, public prosecutor, attorney, certified public accountant or other professional or technical specialists who has passed a national examination and been awarded a certificate in a profession necessary for the business of the company	Work experience in the area of commerce, law, finance, or accounting, or otherwise necessary for the business of the company	1	2	3	4	5	6	7	8	9	10	11	12	
Director																
Ming-Kuang Lu			✓					✓	✓	✓	✓	✓	✓	✓	✓	None
Tang-liang Yao			✓			✓		✓	✓	✓	✓	✓	✓	✓	✓	None
Hsiu-Lan Hsu			✓			✓		✓	✓	✓	✓	✓	✓	✓	✓	None
Wen-huei Tsai			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	None
United Renewable Energy Co., Ltd. Representative: Chuan-hsien Hong			✓	✓	✓	✓	✓			✓	✓	✓				None
Maoyang Corporation Representative: Rong-kang Sun			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				None
Kaijiang Corporation Representative: Fang Hao			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				None
Kunchang Investment Corporation Representative: Yu-da Chang			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				None
Hongmao Investment Corporation Representative: Chu-wang Chen			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				None
Independent Director																
Ting-ko Chen	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Shing-hsien Lin			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
Mong-hua Huang			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1

Note 1: A “√” is marked in the space beneath a condition number when a director or supervisor has met that condition during the two years prior to election and during his or her period of service; the conditions are as follows.

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

(2) Not a director or supervisor of the Company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(3) The director, or his or her spouse or minor child, does not hold, in his or her own name or in another name, more than 1% of the company's total issued shares, nor is one of the company's top ten natural-person shareholders.

(4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the officer in the preceding 1 subparagraph, or of any of the above persons in the preceding subparagraphs 2 and 3;

(5) Not a director, supervisor, or employee of a institutional shareholder that directly holds 5% or more of the total number of issued shares of the Company or that holds shares ranking in the top five in holdings, or a director, supervisor or a legal person shareholder who appoints a representative to act as a director or supervisor of the company in accordance with paragraph 1 or 2 of Article 27 of the Company Act. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(6) Not a director, supervisor or employee of a company that a majority of its director seats or voting shares and those of any other company are controlled by the same person. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(7) Not a director (or governor), supervisor, or employee of that other company or institution whose chairperson, general manager, or person holding an equivalent position of the company and a person in any of those positions at another company or institution are the same person or are spouses. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(8) Not a director, supervisor, officer, or shareholder holding 5% or more of the shares, of a specified Company or institution that has a financial or business relationship with the Company. The same does not apply, however, in cases where it holds 20% or more and no more than 50% of the total number of issued shares of a specific company or institution, and where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(9) Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that, provides auditing services to the company or any affiliate of the company, or that provides commercial, legal, financial, accounting or related services to the company or any affiliate of the company for which the provider in the past 2 years has received cumulative compensation exceeding NT$500,000, or a spouse thereof; provided, this restriction does not apply to a member of the remuneration committee, public tender offer review committee, or special committee for merger/consolidation and acquisition, who exercises powers pursuant to the Act or to the Business Mergers and Acquisitions Act or related laws or regulations.

(10) Not a spouse or relative within the second degree of kinship of any other director of the Company.

(11) Not a person of any conditions defined in Article 30 of the Company Act.

(12) Not elected with the conditions of government, juristic person or its representative defined in Article 27 of the Company Act.

(II) Information on the Company's President, Vice President, Assistant Vice President, and the supervisors of all the Company's Divisions and Branch Units as follows

April 26, 2020 Unit: Share; %

Title (Note 1)	Nationality	Name	Gender	Date Elected	Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications (Note 2)	Positions Held Concurrently in The Company and/or in Any Other Company	Other executives, Directors and supervisors who are spouses or within second-degree relative of consanguinity			Remarks
					Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio			Title	Name	Relationship	
CEO	Republic of China	Ming-Kuang Lu	Male	April 2nd, 2007	11,400,000	1.94%	991,685	0.17%	0	0	Honorary Doctor of Engineering of National Chiao Tung University/Academician of Industrial Technology Research Institute/Vice President of LITE-ON Technology Affiliated Enterprise Group	Note 1	None	None	None	Note 5
Vice CEO	Republic of China	Tang-liang Yao	Male	October 1st, 1998	3,450,395	0.59%	14,413	0	0	0	Master of Management and Research, Tamjiang University/Assistant Manager of Manufacturing Department of Xuxing Technology Corporation/President of the Company	Note 2	None	None	None	None
President	Republic of China	Hsiu-Lan Hsu	Female	February 1st, 2008	2,971,085	0.51%	0	0	0	0	Master of Computer Science, University of Illinois/President of Creative Sensors Inc. and Vice President of the Company	Note 3	None	None	None	None
Executive Vice President	Republic of China	Hau-chun Shih	Male	August 1st, 2014	322,000	0.05%	0	0	0	0	Department of Engineering Science, National Cheng Kung University/Vice President of SAMPO Technology Corp. Manufacturing Center/Senior Vice President of Sunrise Global Solar Energy Co., Ltd.	None	None	None	None	None
Vice President of Marketing	Republic of China	Pei-yi Chen	Female	August 1st, 2017	247,035	0.04%	1,000	0	0	0	Department of Land Economics, National Chengchi University/Director of Business of Sunrise Global Solar Energy Co., Ltd.	None	None	None	None	None
Vice President of Corporate Development	Republic of China	C.W. Lee	Male	March 21st, 2017	30,000	0.01%	0	0	0	0	Master of Business Administration, Meiji University, Japan/Executive Vice President and President of Covalent Materials Taiwan/ Assistant Vice President of MITSUI & CO. (Taiwan), LTD.	Note 4	None	None	None	None
R&D Chief	Indonesia	BUDI TJAHJONO	Male	August 9, 2016	300,000	0.05%	0	0	0	0	Doctor of New South Wales University, Australia/CTO of Sunrise Global Solar Energy Co., Ltd.	None	None	None	None	None

R&D Center Chief	Republic of China	Chien-hong Liu	Male	August 1st, 2017	38,925	0.01%	0	0	0	0	Department of Mathematics, Chung Yuan Christian University/Factory Director of Sunrise Global Solar Energy Co., Ltd.	None	None	None	None	None
Chief of Finance & Accounting Department	Republic of China	Hsiu-Ling Hsu	Female	March 23, 2018	0	0	0	0	0	0	Master of Business Administration, National Taipei University/Director of PwC Taiwan/Accounting Manager of Sunrise Global Solar Energy Co., Ltd./Accounting Manager of GlobalWafers Co., Ltd.	None	None	None	None	None

Note 1: At present, he is concurrently the Chairman and CEO of Actron Technology Corporation, Legal Person, Director and Representative of GlobalWafers Co., Ltd., Legal Person, Director and Representative of Formerica OptoElectronics Inc., Legal Person, Chairman of Bigbest solutions, Inc., Chairman of Rec Technology Corporation, Legal Person, Director and Representative of SAS Sunrise Pte. Ltd., Legal Person, Director and Representative of SAS Sunrise Inc., Director of GlobiTech Incorporated, Director of GlobalWafers Japan Co., Ltd., and Director of GWafers Singapore Pte.Ltd.

Note 2: At present, he is concurrently the concurrently Legal Person, Director and Representative of GlobalWafers Co., Ltd., Vice Chairman and Vice CEO of Actron Technology Corporation, Chairman and CEO of Crystalwise Corporation, Director of Songlong Electronics Corporation, Director of Yuanhong (Shandong) Photoelectric Material Co., Ltd., Director of Shanghai Zhaoye Shenkai Electronic Material Co., Ltd., Director of SY Company LLC, Legal Person, Director and Representative of SAS Sunrise Pte. Ltd., Legal Person, Director and Representative of Sunrise PV Three Co., Ltd., Legal Person, Director and Representative of Taiwan Speciality Chemicals Corporation, Chairman of Kunshan Sino Silicon Technology Co., Ltd., Director of GlobiTech Incorporated, Director of GlobalWafers Japan Co., Ltd, and Director of GWafers Singapore Pte. Ltd.

Note 3: At present, she is concurrently Chairman and CEO of GlobalWafers Co., Ltd., Legal Person, Director and Representative of Actron Technology Corporation, Direct of Crystalwise Corporation, Legal Person, Director and Representative of SAS Sunrise Inc., Legal Person, Director and Representative of SAS Sunrise Pte. Ltd., Chairman of Sunrise PV Three Co., Ltd., Chairman of Sunrise PV Four Co., Ltd., Chairman of Taiwan Speciality Chemicals Corporation, Director of GWafers Inc., Director of GlobalSemiconductor Inc., Chairman and CEO of GlobiTech Incorporated, Chairman of GlobalWafers Japan Co., Ltd., Vice Chairman of Kunshan Sino Silicon Technology Co., Ltd., Director of Shanghai GROWFAST Semiconductor Technology Co. Ltd., Chairman of Topsil GlobalWafers A/S, Director of GWafers Singapore Pte., Ltd., Director of GlobalWafers Singapore Pte., Director of GlobalWafers B.V., Chairman of MEMC Japan Limited and Director of MEMC Korea Company.

Note 4: At present, he is concurrently Vice President of Corporate Development of GlobalWafers Co., Ltd.

Note 5: Where the chairman and the president or person of an equivalent post (the highest level manager) of a company are the same person, spouses, or relatives within the first degree of kinship, an explanation shall be given for the reason, reasonableness, necessity thereof, and the measures adopted in response thereto: Under the consideration of the operating scale and in order to improve overall operating efficiency, the chairman of the Company is also the CEO. Other than the positions mentioned, the Company also has a position of the President, which is having different authorities. The CEO is more focused on the planning aspect (Responsible to develop the Company's business strategy, annual budget plan, important customer relationship maintenance, strategic alliance planning, investment layout planning and annual achievement tracking, etc.) and the President is responsible for the execution aspect of the Company's operation(Focused on coordination and supervision to achieve operational objectives, while implementing the Company's policies and the business strategy and related operational matters planned by the CEO). The two positions complement each other. By having the Chairman also working as the CEO, the board of directors can plan the Company's development blueprint much practical for operating and managing as well as to have more clarity to the operating status of the Company. More than half of the Board members of the Company are employees or managers of the Company at the same time, and the Board of Directors has three independent directors. The functional committee members are chaired by independent directors to make recommendations to the Board after full discussion of important issues, which strengthens the supervisory functions of the Board of Directors and implements corporate governance.

(III)Compensation Paid to CEO, President and Vice Presidents

1. Remuneration Paid to Directors (Independent Directors included): 2019

December 31, 2019 Unit: NT$ thousands

Title	Name	Remuneration								Ratio of Total Remuneration (A+B+C+D) to Net Income (%		Relevant Remuneration Received by Directors Who are Also Employees								Ratio of Total Compensation (A+B+C+D+E+F+G) to Net Income (%)		Compensation Paid to Directors from an Invested Company Other than the Company's Subsidiary or parent company
		Base Compensation (A)		Severance Pay (B)		Bonus to Directors (C)		Allowances (D)				Salary, Bonuses, and Allowances (E)		Severance Pay (F)		Profit Sharing- Employee Bonus (G)						
		The company	All companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company		Companies in the consolidated financial statements		The company	Companies in the consolidated financial statements	
																Cash	Stock	Cash	Stock			
Director	Ming-Kuang Lu																					
Director	Tang-liang Yao																					
Director	Hsiu-Lan Hsu																					
Director	Wen-huei Tsai	22,600	22,600	0	0	40,050	54,150	355	455	2.80.%	3.43%	9,512	13,150	0	0	21,000	0	71,000	0	4.16%	7.18%	None
Director	United Renewable Energy Co., Ltd. Representative: Chuan-hsien Hong																					
Director	Kaijiang Corporation Representative: Hau Fang																					

Director	Maoyang Corporation Representative: Rong-kang Sun																					
Director	Representative of Kunchang Investment Corporation: Yu-da Chang																					
Director	Hongmao Investment Corporation Representative: Chu-wang Chen																					
Independent Director	Ting-ko Chen																					
Independent Director	Shing-hsien Lin	2,160	2,160	0	0	1,740	1,740	130	130	0.18%	0.18%	0	0	0	0	0	0	0	0	0.18%	0.18%	None
Independent Director	Mong-hua Huang																					

1.Please describe the policy, system, standard and structure of the remuneration of independent directors, and the correlation with the amount of remuneration paid according to the responsibilities, risks, input time and other factors:
In addition to paying the monthly fixed remuneration of independent directors and the transportation fee for attending the Board of Directors meeting, the Company may determine the amount of remuneration allocated to independent directors by their participation and attribution to company's operating. According to the annual profit situation, the amount of independent directors' remuneration will be allocated from the remuneration of the directors. The remuneration of independent directors shall be submitted to the Board of Directors for resolution after consideration and adoption by the Remuneration Committee.
2.Apart from above disclosure, compensation paid to directors who provide service in all companies in the consolidated financial statements (such as being consultant): NA

Remuneration Paid to Directors

Remuneration Paid to Directors	Name of Directors			
	Total Remuneration (A+B+C+D)		Total Compensation (A+B+C+D+E+F+G)	
	The Company	Companies in the consolidated financial statements	The Company	Companies in the consolidated financial statements
Under NT$ 1,000,000	—	—	—	—
NT$ 1,000,000 ~ NT$1,999,999	Independent Director: Ting-ko Chen, Shing-hsien Lin and Mong-hua Huang	Independent Director: Ting-ko Chen, Shing-hsien Lin and Mong-hua Huang	Independent Director: Ting-ko Chen, Shing-hsien Lin and Mong-hua Huang	Independent Director: Ting-ko Chen, Shing-hsien Lin and Mong-hua Huang
NT$ 2,000,000 ~ NT$ 3,499,999	—	—	—	—
NT$ 3,500,000 ~ NT$ 4,999,999	Director: Hsiu-Lan Hsu, Wen-huei Tsai, Chuan-hsien Hong, Representative of United Renewable Energy Co., Ltd., Hau Fang, Representative of Kaijiang Corporation, Rong-kang Sun, Representative of Maoyang Corporation, Yu-da Chang, Representative of Kunchang Investment Corporation, and Chu-wang Chen, Representative of Hongmao Investment Corporation	Director: Wen-huei Tsai, Chuan-hsien Hong, Representative of United Renewable Energy Co., Ltd., Hau Fang, Representative of Kaijiang Corporation, Rong-kang Sun, Representative of Maoyang Corporation, Yu-da Chang, Representative of Kunchang Investment Corporation, and Chu-wang Chen, Representative of Hongmao Investment Corporation	Director: Wen-huei Tsai, Chuan-hsien Hong, Representative of United Renewable Energy Co., Ltd., Hau Fang, Representative of Kaijiang Corporation, Rong-kang Sun, Representative of Maoyang Corporation, Yu-da Chang, Representative of Kunchang Investment Corporation, and Chu-wang Chen, Representative of Hongmao Investment Corporation	Director: Wen-huei Tsai, Chuan-hsien Hong, Representative of United Renewable Energy Co., Ltd., Hau Fang, Representative of Kaijiang Corporation, Rong-kang Sun, Representative of Maoyang Corporation, Yu-da Chang, Representative of Kunchang Investment Corporation, and Chu-wang Chen, Representative of Hongmao Investment Corporation
NT$ 5,000,000 ~ NT$ 9,999,999	—	—	—	—
NT$ 10,000,000~ NT$ 14,999,999	—	—	Director: Hsiu-Lan Hsu	—
NT$ 15,000,000 ~ NT$ 29,999,999	Director: Ming-Kuang Lu and Tang-liang Yao	Director: Ming-Kuang Lu, Tang-liang Yao and Hsiu-Lan Hsu	Director: Ming-Kuang Lu and Tang-liang Yao	Director: Ming-Kuang Lu and Tang-liang Yao
NT$ 30,000,000 ~ NT$ 49,999,999	—	—	—	—
NT$ 50,000,000 ~ NT$99,999,999	—	—	—	Director: Hsiu-Lan Hsu
More than NT$ 100,000,000	—	—	—	—
Total	12	12	12	12

2. Remuneration of supervisors: The Company has changed its Audit Committee, so there is no remuneration of supervisors.

3. Remuneration of President and Vice President

December 31, 2019 Unit: NT$ thousands

Title	Name	Salary (A)		Severance Pay (B)		Bonuses and Allowances (C)		Profit Sharing- Employee Bonus (D)				Ratio of total compensation (A+B+C+D) to net income (%)		Compensation Paid to Directors from an Invested Company Other than the Company's Subsidiary or parent company
		The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The Company		Companies in the consolidated financial statements		The company	Companies in the consolidated financial statements	
								Cash	Stock	Cash	Stock			
CEO	Ming-Kuang Lu	18,337	21,733	324	324	2,859	3,408	26,300	0	77,800	0	2.13%	4.59%	None
Vice CEO	Tang-liang Yao													
President	Hsiu-Lan Hsu													
Vice President	Yu-tse Lin													
Executive Vice President	Hau-chun Shih													
Vice President	C.W. Lee													
R&D Chief	BUDI TJAHJONO													

Note: 1. The actual amount of Severance Pay paid in 2019: NT$ 0.
2. The amount of withdrawal or funding of Severance Pay: NT$ 324 thousand.

Range of Remuneration

Range of Remuneration of Presidents and Vice President of the Company	Name of Presidents and Vice President	
	The Company	Companies in the consolidated financial statements
Under NT$ 1,000,000	—	—
NT$ 1,000,000~ NT$ 1,999,999	—	—
NT$ 2,000,000~ NT$ 3,499,999	C.W. Lee	—
NT$ 3,500,000~ NT$ 4,999,999	—	C.W. Lee
NT$ 5,000,000~ NT$ 9,999,999	Tang-liang Yao and Hsiu-Lan Hsu Hau-chun Shih and BUDI TJAHJONO	Tang-liang Yao and Hau-chun Shih and BUDI TJAHJONO
NT$ 10,000,000~ NT$ 14,999,999	Ming-Kuang Lu	Ming-Kuang Lu
NT$ 15,000,000~ NT$ 29,999,999	—	—
NT$ 30,000,000~ NT$ 49,999,999	—	—
NT$ 50,000,000~ NT$ 99,999,999	—	Hsiu-Lan Hsu
More than NT$ 100,000,000	—	—
Total	6	6

4. Employee Profit Sharing Granted to Management Team

December 31, 2019 Unit: NT$ thousands

	Title	Name	Employee Bonus - in Stock	Employee Bonus - in Cash	Total	Ratio of Total Amount to Net Income (%)
Manager	CEO	Ming-Kuang Lu	0	31,900	31,900	1.42%
	Vice CEO	Tang-liang Yao				
	President	Hsiu-Lan Hsu				
	Execution Vice President	Hau-chun Shih				
	Vice President	C.W. Lee				
	R&D Chief	BUDI TJAHJONO				
	Sales Vice President	Pei-yi Chen				
	Chief of R&D Department of Yilan Branch	Chien-hong Liu				
	Chief of Finance & Accounting Department	Hsiu-Ling Hsu				

(IV) The proportions of total remuneration paid to directors, supervisors, Presidents and Vice President of the Company in net income after tax in the last two years are compared and explained. The policies, standards and combination of remuneration payment, the procedure of remuneration setting, the relationship between remuneration and operating performance, and the relationship between remuneration and future risks are explained.

1. Total Remuneration to Net Income

Title	The ratio of total remuneration of 2019 to net income after tax (%)		The ratio of total remuneration of 2018 to net income after tax (%)	
	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements
Director	2.98%	3.61%	3.54%	4.30%
President and Vice President	2.13%	4.59%	2.43%	5.26%

2. The policies, standards, and portfolios for the payment of remuneration, the procedures for determining remuneration, and the correlation with business performance:

(1) The policies, standards, and portfolios for the payment of remuneration

The Company's remuneration for directors is handled in accordance with the Company's articles of association and the allocation rules of directors' remuneration, which can be divided into three categories: directors' compensation, directors' remuneration and business execution fees; and the remuneration for Presidents and Vice President of the Company can be divided into three categories: salary, bonus and car allotment, and employee remuneration, which are authorized by the Board of Directors to Chairman to be verified based on the relevant provisions of the Company's salary verification.

(2) Procedures of Remuneration

According to the articles of association of the Company, if the Company is profitable in the year, it should allocate 3-15% as employees' remuneration. The Board of Directors decides to distribute the remuneration in stock or cash. The object of the distribution includes the employees of the subordinate company who meet certain conditions. If the Company can make profit with the above amount, the Board of Directors decides to allocate up to 3% as its directors' remuneration. The distribution proposal of remuneration of employees and directors should be submitted and reported to the shareholders' meeting.

If it has accumulative losses, the Company should reserve and make up the amount before distributing remuneration to the employees and directors according to the percentage mentioned in the preceding paragraph. In addition, in the business execution fees, only the traffic allowance for each Board of Directors meeting is distributed. The procedures for determining directors' remuneration should be based on the performance evaluation method of the Board of Directors of the Company, the participation and contribution to the Company's operation should be considered, and reasonable remuneration should be given. The part of remuneration received by the President and Vice President of the Company is based on the operating performance quota of the annual budget approved by the Board of Directors each year. The payment method is based on "Measures for the Administration of Wages and Remuneration of the Company's Managers" and "Measures for Employee Remuneration Distribution".

The Company established Remuneration Committee at the end of 2011, which periodically examines performance of directors and managers, as well as remuneration policy, system, standard and structure. Report of above-mentioned will be discussed in the Board of Directors.

(3) Connection between operation performance and future risk

Performance evaluation and remuneration of directors and managers are measured based on market average, contribution to the Company, monetary amount, distribution method and future risk of the company. It has a positive correlation with the performance and responsibility of the company's business.

III.Implementation of Corporate Governance

(I) Attendance of Directors for Board Meetings

The Board of Directors was held for eleven sessions in 2019. The attendance of directors was as follows:

Title	Name	Attendance in Person	By Proxy	Attendance Rate in Person (%)	Remarks
Chairman	Ming-Kuang Lu	11	0	100%	
Vice Chairman	Tang-liang Yao	11	0	100%	
Director	Hsiu-Lan Hsu	11	0	100%	
Director	Wen-huei Tsai	11	0	100%	
Director	United Renewable Energy Co., Ltd. Representative: Chuan-hsien Hong	11	0	100%	
Director	Maoyang Corporation Representative: Rong-kang Sun	11	0	100%	
Director	Kaijiang Corporation Representative: Fang Hao	10	1	91%	
Director	Kunchang Investment Corporation Representative: Yu-da Chang	10	1	91%	
Director	Hongmao Investment Corporation Representative: Chu-wang Chen	3	8	27%	
Independent Director	Ting-ko Chen	11	0	100%	
Independent Director	Shing-hsien Lin	10	1	91%	
Independent Director	Mong-hua Huang	11	0	100%	

Other mentionable items:

I. f there are any of below circumstances, the dates of meetings, sessions, contents of motions, all independents' opinion and the Company's response to independent directors' opinion should be specified:

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

Not applicable. The Company has set up an Audit Committee, which is governed by Article 14-5 of the Securities and Exchange Act.

(II) Despite issues previously mentioned, other resolutions of the directors' meetings objected to by independent directors or subject to qualified opinion and recorded or declared in writing: No such matter has occurred in the Company.

II. If there is Directors' avoidance of motions in conflict of interest, the Directors' names, contents of motions, causes for avoidance and voting should be specified:

1. On February 21, 2019, the Board of Directors discussed about the case of increasing the shareholding of Actron Technology Corporation. As Chairman Ming-Kuang Lu and Vice Chairman Tang-liang Yao were the Chairman and Director of Actron Technology Corporation and the interested party in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.

2. On February 21, 2019, the Board of Directors discussed about the case of disposal the shareholding of United Renewable Energy Co., Ltd.. As Director Chuan-hsien Hong was Chairman of United Renewable Energy Co., Ltd. and the interested party in the case, he was avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.

3. On May 9, 2019, the Board of Directors discussed about Director Remuneration Distribution Plan of the Company. As the case was voted on a case-by-case basis of the remuneration of each director,the certain Director, whose remuneration was being discussed, was avoided of motions in conflict of interest according to law and did not participate in the discussion and voting .

4. On May 9, 2019, the Board of Directors discussed about the case of managers' and employees' remuneration allocation.As Chairman Ming-Kuang Lu, Vice Chairman Tang-liang Yao and Director Hsiu-Lan Hsu were the interested parties in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.

5. On May 17, 2019, the Board of Directors discussed about the case of participating in the subscription of Crystalwise Technology Inc.'s private placement of common stock. As Vice Chairman Tang-liang Yao and Director Hsiu-Lan Hsu were Chairman and Director of Crystalwise Technology Inc. as well as the interested party in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion

and voting.

6. On October 9, 2019, the Board of Directors discussed about the case of increasing the shareholding of Actron Technology Corporation. As Chairman Ming-Kuang Lu, Vice Chairman Tang-liang Yao, Director Hsiu-Lan Hsu and Director Fang Hao were Chairman and Directors of Actron Technology Corporation as well as the interested party in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.
7. On December 12, 2019, the Board of Directors discussed about the Letter of Support to be issued by the Company for Crystalwise Technology Inc.. As Vice Chairman Tang-liang Yao and Director Hsiu-Lan Hsu were Chairman and Director of Crystalwise Technology Inc. and the interested party in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.
8. On December 12, 2019, the Board of Directors discussed about the Letter of Support to be issued by the Company for Taiwan Speciality Chemicals Corporation. As Vice Chairman Tang-liang Yao and Director Hsiu-Lan Hsu were Director and Chairman of Taiwan Speciality Chemicals Corporation and the interested party in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.
9. On December 12, 2019, the Board of Directors discussed about the case of purchasing plant and equipments of the plant from Crystalwise Technology Inc.. Vice Chairman Tang-liang Yao and Director Hsiu-Lan Hsu were Chairman and Director of Crystalwise Technology Inc. and the interested party in the case, they were avoided of motions in conflict of interest according to law and did not participate in the discussion and voting.

III. The Evaluation of the Board of Directors

<table>
<tr><th>Cycle Time of the Assessment</th><th>Assessing Period</th><th>Assessing Scope</th><th>Assessing Method</th><th>Content of the Assessment</th></tr>
<tr><td>Once A Year</td><td>From January 1,2019 to December 31,2019</td><td>●Board of Directors
●Individual Members of the Board of Directors
●Functional Committee</td><td>●Self-assessment from the Board of Directors
●Self-assessment from Individual Members of the Board of Directors
●Self-assessment from the Functional Committee</td><td>Self-assessment from the Board of Directors
1.Level of involvement in the Company's operations.
2.Improved the quality of the resolution from the Board of Directors.
3.The composition and structure of the Board of Directors.
4. The election and advanced studies of Directors.
5.Internal control.

Self-assessment from Individual Members of the Board of Directors
1.Mastering the company's goals and tasks.
2.The cognition to the responsibility of a Director.
3.Level of involvement in the Company's operations.
4.Internal relationship management and communication.
5.Director’s profession and advanced studies.
6.Internal Control.

Self-assessment from the Functional Committee
1.Level of involvement in the Company's operations.
2.The cognition to the responsibility of Functional Committee.
3.Improved the quality of the resolution from the Functional Committee.
4.The composition and structure of the Functional Committee.
5.Internal Control.</td></tr>
</table>

IV. Functional objectives (e.g. setting up Audit Committee, improving information transparency, etc.) and implementation evaluation:

Strengthen functional objectives of the Board of Directors	Implementation evaluation
Establish Independent Directors	Strengthen the independent and objective functions of professional directors and supervise the operation of the Board of Directors.
Establish the Remuneration Committee	Assist the Board of Directors in implementing and evaluating the Company's overall compensation and benefits system, and regularly review the appropriateness of remuneration for directors, supervisors and managers.
Establish the Audit Committee	Exercise the functions and powers stipulated in the Securities and Exchange Law, Company Law and other relevant laws and decrees.
Continuously improve the information transparency	The Company appointed a special person to be responsible for the disclosure of company information and updating of company website information.
Actively make communication with stakeholders	The Company has spokespersons and acting spokespersons, and stakeholders can use them as channels of communication. Every year, the board of shareholders accepts the shareholders' proposals according to the schedule. The shareholders who have the right to submit proposals can apply to the Company during the period of acceptance. The Company will convene the meeting of Board of Directors to examine the proposals in accordance with the relevant provisions.
Improve the operational efficiency and decision-making ability of the Board of Directors	The Company has formulated "the Meeting Standards of Board of Directors" to strengthen the implementation of the functions of the Board of Directors, and promote the healthy development of the Board of Directors' participation in decision-making.
Strengthen professional knowledge	The directors and supervisors of the Company should study for a number of hours per year as prescribed by the competent authority, the relevant members of the Board of Directors should be encouraged to participate in various professional courses, and the relevant decrees should be promulgated at the meeting of the Board of Directors to comply with the provisions of the decree.
Set the position of Corporate Governance Supervisor	In order to implement corporate governance and enhance the effectiveness of the Board of Directors, on May 9, 2019, the Board of Directors set the position of Corporate Governance Supervisor to providing directors with relevant information to perform their duties and other necessary assistance.

(II)The Operation of the Audit Committee:

A total of 11 Audit Committee meetings were held in 2019. The attendance of the independent directors was as follows:

Title	Name	Attendance in Person	By Proxy	Attendance Rate (%)	Remarks
Independent Director	Ting-ko Chen	11	0	100%	
Independent Director	Shing-hsien Lin	10	1	91%	
Independent Director	Mong-hua Huang	11	0	100%	

The Audit Committee of the Company is composed of three independent directors. The matters under consideration include:

(I) The fair expression of the Company's financial statements.

(II) Selection (relieving) of CPAs and their competence, independence and performance as well as certified public accountant fees.

(III) Effective implementation of the Company's internal control.

(IV) Major assets, derivatives, loaning funds and endorsements or guaranteed transactions.

(V) Revision of the procedures for dealing with regulations governing the acquisition and disposal of assets, derivative transactions, loaning funds to others and the measures for endorsement and guarantee.

Other mentionable items:

I. If there are the circumstances referred to in any of below, the dates of meetings, sessions, contents of motion, resolutions of the Audit Committee and the Company’s response to the Audit Committee’s opinion should be specified.

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

The motions of 2019 were approved by all the members present in the Audit Committee and all the directors present in the Board of Directors. The operation of the Audit Committee in 2019 was as follows.

Date of meeting (session)	Content of motion	Matters listed in Article 14-5 of Securities and Exchange Law	Resolution results of the Audit Committee and the Company's Treatment of the Audit Committee's Opinions
January 11, 2019 (The First Regular Meeting in 2019)	The Company discussion about the amendment to long-term supply agreement settled with supplier for silicon raw materials	V	Adopted with the consent of all the members present in the Audit Committee
	The Company long-term discussion about planning to amend supply agreement settled with supplier for silicon raw materials	V	
	The asset impairment for the year 2018.	V	
	The Company subscribe to the private placement unsecured ordinary corporate bonds of Crystalwise Technology Inc.	V	
February 21, 2019 (The Second Regular Meeting in 2019)	Subscription to the investment company cash capital increase	V	Adopted with the consent of all the members present in the Audit Committee
	Increasing the shareholding of investment company.	V	
	Disposal of the shareholding of investment company.	V	
	Cancelation of establishing new company with other investor.	V	
	Certified public accountant fees	V	
March 21, 2019 (The Third Regular Meeting in 2019)	Audit Business Report	V	Adopted with the consent of all the members present in the Audit Committee
	Report of "IFRS No. 16 Leasing Implementation Plan" of the Company	V	
	Report on the Evaluation of the Competency and Independence of CPAs	V	

	The Company's Business Report and Financial Statements of 2018	V	
	The Company's Earnings Allocation of 2018	V	
	Discussion about Cash Giving by Capital Reserve	V	
	Amendment to the Company's "Treatment Procedures for Acquisition or Disposal of Assets"	V	
	Amendment to the Company's "Treatment Procedures for Making Transactions of Derivatives"	V	
	Amendment to the Company's "Operation Procedures for Loan to Others"	V	
	Amendment to the Company's "Measures for Endorsement and Guarantee"	V	
	Discussion about Non-handling of the Issuance of New Shares by Capital Increase of Private Placement Equity upon Expiration	V	
	Discussion about Dealing with Public or Private Offerings of Securities to Meet the Company's Financial Needs	V	
	"Declaration of Internal Control System" of 2018	V	
	Serving as Joint Guarantor for a Subsidiary's, Sunrise PV World Co. , Loan from a Financial Institution	V	
	Amendment to the Company's “Accounting System”	V	
	Additional Investment to Aleo sunrise with total amount EUR 5,400,001, and the actual fund transfer amount EUR1 which the rest will be converted into equity, to pay off the loaning of funds case	V	
May 9, 2019 (The Fourth Regular Meeting in 2019)	Audit Business Report	V	Adopted with the consent of all the members present in the Audit Committee
	The Company's Consolidated Financial Quarterly Report for the First Quarter in 2019	V	
May 17, 2019 (The Five Regular Meeting in 2019)	The Company Intending to Subscribe the Ordinary Corporate Stock’s Private Replacement Cash Capital Increase of Crystalwise TechnologyInc.	V	Adopted with the consent of all the members present in the Audit Committee
June 26, 2019 (The Sixth Regular Meeting in 2019)	Cancellation of Establishing New Company with Other Investors	V	Adopted with the consent of all the members present in the Audit Committee
	The Company Recognize Debt Provision	V	
August 8, 2019 (The Seventh Regular Meeting in 2019)	Audit Business Report	V	Adopted with the consent of all the members present in the Audit Committee
	The Company's Consolidated Financial Quarterly Report for the Second Quarter in 2019	V	
	The Case of Loaning Fund to the Power Plant Subsidiary	V	
August 22, 2019 (The Eighth Regular Meeting in 2019)	Disposal of the Shareholding of Investment Company	V	Adopted with the consent of all the members present in the Audit Committee
October 9, 2019 (The Ninth Regular Meeting in 2019)	Increase of the Shareholding of Investment Company	V	Adopted with the consent of all the members present in the Audit Committee

November 12, 2019 (The Tenth Regular Meeting in 2019)	Audit Business Report The Company's Consolidated Financial Quarterly Report for the Third Quarter in 2019 Discussion about the Internal Audit Plan of 2019 Serving as Guarantor for Loan of Subsidiaries from a Financial Institution The Company's Investment	V	Adopted with the consent of all the members present in the Audit Committee
December 12, 2019 (The Eleventh Regular Meeting in 2019)	Making the Company's Operating Plan of 2020 Discussion about the Letter of Support to be Issued by the Company The Short-form Merger with the Subsidiary Discussed the Case of Purchase Plants and the Equipment	V	Adopted with the consent of all the members present in the Audit Committee

(II) Other resolutions which were not approved by the Audit Committee but were approved by two thirds or more of all directors: None.

II. If there are independent directors' avoidance of motions in conflict of interest, the directors' names, contents of motion, causes for avoidance and voting should be specified: The Company has no above circumstance.

III. Communications between the independent directors, the Company's chief internal auditor and CPAs (e.g. the items, methods and results of audits of corporate finance or operations, etc.).

(I) The chief internal auditors have communicated the result of the audit reports to the members of the Audit Committee periodically, and have presented the findings of all audit reports in the quarterly meetings of the Audit Committee. In case of special circumstances, they will inform the members of the Audit Committee in a timely manner. There was no above special situation in 2019. The communication channel between the Audit Committee and the chief internal auditor of the Company has been functioning well.

(II) The Company's CPAs have presented the findings or the comments for the quarterly corporate financial reports, as well as those matters communication of which is required by law, in the regular quarterly meetings of the Audit Committee. In case of special circumstances, they will inform the members of the Audit Committee in a timely manner: There was no above special circumstance in 2019. The communication channel between the Audit Committee and the CPAs of the Company has been functioning well.

Date	Focus of communication	Recommendations and results
March 21, 2019 Audit Committee	1. Accountants explained the financial, profit and loss and industry situation of Q4 in 2018, and discussed about the application of some accounting principles and the impact of the newly revised decree. 2. Accountants discussed and communicated about questions raised by participants. 3. Chief internal auditor made the internal audit business report. 4. Issued a declaration on the internal control system.	None
May 9, 2019 Audit Committee	1. Accountants explained the financial, profit and loss and industry situation of Q1 in 2019, and discussed about the application of some accounting principles and the impact of the newly revised decree. 2. Accountants discussed and communicated about questions raised by participants. 3. Chief internal auditor made the internal audit business report.	None

August 8, 2019 Audit Committee	1. Accountants explained the financial, profit and loss and industry situation of Q2 in 2019, and discussed about the application of some accounting principles and the impact of the newly revised decree. 2. Accountants discussed and communicated about questions raised by participants. 3. Chief internal auditor made the internal audit business report.	None
November 12, 2019 Audit Committee	1. Accountants explained the financial, profit and loss and industry situation of Q3 in 2019, and discussed about the application of some accounting principles and the impact of the newly revised decree. 2. Accountants discussed and communicated about questions raised by participants. 3. Chief internal auditor made the internal audit business report. 4. Discussion about the internal audit plan.	None
Results: The above matters were examined and approved by the Audit Committee, and the independent directors had no objection.		

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

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
I. Does the company establish and disclose the Corporate Governance Best-Practice Principles based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies"?	V		The Company has established the Corporate Governance Best-Practice Principles based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies". The information has been disclosed on the Company's website and Corporate Governance Area of MOPS (http://mops.twse.com.tw/).	No significant difference
II. Shareholding structure & shareholders' rights				
(I) Does the company establish an internal operating procedure to deal with shareholders' suggestions, doubts, disputes and litigations, and implement based on the procedure?	V		(I) The Company has spokespersons, stock affair manager and personnel, who can effectively deal with shareholders' suggestions or disputes. If legal issues are involved, legal affair personnel and professional lawyers will be invited to assist in handling.	No significant difference
(II) Does the company possess the list of its major shareholders as well as the ultimate owners of those shares?	V		(II) The Company keeps abreast of the shareholding status of directors, managerial officers, and major shareholders holding more than 10% shareholding. The Company discloses the relevant information on the MOPS designated by Securities and Futures Bureau on a monthly basis.	No significant difference
(III) Does the company establish and execute the risk management and firewall system within its conglomerate structure?	V		(III) The Company's internal control covers the corporate risk management activities and operating activities. The Company establishes the "Regulations Governing Supervision on Subsidiaries" to fulfill the risk control mechanism against subsidiaries. Meanwhile, the Company also establishes the "Regulations Governing Management of Investment" and	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
			"Operating Procedure for Transactions of Group Members and Specific Companies with Related Parties" to govern the purchases/sales, acquisition or disposition of assets, endorsements/guarantees and loaning of fund by the affiliates.	
(IV) Does the company establish internal rules against insiders trading with undisclosed information?	V		(IV) The Company establishes the "Operating Procedure for Prevention of Insider Trading" to prohibit insiders from trading securities based on non-public information.	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
III. Formation and responsibilities of Board of Directors (I) Whether the Board of Directors has diversified policies regulated and implemented substantively according to the composition of the members?	V		(I) Article 18 of The Company's "Corporate Governance Best-Practice Principles" has clearly regulated the diversification policy of board members, and formulated appropriate diversification policies on their own operation, operation patterns and development needs, such as basic composition (e.g. gender, age, nationality and culture), professional knowledge and skills, and industrial experience. At present, there are 12 board members, of which 3 are independent directors, accounting for 25%. The term of three independent directors is all less than 9 years. Among the 12 board members, there are two female directors, accounting for 17%. The board members have working experience and expertise in operation management, professional technology, legal affairs, finance and strategy management to implement the diversified policy of board members. The Company's diversified policy of board member and the implementation of diversification by individual board members have been disclosed on the Company's website. The implementation of diversification by board members is illustrated in Schedule 1.	No significant difference
(II) Whether the Company, in addition to establishing the Remuneration Committee and Audit Committee, pursuant to laws, is willing to establish any other functional committees voluntarily?	V		(II) The Audit Committee was established in 2014: All three members are independent directors; The Remuneration Committee was established in 2011: All three members are independent directors; The Commission for Sustainable Development of Enterprises was established in 2016: It is composed of management teams and reports the implementation status and results to the Board of Directors every year.	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
(III) Whether the Company has defined the regulations governing appraisal on performance of the Board of Directors and the approach to conduct the appraisal, whether it conducts the performance appraisal periodically each year, submit the results to BoD and apply as reference for remuneration evaluation of each director and nomination for term renewal?			(III) After approval of the Board of Directors, the Company has established "the Performance Evaluation Measures for the Board of Directors and Functional Committees". It makes the performance evaluation of the Board of Directors and the Functional Committee (including the Remuneration Committee and the Audit Committee) at least once a year, and submits the evaluation results to the Board of Directors. At the end of each year, the President Office is responsible for executing and coordinating the evaluation process. Internal questionnaires are collected. The evaluation is completed through the internal self-evaluation, and the self-evaluation of board members and functional members. The evaluation scope includes the performance evaluation of the whole Board of Directors, individual members of the Board of Directors, the Remuneration Committee and the Audit Committee. The performance evaluation standards of the Board of Directors and the functional committees of the Company mainly include participation in the operation of the Company, improvement of the decision-making quality of the Board of Directors and functional committees, composition and structure of the Board of Directors and functional committees, selection and continuing education of the Board of Directors and functional members, internal control, etc. The evaluation results are submitted to the Board of Directors for reference when selecting or nominating directors. The performance evaluation results of 2019 were all good, and they were reported to the Board of Directors on March 19, 2020 and disclosed on the Company's website.	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
(IV) Whether the Company assesses the independence of the external auditor periodically?	V		(IV) The Company has established the "Regulations Governing Appraisal on Independence and Performance External Auditors". The Company will assess the external auditors' independence, competence and performance each year, and submit the assessment report to the Audit Committee and Board of Directors for approval. The Company has completed the 2019 appraisal on independence and performance of external auditors. The appraisal report was already reported to the Audit Committee meeting and approved by the Board meeting on March 19, 2020. The scope of appraisal on independence covers the 15 indicators, including whether the external auditors hold the position as directors/supervisor or managerial officers of customers, or any other positions which may render material effect to the audited cases, whether the external auditors have direct or indirect material financial interest with the Company, whether the external auditors have significant business relations and employment relations with the Company, and whether the external auditors promote, or act as the broker for, the stock or other securities issued by the Company. The performance indicators include service quality, level of profession and timeliness.	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
IV. Where the Company is a TWSE/TPEX listed company, has the Company designated a department or personnel that specializes (or is involved) in corporate governance affairs (including but not limited to, providing directors/supervisors with the information needed to perform their duties, convention of board meetings and shareholders' meetings under laws, company registration and registration of changes, preparation of board meeting and shareholders' meeting minutes, etc)?	V		In order to implement corporate governance and strengthen the function of directorship, after the approval of the Board of Directors on May 9, 2019, the Company appointed Section Chief Ming-huei Chien as the Company's Governance Supervisor. He has more than three years' experience in finance, stock and meeting management of public issuing companies. The Corporate Governance Supervisor and members of the President Office is responsible for related matters of corporate governance and serves as the Secretary of the Board of Directors. The main responsibilities of the Corporate Governance Supervisor include providing the information needed by the directors to carry out their business, assisting directors to abide by the laws and regulations, assisting directors in taking office and continuing their studies, handling matters related to the meetings of the Board of Directors, committees and the Board of Shareholder, making minutes of meetings, etc. The implementation of corporate governance in 2019 was as follows: 1. Formulated and planned relevant measures for corporate governance, and implemented laws and regulations. 2. Provided the information needed by directors to carry out their business and assisted directors in complying with the decrees. 3. Planned the meeting of Board of Directors, notified all directors at least 7 days before the meeting, provided sufficient information for the meeting, and sent the minutes of the meeting of Board of Directors within 20 days after the meeting. 4. Registered the date of the shareholders' meeting in advance according to law, prepared the notice of meeting, meeting handbook	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from “the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
			and meeting records within the legal time limit, and changed the registration after amending of the Articles of Incorporation or re-election of directors. 5. Provided directors' refresher courses and purchased liability insurance for directors and key employees. 6. Maintained the relationship with investors, organized the inventor conferences, and established diversified communication channels with investors. The Company's Corporate Governance Supervisor was newly appointed. He already completed 18 hours of refresher courses within one year from the date of appointment according to law. Please see (VIII) for details regarding Managers' Training on Corporate Governance.	

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
V. Whether the Company has established a communication channel for the stakeholders (including but not limited to shareholders, employees, customers and suppliers), set up the stakeholder section on the Company's website, and responded to the stakeholders regarding their concerns over corporate social responsibilities?	V		I. The Company has spokespersons, stock affair managers and personnel, establishes smooth communication channels, and respects and safeguards the legal rights and interests of all stakeholders. II. The Company has a corporate responsibility area and a stakeholder area on its website. It also has established contact telephone and e-mail boxes for business personnel, investors, suppliers and employees' welfare. All stakeholders can communicate with each other by telephone or e-mail when necessary. In addition, in the social responsibility area of enterprise, the Company discloses information about stakeholders' concerns, communication channels and so on. Every year, the Board of Directors reports on the promotion and implementation of social responsibility of enterprise and the communication with stakeholders.	No significant difference
VI. Does the company appoint a professional shareholder service agency to deal with shareholder affairs?	V		The Company designates the professional Yuanta Securities Co., Ltd. to deal with shareholder affairs.	No significant difference
VII. Information Disclosure				
(I) Does the company have a corporate website to disclose both financial standings and the status of corporate governance?	V		I. The Company has set up a website to disclose information regarding the Company's financials, business and corporate governance status.	No significant difference
(II) Does the company have other information disclosure channels (e.g. building an English website, appointing designated people to handle information collection and disclosure, creating a spokesman system,	V		II. The Company has set up an English website and assigned an appropriate person to handle information collection and disclosure, as well as webcasting investor conferences (http://www.saswafer.com), to fully disclose company information and implement the spokesperson system in accordance with the	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
webcasting investor conferences)? (III) Whether the Company announces and declares the annual financial statements within two months after the end of the fiscal year, and announces and declares the first, second and third quarter financial statements and the monthly revenue ahead of the prescribed period?		V	regulations. III. The Company arranges early announcements and declares the first, second, and third quarter financial reports and monthly revenue before the prescribed deadline. However due to the numerous overseas subsidiaries result in complexity of transnational financial statements consolidation, the Company is unable to announce and declare its annual financial statements within two months after the end of the fiscal year, but will still complete it within the legal period to enhance the transparency and timeliness of company information disclosure.	No significant difference except annual financial statements
VIII. Is there any other important information to facilitate a better understanding of the company's corporate governance practices (e.g., including but not limited to employee rights, employee wellness, investor relations, supplier relations, rights of stakeholders, directors' and supervisors' training records, the implementation of risk management policies and risk evaluation measures, the implementation of customer relations policies, and purchasing insurance for directors and supervisors)?	V		(1) Status of employee rights and: The Company has always treated its employees in good faith, focused on rational and human-based management, established smooth communication channels, maintained good relations between employer and employees, and safeguarded the legal rights and interests of employees in accordance with the Labor Standard Act and the Company's personnel regulations. (2) Status of employee wellness: The Company establishes a good relationship of mutual trust with employees through its welfare system and education and training system. Such as establishing the Staff Welfare Committee, and providing staff travel, employee insurance, various subsidies and benefits and free annual regular health examination, etc. (3) Investor relations: The Company fully discloses information through MOPS and its website, enables investors to fully understand the Company's operating conditions, and communicates with investors through shareholders' meetings and spokespersons.	No significant difference

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
			(4) Supplier relations: The Company has formulated "Measures for Supplier Survey, Appraisal and Evaluation" to carefully define suppliers' quality, service level, green products, environmental safety risks, ethics and social responsibility, and select qualified suppliers. The Company deals with suppliers in accordance with its "Ethical Corporate Management Best-Practice Principles", maintains a good interactive relationship, and audits regularly to ensure supplier quality. (5) Rights of stakeholders: The Company has contact telephone and e-mail boxes for spokespersons and acting spokespersons, business personnel, investment relations, supplier relations and employee welfare relations, and can communicate directly with stakeholders. It has set up a company website (http:// www.saswafer.com) to disclose its information about finance, business, corporate governance and stock agency. (6) Status of directors' training: 1. See (VIII) Status of Directors' Training. 2. Disclosed in the Corporate Governance Area of MOPS (http://mops.twse.com.tw). (7) Implementation of risk management policies and risk measurement standards: The Company has formulated "Risk Management Policies" and "Measures for Risk Management" in accordance with the law for various risk management and evaluation. Please refer to this year's report, review analysis of financial situation and operating results and risk management. (8) Implementation of customer policies: The Company always keeps close contact with customers and maintains stable and good	

Evaluation Item	Yes	No	Abstract Illustration	Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
			relations to ensure the expected reliability and quality of products and create company profits. (9) The Company's purchasing of liability insurance for directors: The Company has purchased liability insurance for directors to strengthen the protection of shareholders' rights and interests. It is also disclosed in the Corporate Governance Area of MOPS (http://mops.twse.com.tw).	

IX. Please state the improvement according to the corporate governance evaluation results issued by the Corporate Governance Center of Taiwan Stock Exchange Co., Ltd. in recent years, and put forward priority items to be improved and measures for those which have not yet been improved.

Results of the first to the sixth "Corporate Governance Evaluation" of the Company ranked among the top 5% of TPEx Listed Companies. This shows the Company's efforts in corporate governance. Here are some improvements and possible improvements of this year.

(I) Improvements

1. Upload the English version of the annual report 7 days before the shareholders' meeting.
2. Upload the English version of annual financial report 7 days before the shareholders' meeting.

(II) Possible improvements in the future

1. To fit the amendment of "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies", the Company will arrange early announcements and declares the first, second, and third quarter financial reports.
2. Holding an earnings call at least once per quarter.

Schedule 1: Implementation of Diversification by Board Members

Diversified Core Items / Name of Directors	Nationality	Gender	Operational Judgment Ability	Accounting and Financial Analysis Ability	Business Management Ability	Crisis Handling Procedures	Industrial Knowledge	International Market View	Leaders-hip Ability	Decision-making Ability	Law
Ming-Kuang Lu	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Tang-liang Yao	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Hsiu-Lan Hsu	Republic of China	Female	✓	✓	✓	✓	✓	✓	✓	✓	
United Renewable Energy Co., Ltd. Representative: Chuan-hsien Hong	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Representative of Hongmao Investment Co., Ltd: Chu-wang Chen	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Representative of Maoyang Co., Ltd.: Rong-kang Sun	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wen-huei Tsai	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Representative of Kunchang Investment Co., Ltd.: Yu-da Chang	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Representative of Kaijiang Co., Ltd: Fang Hao	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Ting-ko Chen	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Shing-hsien Lin	Republic of China	Male	✓	✓	✓	✓	✓	✓	✓	✓	
Mong-hua Huang	Republic of China	Female	✓	✓	✓	✓	✓	✓	✓	✓	

(IV) Operations of the Remuneration Committee:

1. Information of Remuneration Committee Members

Title	Conditions / Name	If independent directors equip with over 5 years of working experience and below qualifications			Independence (Note 1)										Concurrently serving in remuneration committee of other listed companies (Counting in company)	Remarks (Note 2)
		Owning qualification of national/ private college instructor or above of commence, law, finance or corporal operation-related professions	Certified technicians or judge, prosecutor, lawyer, CPA or corporal operation-related national certifications	Experienced in commence, law, finance, accounting or other corporal operation-related business	1	2	3	4	5	6	7	8	9	10		
Independent Director	Ting-ko Chen	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2	None
Independent Director	Shing-hsien Lin			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	None	None
Independent Director	Mong-hua Huang			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	None	None

Note 1: A "√" is marked in the space beneath a condition number when a director or supervisor has met that condition during the two years prior to election and during his or her period of service; the conditions are as follows.

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

(2) Not a director or supervisor of the Company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(3) The director, or his or her spouse or minor child, does not hold, in his or her own name or in another name, more than 1% of the company's total issued shares, nor is one of the company's top ten natural-person shareholders.

(4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the officer in the preceding 1 subparagraph, or of any of the above persons in the preceding subparagraphs 2 and 3;

(5) Not a director, supervisor, or employee of a institutional shareholder that directly holds 5% or more of the total number of issued shares of the Company or that holds shares ranking in the top five in holdings, or a director, supervisor or a legal person shareholder who appoints a representative to act as a director or supervisor of the company in accordance with paragraph 1 or 2 of Article 27 of the Company Act. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(6) Not a director, supervisor or employee of a company that a majority of its director seats or voting shares and those of any other company are controlled by the same person. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(7) Not a director (or governor), supervisor, or employee of that other company or institution whose chairperson, general manager, or person holding an equivalent position of the company and a person in any of those positions at another company or

institution are the same person or are spouses. The same does not apply, however, in cases where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(8) Not a director, supervisor, officer, or shareholder holding 5% or more of the shares, of a specified Company or institution that has a financial or business relationship with the Company. The same does not apply, however, in cases where it holds 20% or more and no more than 50% of the total number of issued shares of a specific company or institution, and where the person is an independent director of the Company, its parent Company, or any subsidiary in which the Company holds Pursuant to Taiwan or local regulations.

(9) Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that, provides auditing services to the company or any affiliate of the company, or that provides commercial, legal, financial, accounting or related services to the company or any affiliate of the company for which the provider in the past 2 years has received cumulative compensation exceeding NT$500,000, or a spouse thereof; provided, this restriction does not apply to a member of the remuneration committee, public tender offer review committee, or special committee for merger/consolidation and acquisition, who exercises powers pursuant to the Act or to the Business Mergers and Acquisitions Act or related laws or regulations.

(10) Not a person of any conditions defined in Article 30 of the Company Act.

Note 2: If a remuneration committee member is director, please specify if matching item 5, Article 6 of "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".

2. Operations of the Remuneration Committee

(1) The Company's Remuneration Committee consists of three members and all independent directors.

(2) Term of office of the current members: from June 27, 2017 to June 26, 2020. In the most recent year (2019), the Remuneration Committee held meetings for twice (A). Membership and attendance were as follows:

Title	Name	Attendance in Person (B)	By Proxy	Attendance Rate (%) (B/A)	Remarks
Convener	Ting-ko Chen	2	0	100%	Reappointed on June 27^{th}, 2017
Member	Shing-hsien Lin	2	0	100%	Reappointed on June 27^{th}, 2017
Member	Mong-hua Huang	2	0	100%	Reappointed on June 27^{th}, 2017

Other mentionable items:

I. If the board of directors declines to adopt or modifies a recommendation of the Remuneration Committee, it should specify the date of the meeting, session, content of the motion, resolution by the board of directors, and the Company's response to the Remuneration Committee's opinion (e.g., if the remuneration passed by the Board of Directors exceeds the recommendation of the Remuneration Committee, the circumstances and cause for the difference shall be specified): None.

II. Resolutions of the Remuneration Committee objected to by members or subject to a qualified opinion and recorded or declared in writing, the date of the meeting, session, content of the motion, all members' opinions and the response to members' opinion should be specified: None.

III. The operation of the Remuneration Committee was as follows:

The competency of the Remuneration Committee is based on objective and professional position and provides advice to the Board of Directors about the remuneration policy and structure. As to their job scope :

(1) Regularly review the remuneration committee's organizational procedures and the policies, systems, standards and structure of directors' and managers' performance evaluation and compensation.

(2) Regularly assess and review the content and amount of compensation that paid to directors and managers.

Operations of Remuneration Committee:

Session/Date of the Remuneration Committee	Content of motion	Resolution results	The Company's response to the Remuneration Committee's opinion
The third session The first meeting in 2019 March 21^{st}, 2019	Motion for annual salary adjustment of managers	Agreed and approved by all the members present	To be submitted to the Board of Directors after the approval of all the members present
	Director's Remuneration and Employee's Remuneration Distribution of the Company in 2018		
The third session The second meeting in 2019 May 9^{th}, 2019	Motion for amendment to "Procedure of director remuneration distribution"	Agreed and approved by all the members present	
	Motion for 2018 director remuneration		
	Motion for 2018 manager remuneration		

(V) **Ethical Corporate Management an**d Deviations from “Corporate Governance Best-Practice Principles for TWSE/GTSM Listed Companies”:

Evaluation Item	Implementation Status (Note 1)			Deviations from “the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Explanation (Note 2)	
I. Whether the company conducts business operations in accordance with the principle of materiality risk assessment of environmental, social and corporate governance issues, and formulates relevant risk management policies or strategies?	V		The company legislates "Risk Management Policy" and "Risk Management Measures" and approved by the Board of Directors. The President Office coordinates the advocacy and implementation of the risk management mechanisms such as corporate hazards, operations, finance, strategies, compliance and contracts, and monitor the related risks of each unit, which shall be assessed once ever year and report the final assessment to the Board of Directors. Through the effective implementation of the risk management process (Risk management processes include risk identification, risk measurement, risk monitoring, risk reporting and disclosure, and risk response.), the Company's risk management strategy was implemented. In response to international trends, the Company also conducts risk assessments on environmental, social, corporate governance and climate change-related issues related to the Company's operations, and formulates relevant risk management strategies, which are provided for in the Company's CSR Report, Chapter II, Governance and Operation.	No significant difference
II.Whether the Company establishes a unit dedicated to (concurrently engaged in) promoting corporate social responsibility under supervision by the high-rank management authorized by the Board of Directors who shall be responsible for reporting the status thereof to the Board of Directors?	V		The Company has established "the Sustainable Development Committee of the Enterprise" to become the decision-making and operation center of corporate social responsibility of Sino-American Silicon Products Inc.. The President regularly reports to the Board of Directors on the implementation results of corporate social responsibility in the current year and the work plan for the next year. "Sustainable Development Committee of the Enterprise" is a	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
			cross-sectoral communication and coordination platform for the Company to fulfill corporate social responsibility. It is led by the President. Representatives are appointed by various functional organizations to serve as members. It holds corporate social responsibility meetings from time to time. To implement environmental, social and governance activities, the Sustainable Development Committee of the Enterprise consists of three groups, which are environmental group, governance group and social group. It also discusses about various issues related to stakeholders such as employees, shareholders, customers, suppliers, governments and society, sets goals, makes plans, and tracks the progress of implementation, so as to systematically and effectively practice corporate social responsibility.	
III. Environmental issues (I) Whether the Company establishes an appropriate environmental management system which suits its industrial characteristics?	V		(I) The Company's Zhunan plant and Yilan plant have passed and renewed the internationally recognized environmental and safety and health management system certification of ISO 14001 and ISO 45001 certification. The updated certifications information as below: 1. ISO 45001 : 2018 Effective Date : 02 March 2020- 11 March,2022 Approved Date : 03 March, 2020 Certification No. : 196466-2016-ASA-RGC-JAS-ANZ 2. ISO 14001 : 2015 Effective Date : 02 March 2020- 11 March 2022 Approved Date: 03 March, 2020 Certification No. : 196463-2016-AE-RGC-UKAS The company upholds a healthy and safe working environment, the environmental protection responsibility and aims for green	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
			operation, and expects to take care of environmental protection while serving customers, and provides a better and safer working environment. The implementation of ESH is through the "compliance with laws and regulations, risk control, consultative participation, green operation, continuous improvement" policy and to incorporate energy saving and carbon reduction, pollution prevention, waste reduction and other measures into daily operations, and implement environmental protection and management of the production process.	
(II) Whether the Company is committed to improving the utilization efficiency of various resources and using recycled materials with low impact on environmental?	V		(II) As a member of the global citizen, in order to achieve the goal of sustainable utilization of environmental resources, the Company focuses on the improvement of the efficiency of the use of various resources, gives priority to the process reduction and reuse, and finally makes disposal; in the selection of raw materials, it will choose recycled materials with low impact on the environment as far as possible in order to reduce the impact on the environment.	No significant difference
(III) Whether the Company assesses the potential risks and opportunities of climate change to the company now and in the future, and take measures to deal with climate-related issues?	V		(III) Mitigating greenhouse gas emissions has become a key issue for global economic development. The Company follows the framework recommended by The Task Force on Climate-Related Financial Disclosures (TCFD) published by the Financial Stability Board (FSB), which includes governance, strategy, risk management and metrics &targets. As the result, the Company expose information related to climate change and identifies the potential risks and opportunities that caused by climate change as well as related countermeasures and objectives. For related information, please refer to the company's corporate social responsibility report "Chapter 2, Governance and Operations"	No significant difference
(IV) Whether the company counts greenhouse gas emissions, water	V		(IV) The Company entrusted the Institute of Industrial Technology to complete the database, introduce energy management,	No significant difference

<table>
<tr><th rowspan="2">Evaluation Item</th><th colspan="3">Implementation Status (Note 1)</th><th rowspan="2">Deviations from “the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Abstract Explanation (Note 2)</th></tr>
<tr><td>consumption and total weight of waste in the past two years, and formulate policies for energy, carbon, greenhouse gas and water use reduction, or other waste management?</td><td></td><td></td><td>greenhouse gas examination, carbon footprint examination, clean production process and other international system in Hsinchu Plant in 2017. In the future, the relevant systems can be checked according to the needs of customers or government agencies. Each year, the Company also confirms the accuracy of information disclosures through the confirmation and verification of CSR by third parties. For more related information, please refer to the Company's CSR Report, Chapter IV, Sustainable Environment.
According to results of the organizational examination, the greenhouse gas emissions from Hsinchu, Zhunan and Yilan Plants of the Company from 2018 to 2019 are shown in the following table: Unit: metric ton of CO2e/year

<table>
<tr><th>Plant / Year</th><th>Hsinchu Plant</th><th>Zhunan Plant</th><th>Yilan Plant</th><th>Total</th></tr>
<tr><td>2018</td><td>157,237</td><td>28,229</td><td>36,671</td><td>222,137</td></tr>
<tr><td>2019</td><td>174,992</td><td>15,391</td><td>29,931</td><td>220,314</td></tr>
</table>

According to results of the organizational examination of greenhouse gas emissions, the main source of greenhouse gas emissions of the Company is electricity (Category 2). Therefore, the reduction of electricity use and the improvement of energy efficiency are the top priorities of the Company at present. Starting from the core of the Company, by introducing the environmental management system and the energy management system, the Company promotes various energy-saving improvement measures to achieve the goal of energy saving and carbon reduction. In 2015, the Company began to cooperate with BenQESCO, and introduced various improvement plans of energy-saving project, such as air conditioning and cooling water frequency conversion control in the</td><td></td></tr>
</table>

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
			plant, air conditioning system improvement, energy-saving lighting source replacement, waste heat recovery of air compressor, etc. The results of energy-saving measures for electricity are shown in the table below (Hsinchu Plant + Zhunan Plant + Yilan Plant). After converted into greenhouse gas, the reduction is 2,126,570 kgCO2e.	

Plant / Year	Zhunan Plant+ Yilan Plant	Hsinchu Plant	Total
2019 Total energy saving	1,821,273 kWh of electricity	6,450,929 kWh of electricity	8,272,202 kWh of electricity

In addition to energy saving and carbon reduction, the Company has introduced the concept of product life cycle through the promotion of the new ISO 14001 environmental management system in other parts of environmental protection improvement, such as water saving and waste reduction, so that the reduction of raw materials at the source can be achieved from the improvement of process and product design stages. In the prevention and control of air pollution and water pollution, with the promotion of environmental management system, it sets the target of energy saving, water saving, waste reduction and resource saving each year to reduce the use of energy resources and achieve the effect of reducing greenhouse gas emissions. In the aspect of waste management, the traditional concept of clean-up and disposal is transformed into the concept of effective management of resources, so as to reduce the output of waste. Target setting for 2020, targets for 2019 and the achievement are shown in the following table:

<table>
<tr><td rowspan="2">Evaluation Item</td><td colspan="3">Implementation Status (Note 1)</td><td rowspan="2">Deviations from “the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons</td></tr>
<tr><td>Yes</td><td>No</td><td>Abstract Explanation (Note 2)</td></tr>
<tr><td></td><td></td><td></td><td>

Major Themes	Target for 2020	Target for 2019	Target achievement in 2019
Energy and resource consumption and reduction of greenhouse gas emissions	1.Yilan Plant’s annual power saving no less than 800,000 kW 2.Chunan Plant’s annual power saving rate is higher than 1%	The annual power saving rate of each plant is higher than 1%	Achieved the target
Pollution prevention and control	1. Operating parameters of preventive and control equipment conform to the environmental protection license and the management standard of the service center. 2. Build "Emergency Contingency Measures Plan for Air Pollution Accidents" 3. Yilan Plant builds VOCs self-factor coefficient plan	Operating parameters of preventive and control equipment conform to the environmental protection license	Achieved the target

</td><td></td></tr>
</table>

<table>
<tr><th rowspan="2">Evaluation Item</th><th colspan="3">Implementation Status (Note 1)</th><th rowspan="2">Deviations from “the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Abstract Explanation (Note 2)</th></tr>
<tr><td></td><td></td><td></td><td><table><tr><td>Waste Management</td><td>No less than 85% of waste would be processed by the method of resource recovery.</td><td>According to "the Criteria for Confirmation of Duty of Care for Entrusted Cleaning” to set up the waste management procedures in plants, and at least once a year to visit high-risk waste-processing manufacturers</td><td>Achieved the target</td></tr></table>
Following the Company's strategy, the Company has been active in raw material management, energy management, water resources management and waste management. In addition to achieving the target for 2019, the key achievements of the Company in environmental improvement in 2019 are summarized as follows:
1. The total grid-connected capacity of solar power generation system was higher than 17MW, which could reduce about 6,071 tons of carbon dioxide emissions.
2. The annual energy-saving measures and management could reduce about 970.7 tons of carbon dioxide emissions.
3. Reduce more than 10% of the waste Calcium Fluoride sludge in Yilan Plant I.</td><td></td></tr>
<tr><td>IV. Society issues
(I) Whether the Company establishes the related management policies</td><td>V</td><td></td><td>(I) The Company follows the United Nations conventions such as “the Universal Declaration of Human Rights”,</td><td>No significant difference</td></tr>
</table>

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
and procedures in accordance with the relevant laws and international human rights conventions?			"the International Covenant on Economic, Social and Cultural Rights", "the Global Covenant", "the International Labour Organization Convention", "the Convention on the Elimination of All Forms of Discrimination against Women", and other human rights safeguards, and "Employment Service Act" to establish the "Personnel Appointment Method", which expressly prohibits child labor and related remedies; any illegal discrimination is strictly prohibited, including race, class, language, thought, religion, partisanship, birthplace, place of birth, color, age, gender, sexual orientation, marriage, appearance, facial features, nationality, disability, pregnancy, union membership, masked veteran status, etc. discriminate against employees in recruitment and actual work. The Company operates in various countries and complies with all local labor laws and regulations, including anti-human trafficking and anti-slavery laws. The Company implements safe working conditions and will never tolerate any modern slavery behavior; insists that all business transactions, business relations, supply chain activities, personnel recruitment and appointment are in line with ethical standards, and integrity is the priority, and implement relevant training courses for all employees to strengthen employees' human rights awareness. The basic wages, working hours, vacations, pension benefits, labor and health insurance benefits, and	

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
			occupational disaster compensation of the company's employees are in compliance with the relevant provisions of the Labor Standards Act. Employee Welfare Committee was established and operates to handle various welfare matters through committee members elected by employees. Regularly hold labor-management meetings to understand the ideas of both parties to achieve a win-win situation for labor and management.	
(II) Whether the Company legislates and implement reasonable employee welfare measures (including compensation, vacations and other benefits), and appropriately reflect operating performance or results in employee compensation?	V		(II) The company formulates attendance measures in accordance with the Labor Standards Act, which sets out the employees 'right to leave. In addition to the general benefits such as labor insurance, health insurance, group insurance, and pension benefits, the Company's benefits include the annual bonus, birthday and festival gifts, hosting year-end parties, wedding and funeral celebrations, domestic and foreign tourism, emergency relief, scholarship subsidies, maternity subsidies, group meals, and complete education and training seminars. According to the company's Articles of Association, the company makes annual compensation for employee compensation, and according to the company's "Employee Compensation Distribution Method" procedure, according to employee performance and fair distribution, the operating performance or results will be appropriately reflected in employee compensation.	No significant difference
(III) Whether the Company provides its employees with a safe and healthy work environment, and regularly	V		(III) The Company abides by relevant domestic laws and regulations. All the plants have passed the internationally recognized environmental and safety and	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
implements employee safety and health education measures?			health management system certification of ISO 14001: 2015 / OHSAS 18001: 2007, in order to provide a safe and healthy working environment for employees. The Company regularly inspects the working environment, increases the number of health lectures, advocates anti-bullying in the workplace, adjusts the frequency of health examination of employees to once a year, and sends health information to all employees every week to create a happy, healthy and safe workplace environment. In addition, meetings of occupational safety and health committees are held quarterly in various plants to discuss about safety and health management plan, improvement and response measures of working environment determination, safety and health education and training, safety and health audit, safety and health management performance, accident propaganda and prevention, health management and promotion and other matters. The matters discussed about in the meeting are recorded, and continuously tracked and improved.	
(IV) Whether the Company establishes some effective career development training plan for employees?	V		(IV) In order to stimulate the potential of employees and cultivate outstanding talents, the Company has formulated "Measures for Education and Training", made a complete functional training plan, and continuously reviewed and updated functional projects and training courses, in order to improve and strengthen the ability and help staffs with career development	No significant difference
(V) With regard to customer health and	V		(V) The company mainly provides solar products and follows	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
safety, customer privacy, marketing and labeling of products and services, has the company followed relevant regulations and international standards, and formulated relevant consumer protection policies and appeal procedures?			the relevant laws and regulations of the industry on customer health and safety, customer privacy, marketing and labeling of products and services. The Company does comply with the internationally issued environmental protection laws and regulations to ensure the product output meets RoSH and WEEZ green regulations. The Company has Legal Compliance department to ensure compliance with relevant laws and regulations. There is a confidentiality agreement between the Company and major customers to protect the privacy and confidential information of both parties. At the same time, the Company also signs and abides by the factory operation specifications required by customers to maintain health and safety. The Company has customer complaint handling procedures, maintains good communication channels with customers, and provides transparent and effective customer complaint handling procedures for products and services.	
(VI) Whether the company formulates supplier management policies that require suppliers to follow relevant regulations on environmental protection, occupational safety and health or labor human rights, and their implementation?	V		(VI) The Company has a "supplier evaluation management process", including written evaluation, on-site evaluation, monthly evaluation, process monitoring, qualification evaluation, continuous evaluation and counseling, etc., and regularly or irregularly audit suppliers, and conducts an annual evaluation mechanism as a performance evaluation. The Company requires suppliers to sign the "Supplier Code of Conduct and Supplier Commitment", requiring suppliers to abide by relevant regulations in terms of anti-bribery and	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	
			corruption, social and environmental responsibility, conflict-free minerals, compliance with trade laws, and no infringement. The "Purchase Order" also requires suppliers to comply with relevant policies and regulations on environmental protection and occupational safety and health, intellectual property rights, and labor human rights.	
V. Whether the Company refers to internationally accepted report preparation standards or guidelines to prepare corporate social responsibility reports that disclose the Company's non-financial information? Does the referred report is verified or certified by the third-party verification unit?	V		The Company refers to Global Reporting Initiative (GRI) issued by the "sustainability reporting standards" and "Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies "for the preparation of corporate social responsibility report. The Company's 2019 corporate social responsibility report was inspected by DNV-GL in accordance with the GRI Standards. The 2019 corporate social responsibility report and the verification statement of the certification body were disclosed on the company's "Related Party Section" and MOPS.	No significant difference

VI. If the Company has established the corporate social responsibility principles based on "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies", please describe any discrepancy between the Principles and their implementation:

The Company has "Corporate Social Responsibility Policies", "Code of Practice for Corporate Social Responsibility", "Code of Ethical Conduct" and "Operation Procedures and Guidelines for Ethical Corporate Management" as the basic criteria for the daily operation of all employees. It has also formulated "Procedures for Handling the Important Documents Reporting Illegal and Unethical Conducts", and provides the reporting mechanism for employees to convey their opinions in a safe and confidential manner. Please refer to the "Corporate Governance Policy" Area on the Company's website at http://www.saswafer.com.

VII. Other important information to facilitate better understanding of the Company's corporate social responsibility practices:

1. Environmental protection: It is everyone's responsibility to promote environmental protection and low-carbon activities. In addition to strengthening energy-saving management and control of the process, the Company actively implements waste classification and resource recovery, promotes energy saving and carbon reduction, and has energy-saving and carbon-reduction equipment expenditure.
2. Encourage employees to participate in public welfare activities:

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation (Note 2)	

(1) Blood donation activities were carried out in April and September of 2019. The amount of blood donation reached 52,000cc and a Certificate of Appreciation was awarded by Hsinchu Blood Donation Center.
(2) Donation of Mid-Autumn Festival Cash Gift for Love Activities in September 2019: NT$ 16,000 for Saint Shiguang Rehabilitation Home, NT$ 16,000 for Huakuang Center for Intelligent Development, NT$ 13,000 for Holy Family for Special Education.
(3) In December 2019, the Company sponsored NT$ 20,000 to "Warm Winter for Kindergarten" Garden Party of Hsinchu Family Support Center and donated caring goods for charity sale.
(4) Participate in the 2019 Food Drive event and donate Xiuluan Elementary School in Hsinchu and Chiayi Elementary School for a total of NTD 275,550.
(5) To send warmth to the winter in the rural areas, donate a batch of materials to Shi Lei Elementary School, totaling about NT $ 57,600
(6) Participate in the subscription of the New Year dishes of the Huashan Social Welfare Foundation in Hsinchu, totaling NT $ 123,300

3. Consumer rights and interests: The Company's main products are solar wafer materials. The main products are sold directly to downstream manufacturers, so it does not directly face consumers. For customers, the Company has "Customer Complaint Processing Operation" to provide customer with complaint channels. Externally, it has signed supply contracts, quality contracts, etc. with customers for perfect guarantee of customer rights and interests.
4. Human rights: The Company attaches great importance to human rights. Regardless of race, gender and age, employees enjoy the same right to work, and the Company also provides opportunities for free expression and development to standalone, in order to achieve respect for personal dignity.
5. Safety and health: With zero disaster as the goal, the Company is committed to the promotion of safety and health policy and the continuous improvement of process and working environment. Through the joint efforts of all staffs, we continuously improve the occupational safety and health performance.
6. Employee health care: The Company carries out health examination for employees each year to let them know their health status each year, and then care for and strengthen their health. We also arrange professional medical specialists to visit our plant every month for consulting services. In the workplace, in order to grasp the status of employees' working environment and assess the exposure status of hazard factors, besides setting detection and alarm equipments at appropriate positions, work environment test is also done regularly as a basis for improving the workplace environment.

Note 1: Regardless of whether the evaluation item is achieved or not, the company shall state an appropriate explanation.
Note 2: Companies who have compiled CSR reports may cite the source from specific pages of their CSR reports instead.

(VI) The Company's Performance of Ethical Corporate Management and the Measures Taken

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
I. Establishment of ethical corporate management policies and programs				
(I) Has the Company formulated the ethical corporate management approved by the board of directors, and stated in the regulations and external documents the policies and practices of ethical corporate management, as well as the board and senior management's commitment to actively implement the management policy?	V		(I) The Company has the "Ethical Corporate Management Best-Practice Principles", "the Operational Procedures and Guidelines for Ethical Corporate Management", and "the Code of Ethical Conduct", as the guidelines adopted by the board of directors and "Reporting Illegal and Handling Measures for Cases of Unethical or Dishonest Conduct" approved by the chairperson to pursue ethical operation. The Company's standard contracts and external documents have informed the transaction counterparts to abide by the integrity management policy; the board of directors and senior management have signed a written statement to actively implement the commitment of the integrity management policy, and the Company has indeed implemented in internal management and business activities, including employment by specifying conditions to require employees to abide by the integrity management policy.	No significant difference
(II) Whether the Company has established an assessment mechanism for the risk of dishonesty, regularly analyzes and evaluates business activities with a high risk of dishonesty in the business scope, and accordingly formulates a plan to prevent dishonesty, and at least covers the "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies " Article 7, paragraph 2 of the prevention measures?	V		(II) The Company has listed the dishonesty behavior in the second section of Article 7 of "the Ethical Corporate Management Best-Practice Principle" in "the Operational Procedures and Guidelines for Ethical Corporate Management", and has established a risk assessment mechanism, including follow the self-assessment form and quality Interviews, e-mail tracking of MIS units ... and other control methods to collect data, regularly analyze and evaluate, identify those with higher risks, and supplement the internal audit unit's inspection mechanism to formulate prevention of bribery, and provide illegal political	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
			contributions or improper interests, infringement of intellectual property rights, unfair competition, etc.. Within the scope of business activities, the personnel of each unit of the Company have the obligation to cooperate with legal compliance department regarding the investigation of the aforementioned dishonesty. .	
(III) Whether the Company specifies the operating procedures, behavior guidelines, disciplinary penalties and grievance system in the plan to prevent dishonesty, and implement it, and regularly review and revise the pre-disclosure plan?	V		(III) The Company's plan for preventing dishonesty in accordance with "the Ethical Corporate Management Best-Practice Principle"" includes "Procedures for Ethical Management and Guidelines for Conduct", "Codes of Ethical Conduct ", and "Reporting Illegal and Handling Measures for Cases of Unethical or Dishonest Conduct" which clearly regulate no acceptance to any unrightful benefits, or to commit behaviors that violate integrity, and to encourage the reporting of any illegal or ethical conduct violations, the Company also stipulates the importance of integrity should be regularly announced to directors and employees. The above plan regularly reviews the appropriateness and effectiveness of the prevention plan according to the method set by the risk assessment mechanism of dishonesty behavior, and makes appropriate adjustments or amendments.	No significant difference
II. Fulfill operations integrity policy (I) Does the Company evaluate business partners' ethical records and include ethics-related clauses in business contracts?	V		(I) The Company's "Ethical Corporate Management Best-Practice Principles" has clearly stated that before business transactions, the legality of business transactions and whether there is dishonesty should be considered, and transactions with persons involved in dishonesty should be avoided. In addition, according to the Company's "Procedures for Ethical Management and Guidelines for Conduct", it is necessary to undergo an integrity operation	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from “the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Explanation	
			evaluation before establishing a business relationship with others. The customers’ evaluation (and its distributors / agents) is conducted by sales department; The suppliers’ evaluation (and its distributors / agents) is conducted by purchase department. The integrity management evaluation form is written and quantified; the contract signed with the business transaction partners should specify the integrity management clauses to ensure that the counterparty abides by the company's integrity management policy.	
(II) Does the Company set up a special unit for promoting corporate integrity management under the board of directors, and regularly (at least once a year) report to the board of directors on its integrity management policies and plans to prevent dishonesty, and monitor implementation?	V		(II) The company has established its own Legal Compliance unit in the Legal Department, which is responsible for coordinating the development and supervision of the implementation of the integrity management policy and the prevention of dishonesty behaviors, and supervises the implementation. The Legal Compliance manager reports their finding to the board of directors once a year. If any abnormalities are found, they may also report to the board of directors at any time. Implementation Status of Current Year (1) Establishing and reviewing policies related to ethical corporate management The Company has set up the "Ethical Corporate Management Best-Practice Principles", "Code of Ethical Conduct" and "Reporting Illegal and Handling Measures for Cases of Unethical or Dishonest Conduct", which clearly stipulates no acceptance to inrightful benefit, or violate integrity or dishonesty; the above internal regulations are examined by the legal compliance department with reference of changes in	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from “the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Explanation	
			external regulations and the internal implementation, and are adjusted and revised from time to time. (2) Internal and external advocacy of Company policies Relevant important internal regulations such as the "Ethical Corporate Management Best-Practice Principles", "Code of Ethical Conduct" and "Reporting Illegal and Handling Measures for Cases of Unethical or Dishonest Conduct" have been announced on the Company’s official website and internal websites for inquiries from external and parties. In addition, the company requires suppliers to sign the "Supplier Code of Conduct and Supplier Commitment" which request suppliers to act in compliance with legal, ethical, environmental and quality standards, and the content of the standard contract signed with business partners also includes the relevant provisions for compliance with honest business practices. (3) Reporting channel and whistleblower protection The company has set up the “Reporting Illegal and Handling Measures for Cases of Unethical or Dishonest Conduct", established a disciplinary and appeal system for violations of the integrity management regulations, and set up and announced employee suggestion boxes, electronic mailboxes and complaint hotline to encourage internal and external personnel to report dishonesty or misconduct. The company allows anonymous reports. The identity and content of the reporter will be kept confidential, and the human resource department will be responsible for verification and handling. Anyone who violates the integrity management regulations will be punished based on the	

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
			seriousness of the circumstances, and if necessary, the matter shall be reported to the competent authority or transferred to the judicial bureaus for investigation. (4) Education and training The Company regularly holds education and training, and the targets and duration of courses in 2019 are as follows: 1. "Education and training of new staffs" for new employees, 3.5~8hours; 2. Supervisors at the ministerial level and above, staff of procurement and marketing units "understand the laws related to integrity management" for 2 hours; 3. "Overview of Insider Transactions and Insider Equity Transaction Laws" for levels above directors and the staff in the President's office for 1 hours; 4. "Practice of Negotiable Instruments Act" for financial staff, for 2 hours; 5. "Overview of China's Personal Data Protection Law and EU GDPR Highlights" for section mangers, for 2 hours; 6. "Legal Compliance Seminar" for purchase and sales staff, for 1 hour. The above courses accumulated in 2019: attendants- 524, hours- 54 hours.	
(III) Does the company establish policies to prevent conflicts of interest and provide appropriate communication channels, and implement it?	V		(III) The company stipulates in the "Code of Ethical Conduct" that the personnel of the company should do business in an objective and efficient manner, avoiding the abuse of positions in the company to prevent their own, others or other companies from obtaining improper interests. In addition, the "Procedures for Ethical Management and Guidelines for Conduct" specifies how to recourse when	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
			there is a conflict of interest in the board. In addition, the conflict of interest channels provided by the company are different according to the subjects as follows: directors or independent directors should do so to the president's office or the chief of corporate governance; managers should do so to the legal compliance department.	
(IV) Whether the Company has established an effective accounting system and internal control system for the implementation of integrity management, and the internal audit unit has formulated relevant audit plans based on the results of the assessment of the risk of dishonesty, and checked the compliance with the plan to prevent dishonesty, or entrust an accountant to perform the audit?	V		(IV) The company has established and implemented the accounting system and internal control system which are audited by internal auditors on a regular basis pursuant to the audit plan that includes the subject, scope, item and frequency based on the results of the assessment of the risk of dishonesty to inspect the prevention actions effectiveness. The results shall be notified to the senior management team and the responsible department of ethical operation and be submitted to the board of directors in the form of audit report. In addition, the Company conducts inspections and revisions every year to ensure the effectiveness on the design and implementation of the system, and establish good corporate governance and risk management control mechanisms to serve as the basis on evaluating the overall efficacy of all internal control systems and for producing Internal Control System Statements.	No significant difference
(V) Does the company regularly hold internal and external educational trainings on operational integrity?	V		(V)The Company has conducted courses related to good faith management, the ethical codes of conduct and business and other related fields for all employees regularly. For the course of "good faith management management" and "prevention of insider trading", the current directors, managers and employees who are required or considered necessary to take courses must participate the training program at least every two years;	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
			when a new director or manager takes the office, he or she has to complete the training within 3 months; new employees will attend the good faith management course together with other onboard education and training courses organized by HR. In addition, in accordance with the Company's "Procedures for Ethical Management and Guidelines for Conduct", the chairperson or the chief corporate governance is also designated to convey the importance of integrity to directors, managers, supervisors, etc. at the board or manager meetings. In 2019, the Company conducted a total of 16 courses which totaled 524 participants and a total of 54 training hours, including "Orientation for New Employees", "To Understand Laws Related to Integrity Management", "Overview of Insider Transactions and Insider Equity Transaction Laws", "Practice of Negotiable Instruments Act", and " Taiwan Personal Data Protection Law and Summary of EU GDPR" and "Legal Compliance Introduction."	
III. Operation of the integrity channel (I) Does the company establish both a reward/punishment system and an integrity hotline? Can the accused be reached by an appropriate person for follow-up?	V		(I) The Company has established the "Guidelines for Whistle blowing on Illegal, Immoral or Unethical Conduct", set up an employee suggestion box and email, complaint hotline, principles in handling such matter and channel for external whistleblowing in order to fulfill good faith practice.Whistleblower cases are handled by the company 's spokesperson, HR manager or legal personnel, the case will be transferred to relevant departments for investigation after registration and processed purchant to "Reporting Illegal and Handling Measures for Cases of	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from “the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons
	Yes	No	Abstract Explanation	
			Unethical or Dishonest Conduct." Appropriate rewards will be given to whistleblowers depending on the severity of the case.	
(II) Does the company establish standard operating procedures for confidential reporting on investigating accusation cases?	V		(II) The Company stipulates “Guidelines for Whistleblowing on Illegal, Immoral or Unethical Conduct” and specifies different investigation, procedure based on different cases and the accused. The whistleblowing case will be processed in the principles of confidentiality, full protection of the whistleblower, offering difense chance for the accused, etc to secure the rights of both whistkleblowers and the accused. If the whistleblowing case is verified to be true, the whistleblower will be immediately required to stop and impose appropriate countermeasures, and instruct the relevant departments to review and propose improvement measures to prevent the same behavior from happening again; the legal department will separately report the whistleblowing case, handling and follow-up to the board of directors.	No significant difference
(III) Does the company provide proper whistleblower protection?	V		(III) The company handles whistle-blowing cases in a confidential manner in accordance with the “Guidelines for Whistleblowing on Illegal, Immoral or Unethical Conduct”, and offers full protection to the whistleblowers. Their identity will be kept absolutely confidential and will not face mistreatment due to the whistleblowing; the staff who handles the case will issue a written statement stating that the identity of the whistleblower and the content of the report will be kept confidential.	No significant difference
IV. Enhanced information disclosure (I) Does the company disclose its ethical corporate management policies and the results of its implementation on the	V		The Company has an official website that disclose relevant information such as corporate culture, business policies and the “Ethical Corporate Management Best-Practice Principles”,	No significant difference

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
company's website and MOPS?			"Procedures for Ethical Management and Guidelines for Conduct", "Code of Ethical Conduct", "Guidelines for Whistleblowing on Illegal, Immoral or Unethical Conduct" and the Company's implementation on good faith management.	
V. If the company has established the ethical corporate management policies based on the "Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies", please describe any discrepancy between the policies and their implementation: The Company has established the "Ethical Corporate Management Best-Practice Principles" which clearly regulates the matters to be followed by the Company's staff. Other accusation cases and penalties are also clearly set out in relevant measures. There is no significant difference between the policies and the "Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies".				
VI. Other important information to facilitate a better understanding of the company's ethical corporate management policies (under situations such as review and revision of regulations): 1. The Company complies with Company Act, Securities and Exchange Act, Business Entity Accounting Act, Political Donations Act, Anti-Corruption Act, Government Procurement Act, Act on Recusal of Public Servants Due to Conflicts of Interest as well as relevant regulations for the listed companies or other business entities as basic premise for fulfilling good faith management. The Company also fully dedicates in environmental and quality policies by adopting high standards. 2. The Company has set up the "Rules of Procedure for Board of Directors Meetings" which stipulated recusal system for directors. If a director or a juristic person that the director represents is an interested party in relation to an agenda item, and the relationship is likely to prejudice the interest of this Corporation, that director may state his/her opinions and answer questions, but may not participate in discussion or voting on that agenda item and shall refuse himself or herself from the discussion or the voting on the item, and may not exercise voting rights as proxy for another director. 3. The Company has set up the "Regulations Governing the Prevention of Insider Trading" which stipulates that upon actually knowing of any material information, the insiders, quasi-insiders and tippees shall not purchase or sell shares of the company that are listed on an exchange or an over-the-counter market, or any other equity-type security of the company after the information is precise, and prior to the public disclosure of such information or within 18 hours after its public disclosure in case accidentally violate insider trading because they are not familiar with the regulations. 4. The Company stipulates "Procedures for Handling Material Inside Information" to establish sound mechanisms for the handling and disclosure of material inside information in order to prevent improper information disclosures and to ensure the consistency and accuracy of information released by this Corporation to the public. The procedure regulates that no director, supervisor, managerial officer, or employee with knowledge of material inside information of the Company may divulge the information to others, nor inquire about or collect any non-public material inside information of this Company not related to their individual duties from a person with knowledge of such information, nor may they disclose to others any non-public material inside information of this Corporation of which they become aware for reasons other than the performance of their duties. 5. The company updates, revises and adjusts contexts in "Ethical Corporate Management Best Practice Principles" to be in accordance with "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" released by TPEx, the third amendment was approved by the board dated 2019.11.12 and submitted to the shareholder meeting.				

Evaluation Item	Implementation Status (Note 1)			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation	
6. The company updates, revises and adjusts contexts in "Codes of Ethical Conduct" to be in accordance with "Codes of Ethical Conduct for TWSE/GTSM Listed Companies" released by TPEx, the fourth amendment was approved by the board dated 2019.11.12 and submitted to the shareholder meeting. 7. The company updates, revises and adjusts contexts in "Procedures for Ethical Management and Guidelines for Conduct" to be in accordance with "Procedures for Ethical Management and Guidelines for Conduct for TWSE/GTSM Listed Companies" released by TPEx, the second amendment was approved by the chairperson on 2019.11.12 and submitted to the shareholder meeting. 8. The company updates, revises and adjusts contexts in "Guidelines for Whistleblowing on Illegal, Immoral or Unethical Conduct" to be in accordance with "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" released by TPEx, the third amendment was approved by the chairperson on 2019.11.12 and submitted to the shareholder meeting.				

Note 1: Regardless of whether the evaluation item is achieved or not, the company shall state an appropriate explanation.

(VII) If the Company has formulated code of corporate governance and related regulations, it should disclose its inquiry methods: If the Company has formulated code of corporate governance practice, the relevant measures are implemented in accordance with the spirit and norms of "the Code of Practice for Corporate Governance of TWSE/TPEx Listed Companies". Please refer to the Investor Service Area on the Company's website (http://www.saswafer.com).

(VIII) Other important information sufficient to enhance understanding of the operation of corporate governance should be disclosed together: The inquiry method is as follows:

1. MOPS: http://mops.twse.com.tw
2. Website of the Company: http://www.saswafer.com Investor Area Directors' continuing education:
3. Directors' continuing education:

The Board of Directors of the Company had all completed their further education according to the "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEx Listed Companies" specification.

Title	Name	Training Date	Sponsored by	Training Course	Number of Training Hours
Chairman	Ming-Kuang Lu	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Tang-liang Yao	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Hsiu-Lan Hsu	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Wen-huei Tsai	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3

Title	Name	Training Date	Sponsored by	Training Course	Number of Training Hours
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Representative of Maoyang Corporation :Rong-kang Sun	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Representative of Kaijiang Corporation : Fang Hao	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Representative of Kunchang Investment Corporation :Yu-da Chang	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Director	Representative of Hongmao Investment Corporation :Chu-wang Chen	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of the New Amendment to the Company Law on the Decision-making of the Board of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Independent Director	Ting-ko Chen	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		May 23rd, 2019	Taiwan Corporation Governance Association	Trends and Risk Management in Digital Technology and Artificial Intelligence	3
		October 23rd,2019	Taiwan Corporation Governance Association	The Operation Practice of Enterprise Performance Management and Reward Mechanism	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3

Title	Name	Training Date	Sponsored by	Training Course	Number of Training Hours
Independent Director	Shing-hsien Lin	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of the New Amendment to the Company Law on the Decision-making of the Board of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Independent Director	Mong-hua Huang	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of the New Amendment to the Company Law on the Decision-making of the Board of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3

(IX) Managers' Training on Corporate Governance:

Title	Name	Training Date	Sponsored by	Course Name	Number of Training Hours
President	Hsiu-Lan Hsu	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Accounting Supervisor	Hsiu-Ling Hsu	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
		December 23rd to 24th, 2019	Accounting Research and Development Foundation	Continuing Course for the Head of Accounting at the Issuer's Securities Exchange	12
Audit Supervisor	Fan Cizhen	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		September 26th, 2019	The Institute of Internal Auditors-Chinese Taiwan	Fraud Risk Audit and Management	6
		October 21st, 2019	The Institute of Internal Auditors-Chinese Taiwan	The Function and Task of Corporate Governance Personnel under the Blueprint of Corporate Governance	6
		November 12th, 2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
Corporate Governance Supervisor	Ming-huei Chien	May 9th, 2019	Taiwan Corporation Governance Association	The Impact of Recent Amendment to Regulations on the Decision-making of Directors	3
		July 26th,2019	Corporate Governance Professionals Association	Effectiveness of the Board of Directors and Compensation Seminar	3

		July 31st,2019	Taipei Exchange	Advocate on insider shareholding of TPEx-listed and emerging stock company	3
		November 12th,2019	Taiwan Corporation Governance Association	Analysis of the Return of Overseas Funds of Taiwan Businessmen under Global Anti-Avoidance	3
		April 17th ,2020	Taiwan Corporation Governance Association	Corporate Governance and Legal Compliance Cases	3
		April 24th ,2020	Taiwan Corporation Governance Association	Board of Directors And Decision Effectiveness	3

(IX) Internal Control System Execution Status

1. Statement of Internal Control System

Sino-American Silicon Products Inc.

Internal Control Disclosure Statement

Date: March 19, 2020

Based on the findings of a self-assessment, Sino-American Silicon Products Inc. states the following with regard to its internal control system during the year 2019:

I. Sino-American Silicon Products incorporation’s Board of Directors and Management are responsible for establishing, implementing, and maintaining an adequate internal control system. Our internal control is a process designed to provide reasonable assurance over the effectiveness and efficiency of our operations (including profitability, performance, and safeguarding of assets), reliability of our financial reporting, and compliance with applicable laws and regulations.

II. An internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can provide only reasonable assurance of accomplishing its stated objectives. Moreover, the effectiveness of an internal control system may be subject to changes due to extenuating circumstances beyond our control. Nevertheless, our internal control system contains self-monitoring mechanisms, and Sino-American Silicon Products Inc. takes immediate remedial actions in response to any identified deficiencies.

III. Sino-American Silicon Products Inc. evaluates the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing the Establishment of Internal Control Systems by Public Companies (herein below, the “Regulations“). The criteria adopted by the Regulations identify five key components of managerial internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.

IV. Sino-American Silicon Products Inc. has evaluated the design and operating effectiveness of its internal control system according to the aforesaid Regulations.

V. Based on the findings of such evaluation, Sino-American Silicon Products Inc. believes that on December 31, 2019, we have maintained, in all material respects an effective internal control system (that includes the supervision and management of our subsidiaries), to provide reasonable assurance over our operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations.

VI. This Statement will be an integral part of Sino-American Silicon Products incorporation’s Annual Report for the year 2019 and Prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171, and 174 of the Securities and Exchange Law.

VII. This Statement has been passed by the Board of Directors in the meeting held on 19th Mar. 2020, with none of the twelve attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

Sino-American Silicon Products Inc.

Chairman: Ming-Kuang Lu

President: Hsiu-Lan Hsu

Note 1: Design and implementation of a public company's internal control system, as there are significant deficiency in the year, the internal control system statement should be added explanatory note in the Article 4 that list and explain the significant lack discovery of self-assessment, and the company taken the corrective action to improve the situation before the data of balance sheet.

Note 2: Date of declaration as " the end of fiscal year ".

2. Internal audit organization and operation

   The auditing unit of the Company is affiliated to the Board of Directors, and the appointment or removal of the chief internal auditor must be examined by the Audit Committee and sent to the Board of Directors for approval. The Company should report by the Internet Information System for reference in accordance with the provisions of the Financial Regulatory Commission 10 days in the next month after the approval of the Board of Directors. There is currently one chief internal auditor (department manager) and two auditors.

   The auditing unit makes an annual audit plan based on the results of risk evaluation, including items to be audited each month. It does carry out audit operations in accordance with the annual audit plan, so as to check the internal control system of the Company.

   The Company has set up Audit Committee, all of which are composed of independent directors. When submitting the annual audit plan to the Audit Committee for discussion according to regulations, the opinions of independent directors have been fully taken into account. After each audit, the audit report is made, and the working manuscript and related information are attached. The deficiencies and improvement suggestions will be reported to the management. The audit findings are disclosed in the audit report according to the facts and tracked after the report has been audited at least on a quarterly basis. A tracking report is made until improvement, in order to confirm that the relevant units have taken appropriate improvement measures in time. Members of the Company's Audit Committee communicate well with the chief internal auditor.

   The Company's CPAs report the results of the audit or review of the current quarter's financial statements at quarterly meetings of the Audit Committee, as well as other communication matters required by relevant laws and regulations. Members of the Company's Audit Committee communicate well with CPAs.

3. CPA Audit Report Should Be Disclosed If CPA Is Entrusted To Perform Internal Audit: Not applicable.

(X) Punishment on the Company and its Staff in Violation of Law, or Punishment on its Employees in Violation of Internal Control System and Other Internal Regulations, Major Shortcomings and Status of Correction: None.

(XI) As of the date of this Annual Report, the following resolutions are adopted regarding annual shareholders’ meeting and Board of Directors Meeting:

1. Important resolutions and implementation of 2019 Shareholders’ Meeting (June 27, 2019):

Important resolutions	Implementation status
1. Distribution of cash dividend through capital reserve.	According to the content of the resolution, the distribution was made. The base date of distribution is July 29, 2019, and the distribution of cash dividend of shareholders was completed on August 16, 2019. (NT$ 0.6855 per share)
2. Amendment to "Articles of Incorporation" was approved.	After the resolution of the shareholders’ meeting and registration approved by Hsinchu Science Park Bureau, Minstry of Science and Technology on July 5, 2019, the new revised provisions were implemented.
3. Amendment to "Procedure for Acquisition or Disposal of Assets” was approved.	After the resolution of the shareholders’ meeting, the new revised provisions were implemented.
4. Amendment to “Procedures for Financial Derivatives Transactions" was approved.	After the resolution of the shareholders’ meeting, the new revised provisions were implemented.
5. Amendment to "Procedures for Lending Funds to Other Parties" was approved.	After the resolution of the shareholders’ meeting, the new revised provisions were implemented.
6. Amendment to “Procedures for Endorsement and Guarantee" was approved.	After the resolution of the shareholders’ meeting, the new revised provisions were implemented.
7. To meet the Company's financial needs, it is proposed to handle public or private offerings of securities.	The Board of Directors approved on March 19, 2020 that it will not be dealt with due to the consideration of the whole funds.
8. The recognition of the Business Report and Financial Statements of 2018 was approved.	After the resolution of the shareholders' regular meeting, it was announced on MOPS in accordance with the regulations.

9. The recognition of the proposal for 2018 profit distribution loss was approved.	According to the content of the resolution, the distribution was made. The base date of distribution is July 29, 2019, and the distribution of cash dividend to shareholders was completed on August 16, 2019. (NT$ 2.3145 per share)

2. Important resolutions of the Board of Directors:

Date	Important resolutions
January 11th, 2019	1. Report on the Company's Investment 2. Agreement of the Company to Amend the Long-term Supply Contract 3. The Company's 2018 Asset Impairment 4. The Company Intending to Subscribe the Private Placement Unsecured Ordinary Corporate Bonds of Crystalwise Technology Inc.
February 21st, 2019	1. Report on the Company's Investment 2. Change of the Company's Acting Spokesperson 3. Amendment to the Company's " Supervision Measures for Subsidiaries of Sino-American" 4. The Company's Investment 5. Disposal of Shareholding of Investment Company 6. Cancellation of the Company's Investment 7. The Company's 2018 Certified Fees of CPAs
March 21st, 2019	1. Audit Business Report 2. Report on the Implementation Progress of "Introduction Plan of IFRS No. 16 Lease " 3. Report on the Evaluation of the Competency and Independence of CPAs 4. Performance Evaluation Report of the Company's "Board of Directors and Functional Committee" 5. Report on the Company's Guarantee for Subsidiary 6. The Company's Business Report and Financial Statements of 2018 7. Employee Remuneration and Director Remuneration Distribution Plan of the Company of 2018 8. The Company's Earnings Allocation of 2018 9. Discussion about Cash Giving by Capital Reserve 10. Amendment to the Company's “Articles of Incorporation” 11. Amendment to the Company's "Procedures for Acquisition or Disposal of Assets" 12. Amendment to the Company's "Procedures for Financial Derivatives Transactions” 13. Amendment to the Company's "Procedures for Lending Funds to Other Parties" 14. Amendment to the Company's "Procedures for Endorsement

	and Guarantee" 15. Amendment to the Company's "Code of Ethical Conduct" 16. Amendment to the Company's "Procedures for Ethical Management and Guidelines for Conduct" 17. Amendment to the Company's "Procedures for Handling Cases of Reporting Illegal and Immoral or Unethical Conducts" 18. Formulating the Company's "Measures for Accountant Independence and Performance Evaluation" 19. Discussion about Non-handling of the Issuance of New Shares by Capital Increase of Private Equity upon Expiration 20. Discussion about Dealing with Public or Private Offerings of Securities to Meet the Company's Financial Needs 21. Relevant Matters Concerning the Agenda and Proposals for the Convening of the 2019 General meeting of Shareholders 22. Capital Reduction in Cancellation of Buying Back Employee Restricted Stocks 23. "Declaration of Internal Control System" of 2018 24. Serving as Joint Guarantor for a Subsidiary's Loan from a Financial Institution 25. Discussion about Loan of Funds to Sub-subsidiaries 26. Amendment to the Company's “Accounting System” 27. The Company's Investment 28. Annual Salary Adjustment for Managers of the Company
May 9th, 2019	1. Audit Business Report 2. The Company's Consolidated Financial Quarterly Report for the First Quarter in 2019 3. Report on the Company's Investment 4. Over-limit Improvement Completion Report of Subsidiary's Lending of Funds 5. Provision of Credit Facility and Foreign Exchange Facility by Financial Institution 6. Legislating the Company's “Standard Operating Procedures for Dealing with Directors' Requirements” 7. Appointment of the Company's “Corporate Governance Supervisor” 8. Amendment to the Company's "Allocation Rules of Directors' Remuneration” 9. Allocation of Directors' Remuneration of the Company of 2018 10. The Company's Allocation of Managers’ Remuneration of 2018
May 17th, 2019	1. The Company Intending to Subscribe the Ordinary Corporate Stock’s Private Placement of Crystalwise Technology Inc.
June 26th, 2019	1. Cancellation of Establishing New Company with Other Investors 2. The Company’s Recognition of Debt Provision
August 8th, 2019	1. Report on Information Security Improvement Program 2. Report on the Implementation of the Internal Audit Plan 3. The Company's Consolidated Financial Quarterly Report for the Second Quarter in 2019

	4. Report on the Sale of 100% owned Subsidiary of the Company's Subsidary, Sunrise PV World Co. 5. Report on the Implementation of the Corporate Sustainable Development Committee of the Company 6. Capital Reduction in Cancellation of Buying Back Employee Restricted Stocks 7. Amendment to the Company's "Operation Procedures for Handling the Internal Important Information" 8. Legislating the Company's "Procedure for Legal Compliance" 9. Lending of Funds to Power Plant Subsidiary 10. Provision of Credit Facility and Foreign Exchange Facility by Financial Institution
August 22nd, 2019	1. Disposal of Shareholding of Investment Company
October 9th, 2019	1. Increasing of Shareholding of Investment Company
November 12th, 2019	1. Audit Business Report 2. The Company's Consolidated Financial Quarterly Report for the Third Quarter in 2019 3. Report on the Establishment of a Subsidiary 4. Report on the Renewal of Directors' and Managers' Liability Insurance Contracts 5. Internal Audit Plan of 2020 6. Serving as Guarantor for Loan of Power Plant Subsidiary from a Financial Institution 7. Serving as Joint Guarantor for a Subsidiary's Loan from a Financial Institution 8. Provision of Credit Facility and Foreign Exchange Facility by Financial Institution 9. Amendment to the Company's "Ethical Corporate Management Best Practice Principles" 10. Amendment to the Company's "Procedures for Ethical Management and Guidelines for Conduct" 11. Amendment to the Company's "Codes of Ethical Conduct" 12. Amendment to the Company's "Measures for the Report on Illegal, Immoral and Dishonest Acts" 13. Amendment to the Company's "Procedures for the Prevention of Insider Trading" 14. Amendment to the Company's "Performance Evaluation Method for the Board of Directors and Functional Committee" 15. Amendment to the Company's "Articles of Incorporation"
December 12th, 2019	1. Making the Company's Operating Plan for 2020 2. Issuing the Letter of Support 3. Report on the short-form Merge with 100% owned Subsidiary Sunrise PV World Co.

	4. Report on Establishment of a Branch 5. Report on Change of Yilan Branch's and Zhunan branch's Managers 6. Purchasing Plant and Equipments
March 19th, 2020	1. Audit Business Report 2. Employee Remuneration and Director Remuneration Distribution Plan of the Company of 2019 3. The Company's Business Report and Financial Statements of 2019 4. The Company's Earnings Allocation of 2019 5. Discussion about Cash Giving by Capital Reserve 6. Amendment to the Company's "Articles of Incorporation" 7. Amendment to the Company's "Procedure for Legal Compliance" 8. Discussion about Non-handling of the Issuance of New Shares by Capital Increase of Private Equity upon Expiration 9. Discussion about Dealing with Public or Private Offerings of Securities to Meet the Company's Financial Needs 10. The board of directors election 11. Propose to remove the prohibition on non-competition 12. Relevant Matters Concerning the Agenda and Proposals for the Convening of the 2020 General meeting of Shareholders 13. Capital Reduction in Cancellation of Buying Back Employee Restricted Stocks 14. "Declaration of Internal Control System" of 2019 15. Amendment to the Company's "Internal Control System", "Internal Audit System" and" Self-assessment Operation of Internal Control System Statement" 16. Discussion about Loan of Funds to Sub-subsidiaries 17. The Company's 2019 Certified Fees of CPAs 18. Approval for promotion 19. Increase the Shareholding of Investment Company
May 7th, 2020	1. Audit Business Report 2. The Company's Consolidated Financial Quarterly Report for the First Quarter in 2020 3. Nomination and Review of Candidate List of Directors (including independent directors) 4. The Change of Company's Audit Managers 5. Provision of Credit Facility and Foreign Exchange Facility by Financial Institution 6. Disposal of Cathay Sunrise Corporation shares 7. The Company's Investment 8. Amendments to the "Procedures of Managers' Remuneration" 9. Allocation of Directors' Remuneration of the Company of 2019 10. The Company's Allocation of Managers' Remuneration of 2019

(XVI) As Of The Date Of This Annual Report, A Director Or A Supervisor Has Expressed Disagreement To A Resolution Passed By The Board Of Directors And Kept Document Or A Written Statement: None.

(XVII) As Of The Date Of This Annual Report, Resignation Or Dismissal Of Personnel Responsible For Financial Report (Including Chairman, President, Accounting And Audit Managers):

May 15, 2020

Title	Name	Date of Appointment	Date of Termination	Reasons for Resignation or Dismissal
Internal Audit Manager	Tzu-Chen Fan	January 01, 2006	June 01, 2020	Transfer

IV. Information Regarding Audit Fees

(I) Information Regarding Audit Fees

1. Levels of Information Regarding Audit Fees

Name of Accounting Firm	Name of Accountant		Period of Verification	Remarks
KPMG United Accounting Firm	Cheng-chien Chen	An-chih Cheng	January 2019 –December 2019	

Unit of amount: NT$ 1,000

Fee Range	Fee Items	Audit Fee	Non-audit Fee	Total
1	Under NT$ 2,000,000	—	—	—
2	NT$ 2,000,000 (including) ～ NT$ 4,000,000	—	—	—
3	NT$ 4,000,000 (including) ～ NT$ 6,000,000	—	—	—
4	NT$ 6,000,000 (including) ～ NT$ 8,000,000	V	V	V
5	NT$ 8,000,000 (including) ～ NT$ 10,000,000	—	—	—
6	Over NT$ 10,000,000 (including)	—	—	—

Unit of amount: NT$ 1,000

Accounting Firm	Name of CPA	Audit Fee	Non-audit Fee					Period Covered by CPA's Audit	Remarks
			System of Design	Company Registration	Human Resource	Others (Note 2)	Subtotal		
KPMG United Accounting Firm	Cheng-chien Chen An-chih Cheng	5,750	—	50	—	490	6,290	January 1, 2019 - December 31, 2019	

Note 1: When the Company changes its auditors and the accounting firm, shall separately specify audit period and reason in the Note column, and disclose information of audit and non-audit fees.

Note 2: Please record non-audit fees separately according to service item, if non-audit fees indicated under "Other" constitute 25 percent of total non-audit fees, the nature of those service items shall be indicated in the Note column.

(II) Non-Audit Fee Paid to Auditors and the Accounting Firm Accounted for More Than One-Fourth of Total Audit Fee Shall Disclose the Amount and The Service Item: None.

(III) When the Company Changes Its Accounting Firm and the Audit Fees Paid for the Fiscal Year in Which Such Change Took Place Are Lower Than Those for the Previous Year, The Reduction in the Amount of Audit Fees, Reduction Percentage, and Reason(S) Therefore Shall Be Disclosed: None.

(IV) When the Audit Fees Paid for the Current Year Are Lower Than Those for the Previous Fiscal Year by 15 Percent Or More, the Reduction in the Amount of Audit Fees, Reduction Percentage, and Reason(S) Therefore Shall Be Disclosed: None.

V. Information on Replacement of Independent Auditors in the Last Two Years and Thereafter: None.

VI. Name, professional title and employment in the firm of CPA or his/her related enterprise of the Chairman, President, Finance or Accounting Manager Who Has Worked in the Accounting Firm or Affiliates in the Most Recent Year, the Name, Position and the Service Period Shall Be Disclosed: None.

VII. Changes in Shareholding of Directors, Supervisors, Managers and Major Shareholders in Last Year and as of the Date of this Annual Report:

(I) Changes in shareholding rights of directors, supervisors, managers and shareholders with a shareholding ratio of more than 10%

Title	Name	2019		The year ended April 30, 2020		Remarks
		Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged	
Chairman	Ming-Kuang Lu	(653,000)	0	0	0	CEO of the Company
Vice Chairman	Tang-liang Yao	120,000	0	0	0	Deputy CEO of the Company
Director	Hsiu-Lan Hsu	0	0	0	0	President of the Company
Director	Wen-huei Tsai	0	0	0	0	
Director	United Renewable Energy Co., Ltd. Representative: Chuan-hsien Hong	0 0	0 0	0 0	0 0	
Director	Maoyang Corporation Representative: Rong-kang Sun	0 0	0 0	0 0	0 0	
Director	Representative of Kaijiang Corporation: Fang Hao	0 0	0 0	0 0	0 0	
Director	Kunchang Investment Co., Ltd. Representative: Yu-da Chang	0 0	0 0	0 0	0 0	
Director	Representative of Hongmao Investment Corporation: Chu-wang Chen	0 0	0 0	0 0	0 0	
Independent Director	Ting-ko Chen	0	0	0	0	
Independent Director	Shing-hsien Lin	0	0	0	0	
Independent Director	Mong-hua Huang	0	0	0	0	
Manager	Hau-chun Shih	29,000	0	0	0	

Title	Name	2019		The year ended April 30, 2020		Remarks
		Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged	
Manager	BUDI TJAHJONO	0	0	0	0	
Manager	Yu-tse Lin	0	0	0	0	Termination on 30th June 2019
Manager	C.W. Lee	0	0	(30,000)	0	
Manager	Chien-hong Liu	0	0	0	0	
Manager	Pei-yi Chen	33,000	0	0	0	
Chief of Finance & Accounting Department	Hsiu-Ling Hsu	0	0	0	0	
Corporate Governance Supervisor	Ming-huei Chien	0	0	0	0	

Note 1: Shareholders holding more than 10% of the total shares of the Company should be identified as major shareholders and listed separately.

Note 2: If the relative person concerned in the transfer or pledge of shares is a related party, the following table should be filled out.

(II) Shares Trading with Related Parties: None.

(III) Shares Pledge with Related Parties: None.

VIII. Information Regarding the Relationship among the Top Ten Shareholders Who are Related Parties in the Financial Accounting Standards Bulletin No. 6:

April 26, 2020

Name	Shareholding		Shareholding under spouse or underage children		Shareholding under other		Top 10 shareholders among who are related parties		Remarks
	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio	Name	Relationship	
Hongwang Investment Co., Ltd.	25,050,000	4.27%	0	0	0	0	None	None	
Representative of Hongwang Investment Co., Ltd.: Jiang Sulan	0	0	0	0	0	0	None	None	
Fubon Life Insurance Co., Ltd.	24,259,000	4.14%	0	0	0	0	None	None	
Fubon Life Insurance Co., Ltd.: MingHsing Tsai	0	0	0	0	0	0	None	None	
United Renewable Energy Co., Ltd.	21,860,379	3.73%	0	0	0	0	None	None	
Representative of United Renewable Energy Co., Ltd.: Chuan-hsien Hong	0	0	0	0	0	0	None	None	
The 2nd Time in 2018 of Discretionary Entrustment Group Benefit Investment Account from New Labor Pension Fund	14,731,000	2.51%	0	0	0	0	None	None	
Weilian Technology Co., Ltd.	13,114,000	2.24%	0	0	0	0	None	None	
Representative of Weilian Technology Co., Ltd: Jiang Sulan	0	0	0	0	0	0	None	None	

Ming-Kuang Lu	11,400,000	1.94%	991,685	0.17%	0	0	None	None	
Cathay Life Insurance Company, Ltd.	10,827,000	1.85%	0	0	0	0	None	None	
Representative of Cathay Life Insurance Company, Ltd.: Tiaokuei Huang	0	0	0	0	0	0	None	None	
Hongmao Investment Co., Ltd.:	10,425,000	1.78%	0	0	0	0	None	None	
Representative of Hongmao Investment Co., Ltd.: Jiang Sulan	0	0	0	0	0	0	None	None	
PJ Asset Management Co., Ltd.	10,000,000	1.71%	2,001,685	0.35%	0	0	None	None	
Representative of PJ Asset Management Co., Ltd.: Chen-Hai Lin	0	0	0	0	0	0	None	None	
Mercuries Life Insurance Inc.	9,562,000	1.63%	0	0	0	0	None	None	
Representative of Mercuries Life Insurance Inc.: Hsiangchieh Chen	0	0	0	0	0	0	None	None	

IX. Total Numbers and Equity of Shares Held In any Single Enterprise by the Company, Directors, Supervisors, Managers and Any Companies Controlled Either Directly or Indirectly by the Company:

December 31, 2019 Unit: thousand shares; %

Reinvestment (Note 1)	Investment by SAS		Investments directly or indirectly controlled by directors, supervisors and managers		Total investment	
	Number of Shares	Shareholding Proportion	Number of Shares	Shareholding Proportion	Number of Shares	Shareholding Proportion
Sino Silicon Technology Inc.	48,526	100.00%	—	—	48,526	100.00%
GlobalWafers Corporation	222,727	51.17%	—	—	222,727	51.17%
Aleo Sunrise GmbH	(Note 2)	100.00%	—	—	(Note 2)	100.00%
SAS Sunrise Inc.	24,500	100.00%	—	—	24,500	100.00%
Sunrise PV World Co.	30,000	100.00%	—	—	30,000	100.00%
Sunrise PV Electric Power Five	100	100.00%	—	—	100	100.00%
Crystalwise Technology Inc.	86,923	41.93%	—	—	86,923	41.93%
Accu Solar Corp	7,452	24.70%	—	—	7,452	24.70%
Cathay Sunrise Corporation	45,000	30.00%	—	—	45,000	30.00%
Taiwan Speciality Chemicals Corporation	90,000	30.93%	—	—	90,000	30.93%
Actron Technology Corporation	14,185	15.50%	—	—	14,185	15.50%
Sunrise PV Three Co., Ltd.	—	—	1,500	100.00%	1,500	100.00%
Sunrise PV Four Co., Ltd.	—	—	1,500	100.00%	1,500	100.00%
SAS Sunrise Pte. Ltd.	—	—	30,934	100.00%	30,934	100.00%
AMLED International Systems Inc.	—	—	—	—	—	—
Sulu Electric Power and Light Inc.	—	—	892,500	85.00%	892,500	85.00%
Aleo Solar Distribuzione Italia S.r.l	—	—	(Note 2)	100.00%	(Note 2)	100.00%

Note 1: The Company's investment is based on equity method.
Note 2: It is a limited company, so there is no number of shares.

December 31, 2019 Unit: thousand shares; %

Reinvestment (Note 1)	Investment by SAS		Investments directly or indirectly controlled by directors, supervisors and managers		Total investment	
	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio	Number of Shares	Shareholding Ratio
GlobalWafers Inc.	—	—	90,000	100.00%	90,000	100.00%
GlobalSemiconductor Inc.	—	—	25,000	100.00%	25,000	100.00%
GlobalWafers Japan Co., Ltd.	—	—	128	100.00%	128	100.00%
GWafers Singapore Pte. Ltd.	—	—	541,674	100.00%	541,674	100.00%
Topsil GlobalWafers A/S	—	—	1,000	100.00%	1,000	100.00%
Hongwang Investment Co., Ltd.	—	—	30,976	30.98%	30,976	30.98%
Taisil Electronic Materials Corp.	—	—	9,999	99.99%	9,999	99.99%
MEMC Japan Ltd.	—	—	750	100.00%	750	100.00%
Topsil Semiconductor sp z o.o.	—	—	0.1	100.00%	0.1	100.00%
GlobalWafers Singapore Pte. Ltd.	—	—	299,445	100.00%	299,445	100.00%
GlobalWafers B.V.	—	—	0.1	100.00%	0.1	100.00%
MEMC Electronic Materials, SpA	—	—	65,000	100.00%	65,000	100.00%
MEMC Electronic Materials France SarL	—	—	0.5	100.00%	0.5	100.00%
MEMC Electronic Materials GmbH	—	—	0.002	100.00%	0.002	100.00%
MEMC Korea Company	—	—	25,200	100.00%	25,200	100.00%
GlobiTech Incorporated.	—	—	1	100.00%	1	100.00%
MEMC LLC	—	—	—	100.00%	—	100.00%
MEMC Electronic Materials, Sdn Bhd	—	—	1,036	100.00%	1,036	100.00%
MEMC Ipoh Sdn Bhd	—	—	612,300	100.00%	612,300	100.00%
Kunshan Sino Silicon Technology Co., Ltd.	—	—	(Note 2)	100.00%	(Note 2)	100.00%
SunEdison Semiconductor Technology (Shanghai) Ltd	—	—	(Note 2)	100.00%	(Note 2)	100.00%
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	—	—	(Note 2)	60.00%	(Note 2)	60.00%

Note 1: The Company's investment is based on equity method.
Note 2: It is a limited company, so there is no number of shares.

IV. Capital Overview

I. Capital and Shares

(I) Source of Capital:

1. Issued Shares

Unit: NT$/share

Month/ Year	Par Value	Authorized Capital		Paid-in Capital		Remarks		
		Number of Shares	Amount	Number of Shares	Amount	Sources of Capital	Capital Increased by Assets Other than Cash	Other
January 1981	10	10,800,000	108,000,000	6,044,663	60,446,630	Capital increased by cash 38,902,043	21,544,587	
August 1984	10	10,800,000	108,000,000	10,800,000	108,000,000	Capital increased by cash 111,946	47,441,424	
November 1984	10	14,000,000	140,000,000	14,000,000	140,000,000	Capital increased by cash 32,000,000	None	
April 1990	10	30,000,000	300,000,000	30,000,000	300,000,000	Capital increased by cash 160,000,000	None	Note (1)
November 1995	10	60,000,000	600,000,000	40,000,000	400,000,000	Capital increased by cash 100,000,000	None	Note (2)
February 1998	10	60,000,000	600,000,000	60,000,000	600,000,000	Capital increased by cash 200,000,000	None	Note (3)
August 1998	10	63,000,000	630,000,000	63,000,000	630,000,000	Conversion of capital reserve to capital increase 30,000,000	None	Note (4)
December 1999	10	78,000,000	780,000,000	78,000,000	780,000,000	Capital increased by cash 150,000,000	None	Note (5)
October 2000	10	86,421,000	864,210,000	86,421,000	864,210,000	Conversion of surplus, capital reserve and employee dividend to capital increase 84,210,000	None	Note (6)
October 2001	10	170,000,000	1,700,000,000	100,857,250	1,008,572,500	Conversion of surplus and employee dividend to capital increase 144,362,500	None	Note (7)
October 2002	10	170,000,000	1,700,000,000	105,350,000	1,053,500,000	Conversion of surplus and employee dividend to capital increase 44,927,500	None	Note (8)

September 2003	10	170,000,000	1,700,000,000	109,706,100	1,097,061,000	Conversion of surplus, capital reserve and employee dividend to capital increase 43,561,000	None	Note (9)
September 2004	10	170,000,000	1,700,000,000	114,593,000	1,145,930,000	Conversion of surplus and employee dividend to capital increase 48,869,000	None	Note (10)
September 2005	10	170,000,000	1,700,000,000	122,300,000	1,223,000,000	Conversion of surplus and employee dividend to capital increase 77,070,000	None	Note (11)
October 2005	10	170,000,000	1,700,000,000	152,300,000	1,523,000,000	Capital increased by cash 300,000,000	None	Note (12)
September 2006	10	250,000,000	2,500,000,000	161,000,000	1,610,000,000	Conversion of surplus, capital reserve and employee dividend to capital increase 87,000,000	None	Note (13)
October 2006	10	250,000,000	2,500,000,000	181,000,000	1,810,000,000	Capital increased by cash 200,000,000	None	Note (14)
October 2006	10	250,000,000	2,500,000,000	183,289,000	1,832,890,000	Warrants Conversion stock 22,890,000	None	Note (15)
March 2007	10	250,000,000	2,500,000,000	183,692,000	1,836,920,000	Warrants Conversion stock 4,030,000	None	Note (16)
May 2007	10	250,000,000	2,500,000,000	186,506,000	1,865,060,000	Warrants Conversion stock 28,140,000	None	Note (17)
September 2007	10	250,000,000	2,500,000,000	186,831,000	1,868,310,000	Warrants Conversion stock 3,250,000	None	Note (18)
September 2007	10	250,000,000	2,500,000,000	197,241,300	1,972,413,000	Surplus and employees Conversion of dividend to capital increase 104,103,000	None	Note (19)
December 2007	10	250,000,000	2,500,000,000	198,366,300	1,983,663,000	Warrants Conversion stock 11,250,000	None	Note (20)
February 2008	10	250,000,000	2,500,000,000	198,386,300	1,983,863,000	Warrants Conversion stock 200,000	None	Note (21)
May 2008	10	250,000,000	2,500,000,000	199,107,700	1,991,077,000	Warrants Conversion stock 7,214,000	None	Note (22)

September 2008	10	250,000,000	2,500,000,000	210,426,710	2,104,267,100	Surplus and employees Conversion of dividend to capital increase 110,860,100 Warrants Conversion stock 2,330,000	None	Note (23)
October 2008	10	250,000,000	2,500,000,000	220,426,710	2,204,267,100	Capital increased by cash 100,000,000	None	Note (24)
December 2008	10	250,000,000	2,500,000,000	221,177,710	2,221,777,100	Warrants Conversion stock 7,510,000	None	Note (25)
April 2009	10	250,000,000	2,500,000,000	221,233,710	2,212,337,100	Warrants Conversion stock 560,000	None	Note (26)
May 2009	10	250,000,000	2,500,000,000	221,923,110	2,219,231,100	Warrants Conversion stock 6,894,000	None	Note (27)
August 2009	10	350,000,000	3,500,000,000	267,929,276	2,679,292,760	Surplus and employees Conversion of dividend to capital increase 460,061,660	None	Note (28)
August 2009	10	350,000,000	3,500,000,000	299,179,276	2,991,792,760	Capital increased by cash 312,500,000	None	Note (29)
September 2009	10	350,000,000	3,500,000,000	299,317,276	2,993,172,760	Warrants Conversion stock 1,380,000	None	Note (30)
November 2009	10	350,000,000	3,500,000,000	299,441,276	2,994,412,760	Warrants Conversion stock 1,240,000	None	Note (31)
March 2010	10	350,000,000	3,500,000,000	299,479,276	2,994,792,760	Warrants Conversion stock 380,000	None	Note (32)
April 2010	10	350,000,000	3,500,000,000	299,626,276	2,996,262,760	Warrants Conversion stock 1,470,000	None	Note (33)
July 2010	10	350,000,000	3,500,000,000	321,025,580	3,210,255,800	Surplus and employees Conversion of dividend to capital increase 213,993,040	None	Note (34)
October 2010	10	500,000,000	5,000,000,000	382,025,580	3,820,255,800	Capital increased by cash 610,000,000	None	Note (35)
May 2011	10	500,000,000	5,000,000,000	402,132,190	4,021,321,900	Stock exchange 201,066,100	None	Note (36)
August 2011	10	600,000,000	6,000,000,000	423,119,081	4,231,190,810	Surplus and employees Conversion of dividend to capital increase 209,868,910	None	Note (37)
November 2011	10	600,000,000	6,000,000,000	443,119,081	4,431,190,810	Cash capital increase 200,000,000	None	Note (38)

August 2012	10	800,000,000	8,000,000,000	523,119,081	5,231,190,810	Cash capital increase 800,000,000	None	Note (39)
May 2014	10	800,000,000	8,000,000,000	523,143,081	5,231,430,810	Warrants Conversion stock 240,000	None	Note (40)
August 2014	10	800,000,000	8,000,000,000	580,031,151	5,800,311,510	Merger of Sunrise Global Issue of new shares 568,880,700	None	Note (41)
October 2017	10	800,000,000	8,000,000,000	592,093,651	5,920,936,510	Warrants Conversion stock 60,625,000 New shares restricting staffs' rights 60,000,000	None	Note (42)
January 2018	10	800,000,000	8,000,000,000	592,058,651	5,920,586,510	Cancellation of new shares restricting staffs' rights 350,000	None	Note (43)
October 2018	10	800,000,000	8,000,000,000	586,503,651	5,865,036,510	Capital injection and reduction of treasury stock 55,550,000	None	Note (44)
December 2018	10	800,000,000	8,000,000,000	586,320,651	5,863,206,510	Cancellation of new shares restricting staffs' rights 1,830,000	None	Note (45)
April 2019	10	800,000,000	8,000,000,000	586,287,651	5,862,876,510	Cancellation of new shares restricting staffs' rights 330,000	None	Note (46)
August 2019	10	800,000,000	8,000,000,000	586,236,651	5,862,366,510	Cancellation of new shares restricting staffs' rights 510,000	None	Note (47)
March 2020	10	800,000,000	8,000,000,000	586,221,651	5,862,216,510	Cancellation of new shares restricting staffs' rights 150,000	None	Note (48)

Note (1) Tai Cai Zheng (1) Approval Letter No. 02824 of October 26th, 1990 (1990) of the Securities Management Committee, Ministry of Finance.

Note (2) Tai Cai Zheng (1) Approval Letter No. 39204 of December 4th, 1995 (1995) of the Securities Management Committee, Ministry of Finance.

Note (3) Tai Cai Zheng (1) Approval Letter No. 85459 of November 27th, 1997 (1997) of Securities and Futures Commission, Ministry of Finance.

Note (4) Tai Cai Zheng (1) Approval Letter No. 58663 of July 10th, 1998 (1998) of Securities and Futures Commission, Ministry of Finance.

Note (5) Tai Cai Zheng (1) Approval Letter No. 93634 of October 26th, 1999 (1999) of Securities and Futures Commission, Ministry of Finance.

Note (6) Tai Cai Zheng (1) Approval Letter No. 83396 of October 6th, 2000 (2000) of Securities and Futures Commission, Ministry of Finance.

Note (7) Tai Cai Zheng (1) Approval Letter No. 140364 of June 26th, 2001 (2001) of Securities and Futures Commission, Ministry of Finance.

Note (8) Tai Cai Zheng Yi Zi Approval Letter No. 0910144515 of August 9th, 2002 (2002) of Securities and Futures Commission, Ministry of Finance.

Note (9) Tai Cai Zheng Yi Zi Approval Letter No. 0920133758 of July 25th, 2003 (2003) of Securities and Futures Commission, Ministry of Finance.

Note (10) Tai Cai Zheng Yi Zi Approval Letter No. 0930132046 of July 19th, 2004 (2004) of Financial Supervisory Commission, Executive Yuan.

Note (11) Tai Cai Zheng Yi Zi Approval Letter No. 0940126037 of June 29th, 2005 (2005) of Financial Supervisory Commission, Executive Yuan.

Note (12) Tai Cai Zheng Yi Zi Approval Letter No. 0940125440 of July 1st, 2005 (2005) of Financial Supervisory Commission, Executive Yuan.

Note (13) Tai Cai Zheng Yi Zi Approval Letter No. 0950128446 of July 10th, 2006 (2006) of Financial Supervisory Commission, Executive Yuan.

Note (14) Tai Cai Zheng Yi Zi Approval Letter No. 0950128620 of July 12th, 2006 (2006) of Financial Supervisory Commission, Executive Yuan.

Note (15) Yuan Shang Zi Approval Letter No. 0950028768 of October 27th, 2006 of Taiwan Science Park Administration.

Note (16) Yuan Shang Zi Approval Letter No. 0960006570 of March 13th, 2007 of Taiwan Science Park Administration.

Note (17) Yuan Shang Zi Approval Letter No. 0960011004 of May 1st, 2007 of Taiwan Science Park Administration.

Note (18) Jin Guan Zheng Yi Zi Approval Letter No. 0960036973 of July 17th, 2007 of Financial Supervisory Commission, Executive Yuan.

Note (19) Yuan Shang Zi Approval Letter No. 0960025181 of September 13th, 2007 of Taiwan Science Park Administration.

Note (20) Yuan Shang Zi Approval Letter No. 0960033158 of December 5th, 2007 of Taiwan Science Park Administration.

Note (21) Yuan Shang Zi Approval Letter No. 0970007484 of February 15th, 2008 of Taiwan Science Park Administration.

Note (22) Yuan Shang Zi Approval Letter No. 0970012289 of May 14th, 2008 of Taiwan Science Park Administration.

Note (23) Yuan Shang Zi Approval Letter No. 0970023820 of September 1st, 2008 of Taiwan Science Park Administration.

Note (24) Yuan Shang Zi Approval Letter No. 0970031254 of November 5th, 2008 of Taiwan Science Park Administration.

Note (25) Yuan Shang Zi Approval Letter No. 0970033918 of December 1st, 2008 of Taiwan Science Park Administration.

Note (26) Yuan Shang Zi Approval Letter No. 0980010288 of April 13th, 2009 of Taiwan Science Park Administration.

Note (27) Yuan Shang Zi Approval Letter No. 0980012552 of May 13th, 2009 of Taiwan Science Park Administration.

Note (28) Yuan Shang Zi Approval Letter No. 0980021402 of August 14th, 2009 of Taiwan Science Park Administration.

Note (29) Yuan Shang Zi Approval Letter No. 0980024305 of August 28th, 2009 of Taiwan Science Park Administration.

Note (30) Yuan Shang Zi Approval Letter No. 0980027608 of September 28th, 2009 of Taiwan Science Park Administration.

Note (31) Yuan Shang Zi Approval Letter No. 0980033989 of November 30th, 2009 of Taiwan Science Park Administration.

Note (32) Yuan Shang Zi Approval Letter No. 0990012116 of April 29th, 2010 of Taiwan Science Park Administration.

Note (33) Yuan Shang Zi Approval Letter No. 0990015583 of June 4th, 2010 of Taiwan Science Park Administration.

Note (34) Yuan Shang Zi Approval Letter No. 0990018384 of July 2nd, 2010 of Taiwan Science Park Administration.

Note (35) Yuan Shang Zi Approval Letter No. 0990031133 of October 15th, 2010 of Taiwan Science Park Administration.

Note (36) Yuan Shang Zi Approval Letter No. 1000011943 of May 5th, 2011 of Taiwan Science Park Administration.

Note (37) Yuan Shang Zi Approval Letter No. 1000025568 of August 31st, 2011 of Taiwan Science Park Administration.

Note (38) Yuan Shang Zi Approval Letter No. 1000033672 of November 8th, 2011 of Taiwan Science Park Administration.

Note (39) Yuan Shang Zi Approval Letter No. 1010024319 of August 7th, 2012 of Taiwan Science Park Administration.

Note (40) Zhu Shang Zi Approval Letter No. 1030012459 of May 8th, 2014 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (41) Zhu Shang Zi Approval Letter No. 1030025712 of August 27th, 2014 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (42) Zhu Shang Zi Approval Letter No. 1060029808 of October 27th, 2017 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (43) Zhu Shang Zi Approval Letter No. 1070000085 of January 4th, 2018 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (44) Zhu Shang Zi Approval Letter No. 1070028752 of October 5th, 2018 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (45) Zhu Shang Zi Approval Letter No. 1070034774 of December 4th, 2018 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (46) Zhu Shang Zi Approval Letter No. 1080009195 of April 2nd, 2019 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (47) Zhu Shang Zi Approval Letter No. 1080024365 of August 22nd, 2019 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

Note (48) Zhu Shang Zi Approval Letter No. 1090008694 of March 30th, 2020 of the Administration of Hsinchu Science Industrial Park, Ministry of Science and Technology.

2.Type of Stock

Share Type	Authorized Capital			Remarks
	Issued Shares	Un-issued Shares	Total	
Registered common stock	586,221,651	213,778,349	800,000,000	This stock belongs to TPEx listed stock.

3. Shelf Registration: not applicable.

(II) Status of Shareholders

April 26, 2020

Shareholder / Structure Quantity	Government Agencies	Financial Institutions	Other Juridical Persons	Individuals	Foreign Institution & Persons	Total
Number of Shareholders	8	67	262	68,756	422	69,515
Ownership (Share)	28,801,876	71,305,000	112,442,479	230,053,536	143,618,760	586,221,651
Ownership (%)	4.91%	12.16%	19.18%	39.25%	24.50%	100.00%

(III) Diffusion of Ownership

1. Common Shares

April 26, 2020

Class of Shareholding	Number of Shareholders	Ownership (Share)	Ownership (%)
1 ~ 999	30,808	2,805,828	0.48%
1,000 ~ 5,000	31,958	60,351,039	10.29%
5,001~ 10,000	3,488	26,734,877	4.56%
10,001~ 15,000	1,060	13,338,439	2.28%
15,001~ 20,000	589	10,883,855	1.86%
20,001~ 30,000	534	13,611,649	2.32%
30,001~ 40,000	233	8,326,659	1.42%
40,001~ 50,000	155	7,186,781	1.23%
50,001~ 100,000	291	20,936,160	3.57%
100,001~ 200,000	142	20,328,383	3.47%
200,001~ 400,000	108	29,736,293	5.07%
400,001~ 600,000	42	20,776,302	3.54%
600,001~ 800,000	22	15,287,643	2.61%
800,001~ 1,000,000	16	14,538,970	2.48%
1,000,001 or more	69	321,378,773	54.82%
Total	69,515	586,221,651	100.00%

2. Special shares: None.

(IV) List of Major Shareholders

The name, amount and proportion of the major shareholders whose equity ratio is more than 5% or among top 10

April 26, 2020

Shares / Name of Major Shareholders	Shareholding (shares)	Shareholding Ratio (%)
Hongwang Investment Co., Ltd.	25,050,000	4.27%
Fubon Life Insurance Co., Ltd.	24,259,000	4.14%
United Renewable Energy Co., Ltd.	21,860,379	3.73%
Capital Investment In Custody For Lew Labor Pension Fund (2018. II)	14,731,000	2.51%
Wei-Lian Technology Co.,Ltd.	13,114,000	2.24%
Ming-Kuang Lu	11,400,000	1.94%
Cathy Life Insurance Co., Ltd.	10,827,000	1.85%
Hongmao Investment Co., Ltd.	10,425,000	1.78%
PJ Asset Management Co., Ltd.	10,000,000	1.71%
Mercuries Life Insurance Co., Ltd.	9,562,000	1.63%

(V) Market Price, Net Worth, Earnings, and Dividends per Share for the Last Two Years

Unit: Yuan

Item \ Year			2018	2019	As of March 31st, 2020
Market Price per Share	Highest		153.5	105.00	118.00
	Lowest		47.10	58.60	73.60
	Average		98.16	79.77	95.15
Net Worth per Share	Before Distribution		45.85	45.49	41.96
	After Distribution		43.24	43.13	Not applicable
Earnings per Share	Weighted Average Shares (thousand shares)		581,058	583,210	584,490
	Earnings per Share	Before Adjustment	3.36	3.86	2.37
		After Adjustment	3.36	3.86	Not applicable
Dividends per Share	Cash Dividends		3.00	5.00	Not applicable
	Free Dividends	Dividends from Retained Earnings	—	—	Not applicable
		Dividends from Capital Surplus	—	—	Not applicable
	Accumulated Undistributed Dividends		—	—	Not applicable
Return on Investment	Price / Earnings Ratio		29.21	20.67	Not applicable
	Price / Dividend Ratio		32.72	15.95	Not applicable
	Cash Dividend Yield Rate		3.06	6.27	Not applicable

(VI) Dividend Policy and Implementation Status

1. Dividend Policy

If there is surplus in the annual final accounts of the Company, after paying taxes and making up for accumulated losses according to law, 10% is accrued as the statutory surplus reserve, but when the statutory surplus reserve has reached the amount of the Company's paid-in capital, it should not be listed, and the rest should be listed or turned back to the special surplus reserve according to the law. If there is still a surplus and the accumulated undistributed surplus, the Board of Directors should make a surplus allocation proposal, which should be submitted to shareholders' meeting to decide to distribute dividends. According to the 5th Provision of Article 240 from the Company Act, the Company will authorize the distributable dividends and bonuses in whole or in part may be paid in cash after a resolution has been adopted by a majority vote at a meeting of the board of directors attended by two-thirds of the total number of directors; and in addition thereto a report of such distribution shall be submitted to the shareholders' meeting. The distributable dividends and bonuses in whole or in part may be paid in new stock after a resolution has been adopted by the shareholders.

In order to maintain continuous operation and steady growth of EPS, dividend for shareholders shall be more than 50% of the profit after tax deducting the appropriation of special surplus of the year by the regulations, and the shareholder dividend distribution rate shall be no less than 50% of the cash dividend.

2. Dividend allocation

The Company's surplus distribution in 2019 was adopted by the Board of Directors by resolution on March 19, 2020. The distribution adopted by the Board of Directors is as follows:

1. The net profit in 2019 was NT$ 2,248,385,562. It is proposed to distribute the cash dividend of shareholders of NT$ 2.5843 per share, which is NT$ 1,514,972,613.
2. The Company intends to allocate NT$ 1,416,135,642 from the capital reserve of the excess obtained by issuance of shares over par value, and allocate NT$ 2.4157 per share.

3. Description of expected significant changes in dividend policy: None.

(VII) Impact of the Stock Dividend Proposal of this Shareholders meeting on Operational Performance and Earning per Share: not applicable.

(VIII) Employee Bonus and Directors' and Supervisors' Remuneration

1. The percentage or scope of remuneration for employees and directors contained in the articles of association of the Company:

   If the Company is profitable in the year, it should allocate 3-15% as employees' remuneration. The Board of Directors decides to distribute the remuneration in stock or cash. The object of the distribution includes the employees of the subordinate company who meet certain conditions. The Board of Directors could resolve to allocate up to 3% as its directors' remuneration from the above earning. The distribution proposal of remuneration of employees and directors should be submitted and reported to the shareholders' meeting.

   If it has accumulative losses, the Company should reserve the amount for make-up before distributing remuneration to the employees and directors according to the percentage mentioned in the preceding paragraph.

2. The Estimated Basis for Calculating the Employee Bonus and Directors' Remuneration as well as Employee Stock Bonus, Accounting Treatment if the Actual Distribution Is Different from Estimation:
   (1) Allocation for employee stock bonus and directors' remuneration: In compliance with Articles of Incorporation.
   (2) Ratio of employee stock bonus to capitalization of earnings: If employee remuneration is distributed via stock, this will be calculated based on the total equity attributable to owners of parent in the latest financial statement audited by CPA. The Company does not distribute employee remuneration via stock this year.
   (3) Accounting Treatment if the Actual Distribution Is Different from Estimation: If shareholder resolution is different from the estimation, it will be deemed as changes in accounting estimates and recognized in current profit and loss.
3. Remuneration distribution approved by board meeting:
   (1) If the recommended distribution of employees' bonus and directors' remuneration has differences with estimation, therefore, its reason, variance and dealing should be disclosed.

       Employees' bonus and directors' remuneration are approved in Board Meeting dated 2020.3.19:

       Employees' bonus: NTD 196,400,000, all will be issued in cash

       Directors' remuneration: NTD 41,790,000, all will be issued in cash

       There is no difference in actual distribution of employee bonus and directors' remuneration with the recognition in 2019 financial statements.
   (2) Ratio of recommended employee stock bonus to net income in the current standalone or consolidated financial statements, and the total amount of employees to remuneration: None.
4. Actual distribution of employees' bonus, directors' and supervisors' remuneration in the previous year (including shares numbers, amount and price), if there is any difference with estimation, its variation, reason and handling should be specified:

Unit:NTD

Item	The Amount BoD Agreed to Distribute	The Amount that Actually Distribute	Quantity Variance	Explanation for the Variance
Employees' Bonus	131,990,000	131,990,000	None	NA
Directors' Remuneration	44,010,000	44,010,000	None	NA

(IX) Repurchase of Company Shares: None.

II. Status of Corporate Bonds: None.

III. Status of Preferred Stocks: None.

IV. GDR Issuance:

March 31, 2020

Issue date / Item	September 8, 2010
Date of Issuance	September 8, 2010
Issuance and Listing	Luxembourg Stock Exchange
Total Amount	US$ 177,192,800
Offering Price per GDS	US$ 2.9048.
Units Issued	61,000,000 units of GDR Issuance
Underlying Securities	Common shares of Sino-American Silicon Products Inc.
Common Shares Represented	61,000,000 shares
Rights and Obligations of GDS Holders	1. A global depositary receipt holder exercises the voting rights of ordinary shares of Sino-American Silicon in the depositary receipt on the basis of depositary receipt agreement and the relevant provisions of the Law of the Republic of China. 2. A global depositary receipt holder enjoys the same share allocation and other allotment rights as existing common shareholders in accordance with the Law of Republic of China and other relevant laws. If Sino-American Silicon issues stock dividends or shares for other reasons in the future, the depository institution will issue the global depositary receipt to global depositary receipt holder in accordance with provisions of the depository convention and relevant laws with the proportion of the original holding unit of the global depositary receipt, or increase the number of common shares of Sino-American Silicon for each unit of global depositary receipt. Or the depository institution will sell the stock dividends and allocate the net income (deducting relevant taxes and fees) to the global depositary receipt holder on a pro rata basis. When Sino-American Silicon increases its capital by cash or other warrants, the global depositary receipt holder should have the same rights to subscribe for new shares and other rights as shareholders of ordinary shares in accordance with the Law of Republic of China and other relevant laws. The depository institution should provide such rights to the global depositary receipt holder or sell them in accordance with the Law of the Republic of China and other relevant laws, and distribute the net income (after deduction of taxes and expenses) to the global depositary receipt holder according to the ratio.
Trustee	Not applicable
Depositary Bank	Citibank, N.A.
Custodian Bank	Citibank Taiwan Ltd.
GDSs Outstanding	340,497
Apportionment of expenses for the issuance and maintenance	1. Costs related to the issuance of global depositary receipts: The expenses incurred in connection with the issuance of global depositary receipts, including legal fees, listing fees, financial consulting fees and any other related fees, should be borne by the issuing company and the selling shareholders unless otherwise stipulated by the law or agreed by the issuing company, sponsoring underwriter and depository institution. 2. Related expenses in the period of existence: Unless otherwise

<table>
<tr><td colspan="3"></td><td>stipulated by the law or agreed by the issuing company, sponsoring underwriter and depository institution, related expenses in the period of existence, including disclosure of information and other expenses, should be borne by the issuing company.</td></tr>
<tr><td colspan="3">Terms and Conditions in the Deposit Agreement and Custody Agreement</td><td>—</td></tr>
<tr><td rowspan="6">Closing Price per GDS</td><td rowspan="3">2019</td><td>Highest</td><td>US$3.86</td></tr>
<tr><td>Lowest</td><td>US$1.99</td></tr>
<tr><td>Average</td><td>US$ 2.54</td></tr>
<tr><td rowspan="3">As of March 31, 2020</td><td>Highest</td><td>US$3.86</td></tr>
<tr><td>Lowest</td><td>US$ 2.42</td></tr>
<tr><td>Average</td><td>US$ 3.29</td></tr>
</table>

V. Employee Stock Options: None.

VI. Status of New Shares Issuance of Limited Stocks for Employees

(I) Status of New Shares Issuance of Limited Stocks for Employees:

Type of New Restricted Employee Shares	2017 New Restricted Employee Shares
Date of Effective Registration	September 21, 2017
Issue date	October 13, 2017
Number of New Restricted Employee Shares Issued	6,000,000
Par Value	NT$ 20
New Restricted Employee Shares as a Percentage of Shares Issued	1.01%
Vesting Conditions of New Restricted Employee Shares	Those who are still in service upon expiration of the following processes after new restricted employee shares are allocated and obtain the performance evaluation of Grade A (including) or above can obtain the proportion of shares under the vesting conditions as follows: Have worked for 1 year: 40% Have worked for 2 years: 70% Have worked for 3 years: 100%
Restricted Rights of New Restricted Employee Shares	1. Employees should not sell, pledge, transfer, give, set or otherwise dispose of allocated or subscribed shares before the vesting conditions are met. 2. New restricted employee shares have the right to participate in dividend distribution, and the allocation of shares and dividends obtained is not limited by the vested period. The allocated shares and dividends will be allotted to the personal account of employees from a trust account within one month after the date of issuance. 3. The proposals, speeches, voting rights and other matters concerning the rights and interests of shareholders before the employees have met the vested conditions are entrusted to a trust custodian bank to exercise them on their behalf. 4. After the status of New Shares Issuance of Limited Stocks for Employees, they should be immediately delivered to the trust, and the trustee should not be asked to return them in any way or for any reason until the vested conditions have not been met.

Custody Status of New Restricted Employee Shares	Shares are delivered to trust for custody
Measures to be Taken When Vesting Conditions are not Met in Allocation or Subscription for New Shares by Employees	(1) Voluntary demission, dismissal and lay-off: The Company should withdraw the new restricted employee shares which have not yet been acquired from employee at the issuing price from the effective date of resignation. (2) Retirement: The new restricted employee shares which have not yet been acquired should be deemed to be acquired in full on the day of retirement. (3) Disability or death due to occupational disasters or general death: A. If a person is unable to continue his post due to physical disability caused by occupational disasters, the new restricted employee shares which have not yet been acquired should be deemed to be fully acquired on the effective date of demission. B. On the day of the death of an employee, the heirs should be deemed to have acquired all the new restricted employee shares which have not yet been acquired for death due to occupational disasters or general death. (4) On leave without pay: A. New restricted employee shares which have not yet been acquired of employees who leave without pay on duty should acquire all the shares if they have resumed their posts before the expiration date of acquiring new restricted employee shares; and those who have not have resumed their posts should acquired after resuming. B. New restricted employee shares which have not yet been acquired of employees who do not leave without pay on duty should be recovered by the Company at the issuing price on the effective date of salary stopping. (5) Transfer: A. New restricted employee shares which have not yet been acquired of employees who are transferred on duty should acquire all the shares if they still work in the unit which they are transferred to on the expiration date of acquiring new restricted employee shares; and those who leave after the transfer should be considered as separated employees of the Company. B. New restricted employee shares which have not yet been acquired of employees who are not transferred on duty should be recovered by the Company at the issuing price on the effective date of transfer. (6) The Company will cancel any new restricted employee shares recovered by the Company. (7) Before the vested conditions are met, if an employee terminates

	or revokes the agency authorization of the Company in violation of the provisions of Paragraph 6 of this article, the Company should buy at the issuing price from the employee.
Number of New Restricted Employee Shares that have been Redeemed or Bought Back	317,000 Shares
Number of Released New Restricted Employee Shares	3,891,500 Shares
Number of Unreleased New Restricted Shares	1,791,500 Shares
Ratio of Unreleased New Restricted Shares to Total Issued Shares (%)	0.3056%
Impact on possible dilution of shareholdings	Based on 574,476,151 shares circulated at the time of issuance in the three-year vested period stipulated in the measures and 2017 (excluding 5,555,000 shares of treasury stocks), the annual cost's dilution of earnings per share in 2017, 2018, 2019 and 2020 is about NT$ 0.08, NT$ 0.08, NT$ 0.08 and NT$ 0.02, respectively. The dilution of earnings per share of the Company is still limited, so there should be no significant impact on shareholders' rights and interests.

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

May 15, 2020; unit: NT$ thousands; thousand shares

<table>
<tr><th rowspan="2"></th><th rowspan="2">Title</th><th rowspan="2">Name</th><th rowspan="2">No. of New Restricted Shares</th><th rowspan="2">New Restricted Shares as a Percentage of Shares Issued</th><th colspan="4">Released</th><th colspan="4">Unreleased</th></tr>
<tr><th>No. of Shares</th><th>Issued Price (NT$)</th><th>Amount</th><th>Released Restricted Shares as a Percentage of Shares Issued</th><th>No. of Shares</th><th>Issued Price (NT$)</th><th>Amount</th><th>Unreleased Restricted Shares as a Percentage of Shares Issued</th></tr>
<tr><td rowspan="12">Manager</td><td>CEO</td><td>Ming-Kuang Lu</td><td rowspan="12">3,555</td><td rowspan="12">0.61%</td><td rowspan="12">2,539.5</td><td rowspan="12">20</td><td rowspan="12">50,790</td><td rowspan="12">0.43%</td><td rowspan="12">1,015.5</td><td rowspan="12">20</td><td rowspan="12">20,310</td><td rowspan="12">0.17%</td></tr>
<tr><td>Vice CEO</td><td>Tang-liang Yao</td></tr>
<tr><td>President</td><td>Hsiu-Lan Hsu</td></tr>
<tr><td>President of Yilan Branch</td><td>Hau-chun Shih</td></tr>
<tr><td>R&D Chief</td><td>BUDI TJAHJONO</td></tr>
<tr><td>Vice President</td><td>C.W. Lee</td></tr>
<tr><td>Vice President</td><td>Yu-tse Lin (Note)</td></tr>
<tr><td>Associate</td><td>Pei-Yi Chen</td></tr>
<tr><td>Associate</td><td>Dai-Long Ma</td></tr>
<tr><td>Associate</td><td>Chong-Wen Wu (Note)</td></tr>
<tr><td>Chief</td><td>Chien-Hong Liu</td></tr>
<tr><td>Accounting Manager</td><td>Mei-Ying Qiu (Note)</td></tr>
<tr><td rowspan="10">Staff</td><td>Staff</td><td>Zheng-Hong Huang</td><td rowspan="10">570</td><td rowspan="10">0.10%</td><td rowspan="10">399</td><td rowspan="10">20</td><td rowspan="10">7,980</td><td rowspan="10">0.07%</td><td rowspan="10">171</td><td rowspan="10">20</td><td rowspan="10">3,420</td><td rowspan="10">0.03%</td></tr>
<tr><td>Staff</td><td>Jyh-Shyng Lu</td></tr>
<tr><td>Staff</td><td>Ming-Rui Yang</td></tr>
<tr><td>Staff</td><td>Song-Lin Xu</td></tr>
<tr><td>Staff</td><td>Yu-Jun Peng</td></tr>
<tr><td>Staff</td><td>Qi-Shun Chen</td></tr>
<tr><td>Staff</td><td>Wen-Huai Yu</td></tr>
<tr><td>Staff</td><td>Jun-He Chen</td></tr>
<tr><td>Staff</td><td>Shi-Long Zheng</td></tr>
<tr><td>Staff</td><td>Zhong-Wen Huang</td></tr>
</table>

Note: Resigned.

VII. Status of New Shares Issuance in Connection with Mergers and Acquisitions: None.

VIII. Financing Plans and Implementation: None.

V. Operational Highlights

I. Business Activities

(I) Business Scope:

1. Main areas of business operations:

CC01080 Electronic Parts and Components Manufacturing
C801990 Other Chemical Materials Manufacturing
IG03010 Energy-related Technology and Service
F119010 Electronic Materials Wholesale
(Restricted to areas outside Hsinchu Science Park)
F219010 Electronic Materials Retail
(Restricted to areas outside Hsinchu Science Park)
F401010 International Trade
Develop, design, manufacturing and selling of the following products:

(1) Semiconductor silicon materials and components
(2) Varistor
(3) Photovoltaic and communication materials
(4) Silicone Compound
(5) The technology, management and advisory business related to the products listed above
(6) Photovoltaic system integration and installation services
(7) Import-export activities related to the above mentioned business

2. Revenue distribution in 2019:

Unit: NT$ thousands; %

Trade name	Total Sales in Year 2019	(%) of Total Sales
Semiconductor wafer	57,721,510	88.11%
Solar wafer	144,716	0.22%
Solar cell	2,877,421	4.39%
Solar module	1,553,577	2.37%
Solar ingot	792,922	1.21%
Semiconductor ingot	275,284	0.42%
Other	2,144,795	3.28%
Total	65,510,225	100.00%

3. The Company's current products and service items:

(1) Polysilicon high-quality silicon materials
(2) High Efficiency Mono-Si Solar Cell

(3) High Efficiency P-Type Mono-Si Bi-facial Solar Cell
(4) High-efficiency single crystal silicon metal penetrating back-electrode solar cells
(5) High-efficient single crystal silicon multi-confluent solar cells
(6) High-efficient single crystal silicon non-confluent solar cells

4. New technologies and products planned for development
(1) Ultra High Efficiency P-Type Mono-Si Solar Cell
(2) Ultra High Efficiency P-Type Mono-Si Bi-facial Solar Cell
(3) Ultra High Efficiency N-Type Mono-Si Solar Cell Technology

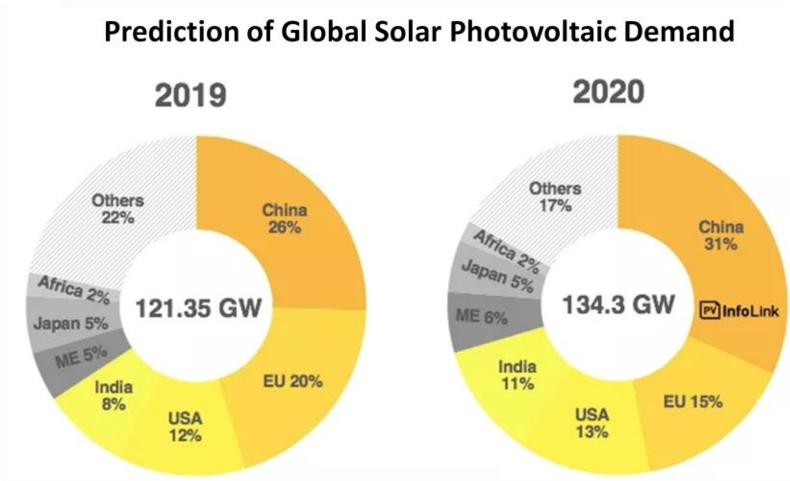
(II) Industry Overview

1. Industrial Current Status and Future Development

(1) Solar energy industry

In recent years, with climate change and increasing energy demand, the goal of greenhouse gas reduction in the era of Kyoto Protocol has been set. The Paris Agreement came into force officially in November 2016. At the COP22 Conference, many governments set renewable energy target and made renewable energy a priority of energy policy. With the sustained development of solar energy technology and the decrease of cost, the long-term demand for solar energy has increased dramatically year by year. As a global member, Taiwan should bear the responsibility of reducing greenhouse gases even though it has not participated in "the United Nations Framework Convention on Climate Change". In this regard, Taiwan implemented *the Law on Reduction and Management of Greenhouse Gas* on July 1, 2015, specifying the long-term reduction target for 2050. Taiwanese government has actively promoted the energy transformation, aiming to achieve accumulative solar installation of 20GW by 2025. It can also be seen that Taiwanese manufacturers are trying to break away from only producing and supplying battery pieces in the past and to transform to component end and system integration.

In 2019, China, the United States, India, Japan and Australia won the top five positions in the solar energy market. Among them, the Chinese market shrank sharply as a result of the new policy issued on May 31, 2018, worsening the problem of over-supply. The spot price of the whole supply chain has dropped by about 30% to 40% since May 31. Meanwhile, the market mainstream shifted to cost-effective high-efficiency mono crystal products. The cancellation of European cancellation on anti-dumping and anti-subsidy measures stimulated the price of the worldwide market ex-China, bringing the better-than-expectation demands on components in ex-China market in 2019, hitting 90GW. For some mature markets, this will increase the willingness to adopt solar energy in the end market. Regarding year 2020, the solar market continues to grow. There are several main reasons: 1, the price of solar modules continues to drop and not bottom out yet. Solar industry as a "growing cycle sector", the declining prices will continuously stimulate demand. 2, the EU market will grow as mandated by Renewable Energy Directive; the United States ITC policy is extended for another five years; the meteoric rise of Middle East owing to its huge PV auction, eyeing to be the next dominant market. Referring to the forecasts of major institutions, the number of new photovoltaic plants overseas will maintain 15%-20% growth in 2020. Not only for the first time, 125GW will be exceeded, but also is expected to hit the challenging goal of 130GW. The above estimate due to the recent outbreak of COVID-19 from China, which has swept the world, has affected the renewable energy supply industry chain, even the demand is full of uncertainty. It is necessary to closely observe the overall impact and trend.



Source: Pvinfo Link, February 5, 2020

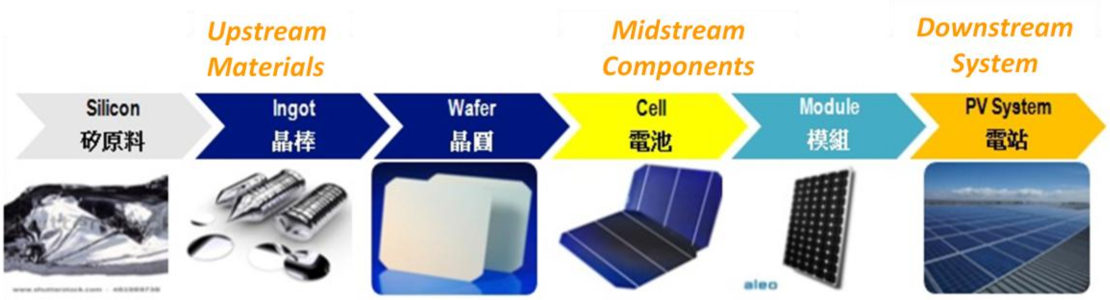
Under the trend of global warming, climate change has become a common challenge faced by the international community. As a global member, Taiwan should bear the responsibility of reducing greenhouse gases even though it has not participated in “the United Nations Framework Convention on Climate Change”. In this regard, China implemented the Law on Reduction and Management of Greenhouse Gas on July 1, 2015, specifying the long-term reduction target for 2050. In 2016, the government energy plan focused on non-nuclear home in 2025 with the goal of 20% renewable energy and the core value of safe energy, green economy, sustainable environment and social equity.

As of Mid-May 2019, Taiwanese accumulative PV installation reached 3,314MW, showing that the policy has been effective since 2016 with capacity increased significantly. The installation in these 2 years is 2.7 times than that of 2016. The second phase of solar photovoltaic policy aims to reach 6.5GW by 2020, will be implemented with contribution from both the central and local governments, to promote the solar panels atop of fishing ponds or farms to boost renewable energy installation.

(2) Semiconductor industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

2. Relationship with Up-, Middle- and Downstream Companies

(1) Relevant map of solar energy industry



Source: SAS Internal

(2) Relevant map of semiconductor Industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

3. Industrial development trend and competition

(1) Solar energy industry

- In 2020, with the continuous expansion of global production capacity and the acceleration of vertical level integration by enterprises, the ineffective production capacity which does not upgrade equipments with the market and whose cost has no competitive advantage will be gradually eliminated.
- Monocrystal products are now the mainstream of the market. With the help of RCZ revolution, Diamond Line revolution and PERC battery piece revolution, the market share of the single crystal industry chain has increased rapidly from 15% to 60% by the end of 2019 in just three years.
- The size and thickness of silicon wafers are changing. Because it is more and more difficult to improve the efficiency of batteries, in 2018 various sizes of single and polycrystal silicon wafers were developed one by one. In order to achieve higher wattage output of components,

the trend of increasing the area of silicon wafers and components has become clearer. In terms of thickness, in order to reduce the cost, more and more production lines have been adjusted to be able to use silicon wafers with a thickness of 160um, while polycrystals are still at a disadvantage in the process of thinning.

- The impact of trade barriers, such as US 201 and India's survey of defense measures, and the patent war, will have a linkage to the relevant layout of the market.
- Taiwan green policy targets at achieving 2.2GW installation in 2020, the implementation and execution of local counties will influence supply and demand in the market.
- The Ministry of Economic Affairs, after numerous hearings to collect opinions and data from experts from all areas, announced 2020's Feed-in Tariffs (FIT) rates for the renewable energy electric power as the following at the end of 2019 :
  - For a Type One or Type Two Facility, the FiT applicable at the issuance date of the Recordation Approval ("RA") applies if the construction of the facilities is completed within 6 months thereafter. For a Type Three Facility, the FiT at the issuance date of the RA applies if the construction of the facilities is completed within 4 months. For instance, for a Type Three Facility, if the RA is issued on June 20, 2020 and the construction is completed by October 19, 2020, the Phase 1 FiT will apply.

    For those solar energy facilities connected to transmission lines with the voltage of 69 kV or above and for which a booster station is installed or which shares a booster station with another facility, the FiT applicable at the issuance date of the RA applies if the construction of the facilities is completed within 18 months after the issuance of the RA or before December 31, 2021, whichever is later. However, the foregoing does not apply if the construction of the booster station was completed before January 1, 2020.

    Other incentives for in 2020 include:

    a. The solar PV power generation system uses solar PV modules with effective certificates from"Voluntary Product Certification on Crystalline Silicon Modules/Thin Film Modules of the Solar PV System", as required by the Standard Inspection Bureau under the Ministry of Economic Affairs, a markup of 6% shall be added to the tariffs.

    b. If solar photovoltaic power generation equipment is on roof-top of school gyms, a markup of 6% shall be added to the tariffs.

c. When Roof-type photovoltaic power generation system was installed in indigenous or remote areas, markup of 1% shall be added to the tariffs.

d. The solar PV power generation system which is installed in the northern area of Taiwan (including Taipei City, New Taipei City, Keelung City, Taoyuan City, Hsinchu County, Hsinchu City, Miaoli County, Yilan County, and Hualien County), a markup of 15% shall be added to the tariffs.

- Except the points mentioned above, additional rates are added as a reward in the following cases:

  a.With regard to solar energy facilities for which the module recycling fees are paid according to Regulations Governing the Installation of Renewable Energy Power Generation Facilities, an additional tariff of NT$0.0656/kWh shall be granted.

  b. The additional tariff of the connected to the EHV (Extra High Voltage.) grid with a capacity of 500 kW and above of the rooftop type solar photovoltaic power generation system is NT$0.4674 (NTD/kWh); for ground-mounted system is NT$0.4506 (NTD/kWh); for floating system is NT$0.4358 (NTD/kWh)

  c. For those solar energy facilities that contribute to the Power Development Assistance Funds, an additional tariff equivalent to the contribution rate shall be granted.

(2) Semiconductor industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

(III) Overview of Technology and R&D

In recent years, the Company has devoted itself to improving the production of silicon wafer, precision processing and battery module. The increase of productivity of polycrystal wafer, the increase of yield of crystal block, the reduction of density of crystal defects, the improvement of crystal quality, the improvement of the efficiency of wafer conversion and the efficiency of battery conversion have exceeded international indicators. Many technical indicators have become international benchmarks. In addition, in recent years, they have actively carried out patent distribution to protect the Company's intellectual property rights. At present, they have obtained more than 273 patent certificates, and their R&D achievements are brilliant and have won many international awards. In recent years, with a deep technical foundation, the Company also dedicate to applications of silicon material to expand the field.

1. The proportion of research and development expenditure in net operating income in the last two years is as follows:

Unit: NT$ thousands

Year	2018	2019	As of March 31st, 2020
Net operating revenues	1,849,867	1,844,789	409,030
R&D expenses	69,238,945	65,510,225	15,277,626
R&D expenses as a percentage of net revenue (%)	2.67%	2.82%	2.68%

2. Technologies or products successfully developed in recent years and up to the date of publication of the annual report

Name of Program	Description of Program	Expected R&D Costs
A5+ Ultra-high cell efficiency multi-crystalline silicon ingot growth technology	Through the thermal field design of polycrystal furnace and computer simulation technology, this program develops the thermal field design of polycrystal furnace with low energy consumption and crystal block growth technology with low defect and high quality. The highest efficiency can reach 21.2% through the verification of actual operation efficiency of solar cell plant. For this technology, multi-national patent protection has been applied for.	NT$ 10,000,000
Multi-crystalline solar wafer diamond wire slicing technology development	With the modification and performance improvement of the existing slicing machine and the adjustment of the diamond wire and slicing process, this program has changed the slicing machine only for Slurry Type into the diamond wire cutting process. Through the matching of wires, the wafers cut have more advantages of quality and cost than the current special machine for diamond in the market.	NT$ 10,000,000
Development of high Efficiency Mono-Si Celco Cell	CELCO Solar Cells have obtained the patent protection in combination with innovative processes and advanced "Back Passivation" and "Local Back Electric Field" technologies.	NT$ 150,000,000
Development project of advanced Si nano-wire technology in solar wafer and solar cell for higher power generation	This program uses nanocrystalline wafers, ALD technology and high-efficiency cell technology to improve cell efficiency and increase effective power generation.	NT$ 90,000,000

(IV) Long-term and Short-term Development

1. Long-term Development
   (1) The product with a high conversion rate has always been the Company's strategy and policy. Keeping the leading efficiency and quality will be the key to win.

(2) Actively seek the Blue Sea market as to maintain the unique competitiveness of the Company's products in the market.

(3) Integrate the upstream, midstream and downstream resources, give full play to the advantages of vertical and efficient products, further promote the long-term healthy development of the solar industry and enhance the international competitive advantage. In the long run, the future strategic direction of the Company is to develop towards the system end.

(4) Dedicated in power plant O&M (operations and maintenance): solar photovoltaic power plants sign 20-year FIT contract with Taiwan Electricity Company, and the stable power generation and operation of the power plant are the key factors to achieve investment efficiency. SAS secures long-term benefits of shareholders with profound O&M experiences over its own power plants, and has developed software to analyze different efficiencies from different power plants to achieve active and immediate preventive O &M and improves power plant utilization rate. Power plant O&M service will be an important part of the system-side development strategy.

(5) As renewable energy builds up its capability, the intermittent power generation characteristics of renewable energy will affect the power supply quality and grid stability of regional power system, and ESS (Energy Storage Systems) could help to improve grid quality. In addition, the Obligation and Duty of Renewable Energy Draft announced at the end of 2019 offers heavy users of electricity the option to set up ESS. SAS has completed the construction of a hybrid PV solar system on its own rooftop in 2019 to integrate systems of solar power generation, energy storage, grid-tied generator and energy managing system platform, which can meet the future market demand for energy management integration.

2. Short-term program

(1) The Company is a leader in manufacturing and supplying of single crystal high-efficiency cells, which will simplify product categories and develop single crystal PERC maintain market competitiveness.

(2) Aggressively searching for proper targets to install solar photovoltaic systems.

II. Market and Sales Overview:

(I) Market Analysis

1. Distribution areas of major commodities

(1) Solar energy industry

Unit: NT$ thousands

Region		2018		2019	
		Sales	Rate (%)	Sales	Rate (%)
Sales in domestic market		3,190,990	31%	1,721,425	23%
Export sales	Asia	3,455,096	34%	2,415,389	33%
	America	1,421,750	14%	1,511,115	20%
	Others	2,127,015	21%	1,772,343	24%
Total		10,194,851	100%	7,420,272	100%

(2) Semiconductor industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

2. Market share

(1) Solar energy industry

A. Yilan Plant has planned 1GW, which includes the development of the next generation of high-efficiency and cost-effective new products. It has become a leading global high-efficiency single crystal cell plant, with a market share of about 2% of the global high-efficiency single crystal battery piece market.

B. In response to the global trend of green energy development, the Taiwan government has also vigorously promoted renewable energy in recent years. The target of the capacity of solar PV devices of 20GW in 2025 was set previously, including 3GW for roof type and 17GW for ground type. At present, it seems that the development of roof-type solar energy is quite effective. According to the statistics of the Energy Bureau of the Ministry of Economy, by the end of 2018, the accumulative capacity was 2.8GW. Based on the short-term success of the “Solar Power Photovoltaic 2-Year Promotion Project”, the government has been continued to promoting the "2020 Solar Photovoltaic Power 6.5 GW Standard Project" to drive the installation of energy with three main guidelines axes- , "central and local governments joint promotion", "industrial park", "solar panels atop of fishing ponds, farms and animal husbandry Livestock, Agriculture, Fisheries and Electricity Symbiosis".

C. Since the middle of 2016, Sino-American Silicon Group has d totaled installed about 80MW in Taiwan, of which 65MW was connected to the grid-connected and the market share was about 1.7%. In addition to the plant rooftops of the plant building, this year SAS will also actively participate in the public bidding of the local county and municipal governments and national lands, aiming at the annual total construction volume of 100MW.

(2) Semiconductor industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

3. The future supply and demand and growth of the market

(1) Solar energy market

A. With the issue of environmental protection and the continuing reduction of solar energy costs, solar energy has become an unanimously recognized alternative energy source in the world. As the price of solar modules decreases, the global market demand for solar power will continue to grow. It is estimated that the global demand for solar power will reach 134GW in 2020. It will gradually replace the general power generation and other convertible power generation forms and become the mainstream.

B. It is anticipated that the global solar energy supply and demand in 2020 will continue to be dominated by highly efficient and competitive products. However, due to the continuously decreased subsidy rates in countries which have developed solar power, the price of solar cells and modules will be easy to fall and difficult to rise. In recent years, the trend of solar supply chain "size does matter" has remained unchanged, and the trend of industrial integration will not stop in 2020.

C. Taiwan's solar market with the installation addition of 1GW in 2018 had become the focus of global attention. The analysis from the EnergyTrend research division of TrendForce shows that cumulative PV installations in Taiwan reached 3.8GW in September 2019; the adjustments made in the 2020 draft of feed-in tariffs (FIT) are expected to help Taiwan achieve its goal of 6.5GW cumulative PV installations in 2020.

D. If the Taiwanese solar PV market were to reach a 6.5GW installation capacity in 2020, quarterly grid connections must exceed 550MW. It is believed that the 3% overall tariff reduction in the new FIT draft is favorable for large-scale projects which take longer to construct. The Taiwanese solar PV market is expected to demonstrate three major trends, as follows:

Trend 1: mid to large-scale projects take places

Taiwan promotes rooftop PV systems initially, including industrial plants, public roofs, livestock houses, etc. The ground-mounted PV systems will become popular target under the promotion of government policy along with the lands released from the government or national enterprises.

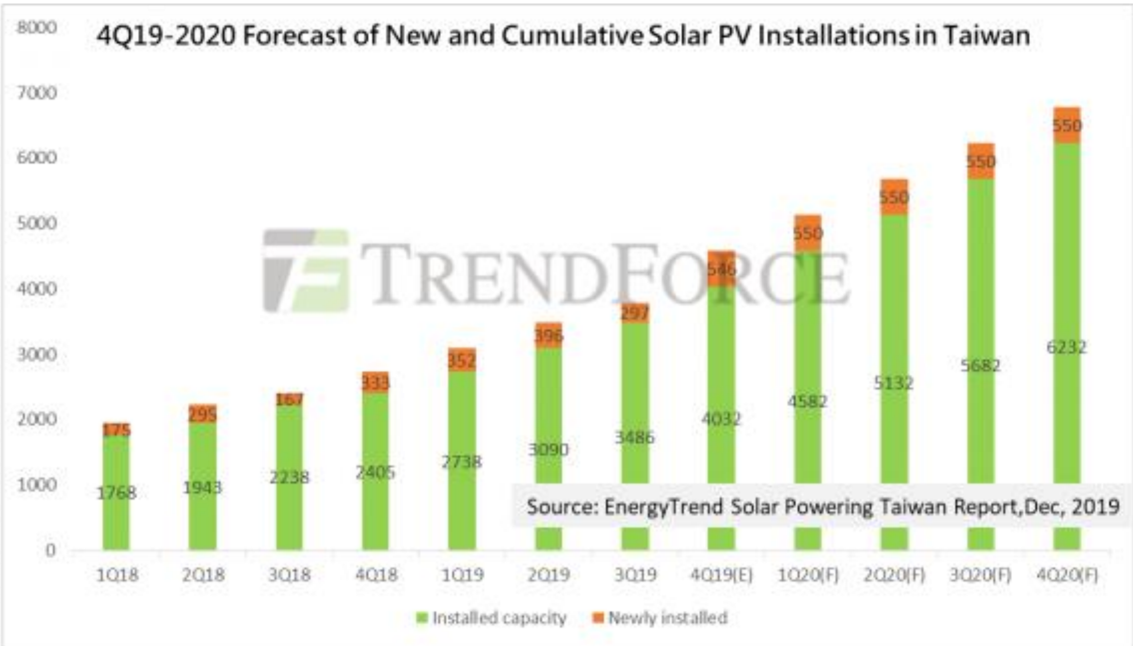
Development and construction of mid to large-scale projects are time-consuming, especially in terms of land mergers and UHV construction. Feeder line grid connections and UHV constructions are facilitated only through the collaboration between the Taiwan Power Company and private EPCs. It is expected to take place mainly in 202H and 211H.

Trend 2: The domestic market of solar module is stable.

Taiwan solar module manufacturers had gradually adjusted the domestic and foreign market sales strategy, which the domestic ratio of the increase to more than 60%. In 2020, Taiwan c solar module manufacturers will neither having expansion plans nor innovating products. The industry will mainly improve a small scale of increase in the number of Watt with the existing products. In terms of prices, solar module will be about 6% lower in 2020 compared to 2019.

Trend 3: Inverter manufacturers compete to improve the product services.

Taiwan has much stable FIT compared to the world, which continuously attract foreign investors to invest in solar power plants. However, it also becomes a battleground for inverter manufacturers to draw investors' attention. In addition to the products' improvement of technical conditions, service that related to them is also an important part. For the solar power plant investors, it could be expected that the products attach with the condition of longer warranty period.



Source：TrendForce

(2) Semiconductor market (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

4. Competitive niche

(1) Long-term R&D investment creates core competitive advantages and holds patents.

(2) Extensive cooperation between industry, government and university has a high level of product innovation capability.

(3) Work closely with downstream customers to grasp market demands and development trend.

(4) Long-term cooperation with raw material suppliers to grasp the stable supply of key raw materials and cost advantages.

(5) With the strength of solar photovoltaic power plant construction and long-term O&M ability, SAS is awarded Top Light Award by the Ministry of Economy Energy Bureau.

(6) SAS is equipped with sound finance and cooperates with financial institutions to invest in power plants. SAS' effective cost control makes it outshine the peers in the industry.

5. Advantages and disadvantages of development prospect

A. Advantages

Solar energy industry

(1) Although the solar PV industry is still not completely separated from the stage of government subsidies, renewable energy is the world trend, which has the value of sustainable operation and long-term development.

(2) The ability of R&D and process improvement is of international standard, which can help to improve product quality and competitiveness.

(3) Vertical integration and layout of marine outfalls are complete. Combined with the government's vigorous promotion of green energy, it has comparative advantages.

(4) The Taiwan government has set a long-term goal of non-nuclear home, and the development of renewable energy is also an established policy. Among them, solar PV is a key development project.

(5) The repatriation of offshore funds brings new momentum to the market

(6) Integrating resources of both upstream and downstream in the solar industry expedites the acquiring of high-efficiency solar panels and SAS could smoothly penetrate into high-efficiency products, demonstrating the synergy of vertical integration.

(7) SAS is not worried over fund shortage and this comforts EPC manufacturers and facilitate cooperation

(8) FIT rates in Taiwan are stable

(9) Experienced in energy storage integration which helps to explore the market of

solar energy and energy storage.

Semiconductor industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

B. Disadvantages and response measures

Solar energy industry

(1) There are a large number of competitors, and the market generally has the trend of oversupply.

(2) As supply exceeds demand in the market, the price of the product has fallen, affecting sales and profits.

(3) Since the United States launched the solar energy trade war on the Chinese mainland in 2012, the solar energy trade war has never stopped. In September 2018, the European Union cancelled the MIP (Minimum Import Price) for China. India's defense tariffs will affect the market supply and demand again due to various policy instability factors of this and next year. In February 2019, the United States imposed a tariff of up to 25% on imported solar cells and modules and formulated Clause 201.

(4) The solar energy industry is still an industry that relies on subsidies from governments around the world. It is not suitable for large-scale production, especially huge capital expenditure.

(5) Regulatory conflicts, insufficient feeders and difficult to integrate land ownership hinder the growth of terrestrial solar photovoltaic. Due to the wide variety of ground-based fields, including agricultural land, water space, salt fields, aquaculture areas, industrial zones, state-owned land, etc., its difficulty is more than the roof type. Most operators often face the central and local government regulations conflict, feeder shortage from Taiwan Electricity Company and land ownership difficult to integrate and so on.

(6) Industrial and livestock roofs are nearing saturation, and the rest that can be set up the solar PV is much fewer with the development costs continue to rise.

(7) The government's announcement that the standard for electricity users will be raised to 5000KW, excluding users that used 800-4999KW, and requires only 10% of the contract capacity of renewable energy equipment within five years. This draft allows Business owners are hesitated to purchase by the draft which and causes the pace of promoting green electricity stalled.

Coping measures

(1) Aggressively develop new customers and cost-effective new products

(2) Strengthen R&D links with downstream customers, develop efficient niche

products with core technological capabilities, increase added value, and actively reduce manufacturing costs to increase profit margins.

(3) Establish market value, dedicate in Taiwan market, and actively integrate downstream power plants and make strategic alliances to ensure business opportunities.

(4) Plants' construction still needs to be strengthened via the top down guidance and integration as well as seeking technical experts, local executive practitioners and industry associations and other related parties to help solve the obstacles.

(5) Strengthen the Company's competitiveness through vertical integration, O&M services, and the development of multi-type power plants.

(6) Strengthen the Company's energy storage solutions to provide business owners with another choice that meets the requirements of heavy user of electricity.

Semiconductor industry (See details in annual report of GlobalWafers, the Company's subsidiary (stock code: 6488)

(II) Important Uses and Production Processes of Major Products

1. Important uses of products

Product Name	Statement of Important Uses
Polysilicon high-quality silicon materials	Application of silicon material products and customized according to customer's needs.
A5+ ultra-high cell efficiency multi-crystalline silicon wafer	For PERC cell process, the efficiency can reach 21.2%.
Multi-crystalline solar bricks	For solar PV substrate material, it can be reprocessed into solar cells
High Efficiency Mono-Si Solar Cell	1. The conversion efficiency of high-efficiency single crystal solar cells is greater than 22.30%. 2. The conversion efficiency of high-efficiency double-sided single crystal silicon solar cells is greater than 22.30% and double-sidedness is greater than 65%. 3. The conversion efficiency of high-efficiency single crystal silicon metal-penetrating back-electrode solar cells is greater than 22.40%. 4. The conversion efficiency of high-efficiency single crystal solar cells without main conflux is greater than 22.40%.

2. Process

Solar wafer

Silicon raw materials→ crystal growth→ opening→ crystal quality evaluation→ grinding→ slicing→ cleaning→ inspection→packaging of finished products

Solar cells

Wafer production→surface roughening→surface diffusion layer formation→surface cleaning and edge insulation→ formation of anti-reflection layer and passivation layer on the surface→metallization and sintering→ solar cell efficiency measurement and classification

(III) Supply of main raw materials

Product Item	Main Raw Materials	Major Suppliers	Supply Situation
Wafer	Polysilicon	Company A, Company B and Company C	Good

(IV)List of major purchasing and selling customers in the last two years

1. List of Main Purchasing Customers in the Last Two Years

Unit: NT$ thousands

	2018				2019			
Item	Company Name	Amount	Percent in the Total Annual Net Purchases	Relation with Issuer	Company Name	Amount	Percent in the Total Annual Net Purchases	Relation with Issuer
1	A	2,289,808	9.78	None	A	1,881,362	9.20	None
2	B	1,406,202	6.00	None	B	1,321,938	6.47	None
3	C	1,983,412	8.47	None	C	1,080,588	5.29	None
4	Other	17,742,205	75.75	None	Other	16,157,478	79.04	None
	Net purchase	23,421,627	100.00		Net purchase	20,441,366	100.00	

Note 1: The name and purchasing amount of suppliers whose proportion of purchasing is higher than 10% of the total purchases in the last two years should be listed. However, if the contract stipulates that the name of the supplier or the object of the transaction is an individual and non-related person, it can be coded.

Note 2: Up to the date of publication of the annual report, companies listed or whose stocks have been bought and sold in the securities firm's business premises should disclose the latest financial information which has been audited and verified by the CPA

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2. List of Main Purchasing Customers in the Last Two Years

Unit: NT$ thousands

	2018				2019			
Item	Company Name	Amount	Percent in the Total Annual Net Sales	Relation with Issuer	Company Name	Amount	Percent in the Total Annual Net Sales	Relation with Issuer
1	B	9,494,244	13.71	None	B	10,253,312	15.65	None
	Other	59,744,701	86.29	None	Other	55,256,913	84.35	None
	Net sales	69,238,945	100.00		Net sales	65,510,225	100	

Note 1: The name and selling amount of customers whose proportion of selling is higher than 10% of the total sales in the last two years should be listed. However, if the contract stipulates that the name of the customer or the object of the transaction is an individual and non-related person, it can be coded.

Note 2: Up to the date of publication of the annual report, companies listed or whose stocks have been bought and sold in the securities firm's business premises should disclose the latest financial information which has been audited and verified by the CPA.

(V) Production in the Last Two Years

Unit: NT$ thousands

Year / Output / Major Products	2018			2019		
	Capacity	Quantity	Amount	Capacity	Quantity	Amount
Solar energy ingot (thousand kg)	6,349	2,635	1,395,056	2,707	778	792,895
Solar silicon wafer (thousand pieces)	211,057	50,760	729,489	24,948	0	0
Semiconductor crystal rod (thousand pieces)	341	290	1,509,225	367	267	1,352,145
Semiconductor wafer (thousand pieces)	57,790	56,909	35,294,655	56,122	51,852	33,795,720
Solar cells (thousand pieces)	122,000	104,953	3,635,804	122,000	97,796	3,020,157
Total	—	—	42,564,229	—	—	38,960,917

Note 1: Capacity refers to the amount of production that the Company can reach under normal operation by using existing production equipments after measuring factors such as necessary shutdown and holidays.

(VI) Sales in the Last Two Years

Unit: NT$ thousands

Year / Sales / Major Products	2018				2019			
	Local		Export		Local		Export	
	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity
Solar energy ingot (thousand kg)	2	618	1,751	999,181	6	2,161	532	790,761
Solar silicon wafer (thousand pieces)	33,549	482,655	8,394	99,269	9,974	144,716	—	—
Semiconductor crystal bar and wafer (thousand pieces)	13,447	13,429,594	34,551	45,614,500	10,132	12,555,238	30,347	45,441,556
Solar cells (thousand pieces)	26,198	850,674	61,300	2,290,783	21,489	645,512	70,310	2,231,909
Solar modules (thousand pieces)	84	350,710	299	1,715,717	19	71,450	295	1,482,127
Other	—	1,506,333	—	1,898,910	—	870,888	—	1,273,907
Total	73,280	16,620,584	106,295	52,618,361	41,621	14,289,965	101,484	51,220,260

III. Employee Data for the Last Two Years:

Year		2018	2019	As of March 31, 2020
Number of Employees	Staffs	337	263	258
	Operators	582	582	565
	Total	919	845	823
Average Age		38	38	38.5
Average Years of Service		6	7	7.5
Education	Masters or above	11%	11.1%	10.69%
	Junior College	62.4%	64%	64.4%
	Senior High School	23.2%	22%	22.24%
	Senior High School or below	3.5%	2.9%	2.67%

The Company and the personnel concerned with transparency of financial information have obtained relevant certificates designated by the competent authority as follows:

1. The Basic Ability Test of Internal Control of Enterprise held by the Securities Foundation: 1 person from Audit Department and 1 person from President Room
2. International Internal Auditor Certificate: Audit Department

IV. Environmental Protection Expenditures:

(I) According to the Law, a Company Shall Apply Permission for Pollution Facilities Placement, Pollutant Emission; Pay Prevention Fee; Set up Environmental Department, above Explanations are as below: the Company Has Applied Permission for Pollution Facilities Placement and Set up Environmental Department to Deal with Related Matters.

(II) Investment of pollution preventing main facilities, and the purposes and possible benefits:

1. Pollution and its improvement

   In order to prevent the occurrence of environmental pollution, we have successively carried out the renovation and improvement of old pollution prevention and control equipments in plants, and continuously strengthened the education and training of operators.

2. Capital expenditure on environmental protection in the last three years

   A. Environmental protection expenditures in 2017

   The total cost of air pollution prevention and maintenance was NT$ 81,539 thousand.

   The total cost of treatment and maintenance of industrial wastewater was NT$ 142,503 thousand.

   The total cost of industrial waste treatment and maintenance was NT$ 81,802 thousand.

   The total cost of other environmental protection expenditures was NT$ 1,615 thousand.

   B. Environmental protection expenditures in 2018

   The total cost of air pollution prevention and maintenance was NT$ 70,493 thousand.

   The total cost of industrial wastewater discharge, treatment and maintenance was NT$ 148,387 thousand.

   The total cost of industrial waste treatment and maintenance was NT$ 89,052 thousand.

   The total cost of other environmental protection expenditures was NT$ 3,757 thousand.

   C. Environmental protection expenditures in 2019

   The total cost of air pollution prevention and maintenance was NT$ 30,242 thousand.

   The total cost of industrial wastewater discharge, treatment and maintenance was NT$ 76,179 thousand.

   The total cost of industrial waste treatment and maintenance was NT$ 76,735 thousand.

   The total cost of other environmental protection expenditures was NT$ 185 thousand.

3. Expected improvement

   The investment of the above pollution prevention and control equipments can effectively respond to the amendment to environmental protection laws and regulations, and the environmental pollution of wastewater and waste gas can be more effectively treated and reduced to ensure its discharge quality.

(III) The Company Shall Specify if There's Any Conflict Related to Pollution in the Last Two Years to the Date Issued Annual Report:

There was no pollution dispute in 2018 and 2019.

(IV) The Company Shall Specify the Total Amount of Loss (Including Compensation), Punishment of Environment Pollution, and Disclose Future Countermeasures (Including Improvement) and Possible Expenditures (Including Estimate Of Possible Loss, Punishment, Compensation, or Specify Facts if Cannot Be Estimated) in the Last Two Years to the Date Issued Annual Report:

Sino-American Silicon was fined once in 2019. The total amount of the fines was NT$ 120,000. Most of the violations of laws and regulations were in the field of safety and environmental protection. In this regard, we not only need to strengthen internal consolidation, but also require cross audit among the plants in the group to explore potential risks from different perspectives and improve internal management.

Punishment Time	Punished Plant	Penalty Amount	Violation	Corrective Measures
July 17th, 2019	Yilan Plant	120,000	1. First Plant chemical warehouse: Failure to transport liquid via pneumatic press and the pressure gauge broke. (Violet Regulations for the Occupational Safety and Health Equipments and Measures) 2. First Plant Waste water plant: Waste water area sulfuric acid storage tank worked site sulfuric acid alarm loss alarm function was immediately at risk. (Violet Specific Chemical Hazard Prevention Standards) 3. First Plant waste water plant: The use of sulfuric acid work site did not set up emergency flushing equipment. (Violet Specific Chemical Hazard Prevention Standards)	1. Immediately replaced the pressure Sensor complete, confirmed the gauge showed normal, and did the inventory as well as set up the instrument of the plant system with the alarm function and checking list 2. Immediate maintenance of sulphuric acid alarms in wastewater plants, and a comprehensive inventory of air contamination, chemical storage tanks. Equipped alarm systems in wastewater systems and inspection forms to regularly check whether the alarm system worked properly 3. Comprehensive inspection of air pollution, waste water system. Also, installed emergency flushing equipment and immediately after the installation, which checked accordingly per month and regular maintenance to ensure the function worked properly.

(V) Effects of Current Pollution Condition and Improvement to Company Profit, Competition and Capital Expense, With Anticipated Major Environmental Protection Expenditures in the Next Two Years: None.

(VI) Relevant information of the Company complying with the European Union Environmental Protection Directive (RoHS): Samples of banned and restricted substances of wafer based on RoHS were sent for testing in accordance with the business demands.

V. Labor Relations:

(I) The Company's employee welfare measures, further education, training, retirement system and its implementation, as well as labor agreements and various measures to safeguard employees' rights and interests

1. Employee welfare measures:
   A. High-quality salary, and fair and just incentive and promotion methods are provided to recognize the contributions of all colleagues to the Company. In addition to general benefits such as labor insurance, health insurance, group insurance and pension payment, the benefits provided by the Company to staffs include festival bonuses, birthday and festival gifts, year-end party, weddings and funerals, domestic and foreign tourism, emergency relief, scholarship, birth allowance, group lunch, employee equity, complete education and training, etc.
   B. 0.1% of the monthly turnover and 40% of the sales income is allocated to the Employee Welfare Committee each month, which is operated by its members in accordance with relevant regulations.
2. Employees' further education and training and their implementation:
   The Company provides diversified training courses and various professional on-the-job training and self-development courses, including new entrant training, on-the-job training courses, labor safety and health education training, professional courses and various post-related assignment training courses, in order to cultivate professionally competent and challenging talents.
3. Retirement system and its implementation:
   A. There are two types of retirement: voluntary retirement and compulsory retirement.

      Voluntary retirement: Those who have worked for more than 15 years and are over 55 years old, those who have worked for more than 25 years or those who have worked for more than 10 years and are over 60 years old.

      Compulsory retirement: The Company may compel a person who is over 65 years old from May 14, 2008 or who is mentally or physically disabled and incompetent to retire.
   B. The calculation of seniority: Calculated from the date of arrival: The seniority in the period of leaving without pay should be deducted.
   C. Standards of pension payment:

      Old system: Two bases are given for each year of service. For over 15 years of service, a base is given every year, but the maximum is 45 bases. Less than half a year is counted as half a year, and more than half a year is counted as one year. If the mental loss or physical disability of a compulsorily retired worker is caused by the performance of his duties, the base of his pension should be increased by 20% in accordance with provisions of the preceding paragraph.

New system: If the new system was chosen after July 2005, the seniority should be calculated by the old system before July 2005, and by the new system after July 2005.

D. The pension of employees arriving after July 2005 is calculated according to the new system (The employer allocates 6% of salary each month and deposits in the personal account of the Labor Insurance Bureau).

4. Labor agreements:

The Company's provisions are based on the Labor Standard Law as a guideline. In accordance with the implementation measures of the Labor Conference, labor meetings are held regularly. Labor relations have always been quite harmonious, and communication channels are unblocked. At the same time, through the joint discussion of the Labor Conference and the Staff Welfare Committee, the mutual benefit and other issues between the two sides are negotiated. In addition to further understanding of each other’s needs and expectations, all our colleagues work together to create the future of the Company based on the business philosophy of coexistence and co-prosperity.

5. Protection measures of employees’ rights and interests:

The Company has a sound management system, which sets out various management measures, stipulates the rights and obligations of colleagues and welfare items, and irregularly reviews and revises the welfare content to safeguard the rights and interests of all colleagues. Content clearly sets out the rights and obligations of colleagues and welfare items, and does not regularly review and revise the welfare content to safeguard the rights and interests of all colleagues

(II) Losses incurred as a result of labor disputes in recent years and up to the date of publication of the annual report, and disclosure of current and future possible estimated amounts and response measures:

The Company's labor relations are harmonious and labor disputes are mediated in accordance with the adjustment procedures. In the most recent year and as of the date of printing of the annual report, there was no loss due to labor disputes.

(III) Employees' Behaviors or Ethical Codes:

In order to let all employees understand employees' behaviors and ethics and gather them together, the Company has formulated relevant measures and regulations to be followed by the Company's management and all employees.

The relevant measures and codes are summarized as follows:

1. Provisions of layered responsibilities and delegation of authorization: The Company implements layered responsibilities. There are also deputies at all levels, all departments comply with provisions of delegation of authorization to ensure the normal operation of the Company's business.
2. Formulate reward and punishment methods: Except for those in the rules of the Company, the rewards can be divided into three categories: reward, small merit and big merit. The punishment can be divided into three categories: admonition, small demerit and big demerit.
3. Implement measures for maintaining business secrets: In order to ensure the Company's business secrets and intellectual property rights, employees are prohibited from competing in business. Employees are required to sign contracts for keeping business secrets and attribution of intellectual property rights.
4. Employees' annual performance evaluation methods: To enhance the morale and performance of the Company's employees, explore outstanding talents, and make employee promotion, rewards and punishments fair and reasonable.
5. Sexual harassment prevention and treatment measures: In order to safeguard gender equality in work and personal dignity, the Company strictly prohibits sexual harassment in the workplace, and specifies rules and employee complaint channels to regulate employees' behaviors in the workplace.
6. Principles of work and codes of conduct for colleagues: In order to clearly regulate the rights and obligations of both employer and employees, improve the management system of modern operation, and urge all employees to work together to achieve the goal of high utilization of human resources and seek for business development, the Company has formulated these rules with reference to relevant laws and decrees. The main contents are as follows:

Chapter 1	Personnel Appointment
Chapter 2	Attendance
Chapter 3	Working Overtime and Duty on Holidays
Chapter 4	Salaries, Allowances and Bonuses
Chapter 5	Performance Evaluation, Rewards and Punishments, Promotion and Mobilization
Chapter 6	Resignation, Leaving without Pay, Lay-off, Removal and Retirement
Chapter 7	Labor and Health Group Insurance
Chapter 8	Employee Welfare Committee
Chapter 9	Marriage, Funeral, Birthday Celebration, Emergency Relief and Assistance
Chapter 10	Compensation and Pension for Occupational Disasters

Chapter 11 Labor Safety and Health

Chapter 12 Communication System and Others

7. The rewards and punishments in plant regulations and the rules to be followed by employees of plant: The plant has formulated "Code of Work for Colleagues" for behaviors and ethics of employees in the plant. It ensures the quality of products of the Company and conforms to the operating standards. Rules for entering and leaving the plant, and general rules for establishing a good working environment and providing work efficiency to maintain the image of the Company and improve the quality of employees should be followed.
   (1) Follow the rules of work and all laws, regulations and rules.
   (2) Obey the distribution, guidance, management and assignment of supervisors at all levels without putting off.
   (3) Do not operate business related to the Company's business or use the name of the Company without authorization.
   (4) Do not seek personal interests through the use of power or official status or information.
   (5) The Company's colleagues should abide by the rules and not disclose the Company's technology, management and business secrets.
   (6) Without the consent of the Company, no company information should be released to the communication circle without authorization.
   (7) Confidential information of the Company should not be collected or disseminated privately.
   (8) No contraband or inflammable articles should be brought into the Company or production area.
   (9) Do not enter the prohibited area with warning slogans or bring relatives, friends and employees who have left the Company into the workplace without permission.
   (10) The salaries of our colleagues should be treated as confidential and should not be arbitrarily told to others, and the compensation of other colleagues should not be asked about.
   (11) Do not gamble, take drugs, smoke, eat betel nut or act indecent in the workplace.
   (12) Alcoholic beverages should not be consumed during working hours.
   (13) Public property should be cherished, and should not be wasted, damaged, changed or used privately.
   (14) Pay attention to appearance, and wear overalls and company service certificates.

   General rules formulated to standardize all employees' compliance, ensure that the quality of our products meets the operating standards, and provide work efficiency to maintain the image of the Company and improve the quality of employees. The above measures and regulations should be trained upon the arrival of new employees, and the latest edition should be announced on the bulletin board in the plant for staffs to enquire at any time.

(IV) Measures to Protect the Working Environment and Personal Safety of Employees:

According to the Labor Safety and Health Law, the Company has established “the Labor Safety and Health Management Unit”, set up the management personnel of the Labor Safety and Health Business, and formulated “the Labor Safety and Health Management Guidelines”. The main contents related to the working environment of the plant area and the protections of personal safety of employees are summarized as follows:

1. Work environment regulations and measures
   (1) Staffs should always pay attention to self-adjustment of physical and mental health and develop good hygienic habits.
   (2) The workplace should be tidied up in proper time and kept clean and tidy.
   (3) Smoking, eating betel nut and drinking alcoholic beverages are strictly prohibited in the plant.
   (4) Smoking should be in the prescribed smoking room and the cigarette butt should not be discarded at will.
   (5) Protective devices should be correctly used when hazardous substances are disposed of.
   (6) Hazardous substances should be clearly marked and should not be damaged arbitrarily.
   (7) Water drinking equipment that meets the drinking water standards should be installed in appropriate places in the workplace and regularly cleaned, and the water quality should be tested.
   (8) Disinfect the whole plant area every year.
   (9) Toilets should be well ventilated, cleaned and disinfected.
   (10) All employees must keep the 6S environment clean and hygienic in the plant area and form good habits.
   (11) No spitting, drowning, throwing of cigarette butts or littering is allowed.

2. Protection of personal safety of employees
   (1) All work should be carried out and audited in accordance with relevant safety standards, operating procedures and safety checklist of working procedures.
   (2) If temporary or non-regular operations do not have such safety standards to follow, they should not be completed. Flexibly use existing safety standards and decide on the safety steps and methods to be adopted after discussion with the person in charge of the work.
   (3) Safety hats and belts should be worn by those who are engaged in elevated work with a height of more than two meters or work with

objects fallen or fallen apart, inspectors and supervisors.

(4) Safety belts and auxiliary ropes or safety ropes should be used correctly in the operation on pipes, towers or racks which are not installed with platforms and guardrails and are above two meters above the ground or at the edges and openings of workplaces.

(5) When partial blackout operation is implemented for substation equipment or plant area, the blackout operation scope should be enclosed and isolated by the iron network or construction warning belt, and the signs of "blackout operation" or "power danger" should be suspended separately for warning purposes. After the completion of the operation, it should be confirmed that the employees who are engaged in the operation have left without the risk of induction before removal.

(6) Personal protective devices should be worn in accordance with the regulations of each station in work. If unsafe conditions, equipment and operation methods are found, they should be reported immediately.

(7) Chasing, bantering or other unsafe acts are prohibited in work.

(8) The maximum operating load of machines and tools should not be exceeded in use.

VI. Important Contracts

Agreement	Counterparty	Period	Major Contents	Restrictions
Land lease agreement	Taiwan Science Park Administration	2008.01.26～2027.12.31	The area is 13,000 square meters, the rent is NT$ 346,710 each month, and the total annual rent is NT$ 4,160,520.	Limited-purpose business use
Sales contract	Customer B B-2	2009~2025	Sales contract	None
Sales contract	Customer B B-3	2009~2025	Sales contract	None
Sales contract	Customer B B-4	2010~2025	Sales contract	None
Sales contract	Customer B B-5	2011~2025	Sales contract	None
Sales contract	Customer D D-2	2006~2025	Sales contract	None
Sales contract	Customer D D-3	2009~2025	Sales contract	None
Sales contract	Customer D D-4	2009~2025	Sales contract	None
Sales contract	Customer F F-2	2009~2020	Sales contract	None
Supplier contract	Supplier A A-4	2013~2031	Silicon Raw Material Contract	None
Supplier contract	Supplier B B-3	2013~2027	Silicon Raw Material Contract	None

VI. Financial Information

I. Five-year Concise Balance Sheet, Profit and Loss Statement and Audit Opinions of Accountants

(I) Concise Balance Sheet

1. Concise Balance Sheet- Based on IFRS (Consolidated)

Unit: NT$ thousands

Item \ Year		Financial Summary for The Last Five Years					Financial information for the year ended March 31, 2020 (Note 1)
		2015	2016	2017	2018	2019	
Current assets		19,281,427	30,143,619	41,006,059	57,260,849	55,165,633	49,884,381
Funds and investments		4,343,435	3,031,504	3,499,459	3,528,186	3,943,497	3,775,887
Property, plant and equipment (Note 2)		18,904,724	41,397,828	37,528,808	37,438,555	40,276,715	41,188,439
Intangible assets		701,566	4,436,073	3,939,134	3,649,397	3,227,583	3,156,944
Other assets (Note 2)		2,955,184	4,005,384	3,369,074	2,108,328	6,770,068	11,237,398
Total assets		46,186,336	83,014,408	89,342,533	103,985,315	109,383,496	109,243,049
Current liabilities	Before distribution	10,070,111	31,901,665	17,328,624	30,153,693	30,160,394	37,558,971
	After distribution	10,529,692	33,300,772	21,237,705	31,510,656	31,675,367	Not applicable
Non-current liabilities		7,546,649	23,885,656	23,885,656	25,917,757	30,607,061	29,270,238
Total liabilities	Before distribution	17,616,760	55,787,321	45,565,622	56,071,450	60,767,455	66,829,209
	After distribution	18,076,341	57,186,428	45,565,622	57,428,413	62,282,428	Not applicable
Equity attributable to shareholders of the parent		22,986,756	20,898,541	27,140,872	26,881,716	26,670,241	24,598,795
Capital stock		5,800,312	5,800,312	5,920,587	5,862,877	5,862,217	5,862,217
Capital surplus		18,614,691	18,821,483	24,205,831	21,757,292	21,072,595	19,555,327
Retained earnings	Before distribution	1,292,442	(740,873)	507,252	2,332,634	3,566,891	3,436,343
	After distribution	832,861	(2,139,980)	507,252	975,671	2,051,918	Not applicable
Other equity interest		(2,550,828)	(2,812,520)	(3,322,937)	(3,071,087)	(3,831,462)	(4,255,092)
Treasury stock		(169,861)	(169,861)	(169,861)	—	—	Not applicable
Non-controlling interest		5,582,820	6,328,546	16,636,039	21,032,149	21,945,800	17,815,045
Total equity	Before distribution	28,569,576	27,227,087	43,776,911	47,913,865	48,616,041	42,413,840
	After distribution	28,109,995	25,827,980	43,776,911	46,556,902	47,101,068	Not applicable

Note 1: The financial data of the last five years have been audited by CPA, and the financial data of the first quarter of 2020 have been reviewed by CPA.

Note 2: The Company has not conducted asset revaluation.

Note 3: The earnings distribution of 2019 had approved by Board of Directors on 19th March, 2020.

2. Concise Balance Sheet- Based on IFRS (standalone)

Unit: NT$ thousands

Item \ Year		Financial Summary for The Last Five Years (Note 1)					Financial information for the year ended March 31, 2020
		2015	2016	2017	2018	2019	
Current assets		6,560,131	6,873,213	5,545,531	3,786,845	2,744,744	—
Funds and investments		16,811,733	14,555,750	22,253,878	26,965,810	28,067,953	—
Property, plant and equipment (Note 2)		7,282,061	7,114,781	6,333,415	3,589,549	3,226,668	—
Intangible assets		—	—	—	—	—	—
Other assets (Note 2)		1,615,670	1,063,399	719,375	150,695	249,009	—
Total assets		32,269,595	29,607,143	34,852,199	34,492,899	34,288,374	—
Current liabilities	Before distribution	4,447,442	4,863,770	4,490,335	3,936,996	1,717,781	—
	After distribution	4,907,023	5,725,484	4,490,335	5,293,959	3,232,754	—
Non-current liabilities		4,835,397	3,844,832	3,220,992	3,674,187	5,900,352	—
Total liabilities	Before distribution	9,282,839	8,708,602	7,711,327	7,611,183	7,618,133	—
	After distribution	9,742,420	9,570,316	7,711,327	8,968,146	9,133,106	—
Equity attributable to shareholders of the parent		22,986,756	20,898,541	27,140,872	26,881,716	26,670,241	—
Capital stock		5,800,312	5,800,312	5,920,587	5,862,877	5,862,217	—
Capital surplus		18,614,691	18,821,483	24,205,831	21,757,292	21,072,595	—
Retained earnings	Before distribution	1,292,442	(740,873)	507,252	2,332,634	3,566,891	—
	After distribution	832,861	(1,602,587)	507,252	975,671	2,051,918	—
Other equity interest		(2,550,828)	(2,812,520)	(3,322,937)	(3,071,087)	(3,831,462)	—
Treasury stock		(169,861)	(169,861)	(169,861)	—	—	—
Non-controlling interest		—	—	—	—	—	—
Total equity	Before distribution	22,986,756	20,898,541	27,140,872	26,881,716	26,670,241	—
	After distribution	22,527,175	20,036,827	27,140,872	25,524,753	25,155,268	—

Note 1: The financial data of the last five years have been audited by theCPA.

Note 2: The Company has not conducted asset revaluation.

Note 3: The earnings distribution of 2019 had approved by Board of Directors on 19th March, 2020.

(II) Concise Profit and Loss Statement and Concise Comprehensive Profit and Loss Statement

1. Concise Consolidated Profit and Loss Statement- Based on IFRS (Consolidated)

Unit: NT$ thousands; only the unit of earnings per share is NT$

Year / Item	Financial Summary for The Last Five Years (Note 1)					Financial information for the year ended March 31, 2020 (Note 2)
	2015	2016	2017	2018	2019	
Operating revenues	28,269,357	31,599,040	59,371,198	69,238,945	65,510,225	15,277,626
Gross profit from operations	4,271,231	3,435,013	11,403,236	18,641,853	19,267,539	5,049,695
Operating profit and loss	2,236,612	42,060	6,325,002	13,177,505	13,515,421	3,705,844
Non-operating income and expenses	(276,431)	(898,438)	(1,199,261)	140,728	408,748	131,999
Income before income tax	1,960,181	(856,378)	5,125,741	13,318,233	13,924,169	3,837,843
Net income of the unit continuing business in the current period	1,056,402	(1,289,006)	3,518,628	8,635,480	8,895,345	2,787,167
Loss from the unit out of business	—	—	—	—	—	—
Net income (loss) in the current period	1,056,402	(1,289,006)	3,518,628	8,635,480	8,895,345	2,787,167
Other comprehensive income in the current period (Net after-tax amount)	162,940	(328,410)	(64,089)	(53,850)	(896,474)	(644,909)
Total comprehensive income in the current period	1,219,342	(1,617,416)	3,454,539	8,581,630	7,998,871	2,142,258
Net income attributable to shareholders of the parent	534,837	(1,589,225)	1,035,505	1,950,503	2,248,386	1,384,425
Net income attributable to non-controlling interest	521,565	300,219	2,483,123	6,684,977	6,646,959	1,402,742
Comprehensive income attributable to shareholders of the parent	635,474	(1,832,339)	971,676	1,604,225	1,774,007	953,606
Comprehensive income attributable to non-controlling interest	583,868	214,923	2,482,863	6,977,405	6,224,864	1,188,652
Earnings per Share	0.93	(2.77)	1.8	3.36	3.86	2.37

Note 1: The financial information of the last five years has been audited by the CPA.

Note 2: Financial data for the first quarter of 2020 has been reviewed by CPA.

2. Concise Consolidated Profit and Loss Statement-Based on IFRS (Indivistandaloneduals)

Unit: NT$ thousands; only the unit of earnings per share is NT$

Item \ Year	Financial Summary for The Last Five Years (Note 1)					Financial information for the year ended March 31, 2020
	2015	2016	2017	2018	2019	
Operating revenues	11,915,968	10,390,005	11,282,980	8,430,747	6,002,885	—
Gross profit from operations	(20,794)	(908,211)	(676,632)	(3,787,340)	(3,892,165)	—
Operating profit and loss	(429,255)	(1,275,282)	(1,090,541)	(4,270,921)	(4,362,878)	—
Non-operating income and expenses	1,098,347	(317,602)	2,115,992	6,296,677	6,689,226	—
Income before income tax	669,092	(1,592,884)	1,025,451	2,025,756	2,326,348	—
Net income of the unit continuing business in the current period	534,837	(1,589,225)	1,035,505	1,950,503	2,248,386	—
Loss from the unit out of business	—	—	—	—	—	—
Net income (loss) in the current period	534,837	(1,589,225)	1,035,505	1,950,503	2,248,386	—
Other comprehensive income in the current period (Net after-tax amount)	100,637	(243,114)	(63,829)	(346,278)	(474,379)	—
Total comprehensive income in the current period	635,474	(1,832,339)	971,676	1,604,225	1,774,007	—
Net income attributable to shareholders of the parent	534,837	(1,589,225)	1,035,505	1,950,503	2,248,386	—
Net income attributable to non-controlling interest	—	—	—	—	—	—
Comprehensive income attributable to shareholders of the parent	635,474	(1,832,339)	971,676	1,604,225	1,774,007	—
Comprehensive income attributable to non-controlling interest	—	—	—	—	—	—
Earnings per Share	0.93	(2.77)	1.8	3.36	3.86	—

Note 1: The financial information of the last five years has been audited by the CPA.

(III) Names of CPAs and Opinions of Audit in the Last Five Years

Year	CPA	Content of Opinions	Remarks
2015	Zeng Meiyu Huang Yonghua	Revised unqualified opinions	Note 1
2016	Zeng Meiyu Huang Yonghua	Unqualified opinions	Note 1
2017	Chen Zhenqian Zheng Anzhi	Unqualified opinions	Note 1
2018	Chen Zhenqian Zheng Anzhi	Unqualified opinions	Note 1
2019	Chen Zhenqian Zheng Anzhi	Unqualified opinions	Note 1

Note 1: The financial statements of the invested company in the previous financial statements have not been audited by this CPA, but by other CPA. Therefore, in the opinions expressed by this accountant in the previous financial statements, the amount listed in the financial statements of the invested company is based on the audit report of other CPA.

II. Five-Year Financial Analysis

(I) Financial Analysis-Based on IFRS (Consolidated)

Item (Note 2)	Year	Financial Analysis for the Last Five Years 2015	2016	2017	2018	2019	As of the year ended March 31, 2020 (Note 1)
Financial structure %	Debt ratio	38	67	51	54	56	61
	Ratio of long-term capital to property, plant and equipment	191	123	162	197	197	174
Solvency (%)	Current ratio	191	94	145	190	183	133
	Quick ratio	123	61	105	161	157	114
	Interest earned ratio (times)	25.92	(4.25)	11.05	57.86	88.22	103.54
Operating performance	Accounts receivable turnover (times)	5.05	4.29	6.84	7.40	7.13	6.92
	Average collection period	72.27	85.08	53.86	49.32	51.19	52.75
	Inventory turnover (times)	4.63	3.64	4.86	5.64	6.05	5.60
	Accounts payable turnover (times)	8.5	6.08	8.21	9.56	9.82	9.78
	Average days in sales	78.83	100.27	75.1	64.71	60.33	65.18
	Property, plant and equipment turnover (times)	1.66	1.05	1.5	1.85	1.69	1.52
	Total assets turnover (times)	0.65	0.49	0.69	0.72	0.61	0.56
Profitability	Return on assets (%)	2.57	(1.77)	4.57	9.11	8.45	10.30
	Return on equity (%)	4.21	(4.62)	9.91	18.84	18.43	24.49
	Pre-tax income to paid-in capital (%) (Note 7)	33.79	(14.76)	86.57	227.15	237.52	261.87
	Net profit rate (%)	3.74	(4.08)	5.93	12.47	13.58	18.24
	Earnings per share (NT$)	0.93	(2.77)	1.79	3.36	3.86	2.37
Analysis of Cash Flow	Cash flow ratio (%)	11.52	7.82	54.43	119.68	62.44	40.32
	Cash flow adequacy ratio (%)	50.55	52.47	107.54	192.05	181.54	225.43
	Cash reinvestment ratio (%)	0.15	1.78	13.88	28.29	13.42	12.60
Leverage	Operating leverage	1.98	186.54	3.76	2.33	2.27	2.13
	Financial leverage	1.04	(0.32)	1.09	1.02	1.01	1.01

Please explain the reasons for the changes in financial ratios in the last two years. (If the increase or decrease is less than 20%, it can be exempted from analysis.)

1. Interest earned ratio (times): Increased profits of the Company result in the increased relative net profit before tax.
2. Cash flow ratio: Decreased ratio of the Company result in contract liabilities last year as a result of a reduction.
3. Cash reinvestment ratio: Decreased ratio of the Company result in contract liabilities last year as a result of a reduction.

Note 1: The financial data of the last five years have been audited by CPA, and the financial data of the first quarter of 2020 have been audited by CPA.

Note 2: At the end of this table in the annual report, the following calculation formulas should be listed:

1. Financial structure
    (1) Debt ratio = total liabilities/total assets.
    (2) Ratio of long-term capital to property, plant and equipment = (total equity + non-current liabilities) / net property, plant and equipment.
2. Solvency
    (1) Current ratio = current assets/current liabilities.
    (2) Quick ratio = (current assets-inventory-prepaid expenses)/ current liabilities.
    (3) Interest earned ratio (times) = net income before income tax and interest expense/ interest expenditure of the current period.
3. Operating performance
    (1) Accounts receivable (including receivables and notes receivable arising from business) turnover ＝ net sales/ average receivable balance of different periods (including receivables and notes receivable arising from business).
    (2) Average collection period = 365/receivables turnover.
    (3) Inventory turnover (times) = cost of sales/average inventory.
    (4) Accounts payable (including accounts payable and notes payable arising from business) turnover ＝ cost of sales/ average payable balance of different periods (including accounts payable and notes payable arising from business).
    (5) Average days in sales = 365/inventory turnover.
    (6) Property, plant and equipment turnover (times) = net sales/average net property, plant and equipment turnover.
    (7) Total assets turnover (times) = net sales/total average assets.
4. Profitability
    (1) Return on total assets (%) = after-tax profits and losses + interest expenses × (1-tax rate)/ average total assets.
    (2) Return on stockholders' equity (%) = after-tax profits and losses/total average equity.
    (3) Profit ratio (%)= after-tax profits and losses /net sales.
    (4) Earnings per share = profits and losses attributable to shareholders of the parent - special dividend) / weighted average number of issued shares. (Note 3)
5. Cash flow
    (1) Cash flow ratio = net cash flow of business activities/current liabilities.
    (2) Cash flow adequacy ratio = net cash flow of business activities in the last five years/ (capital expenditure + inventory increase + cash dividend) of the last five years.
    (3) Cash reinvestment ratio= (net cash flow of business activities - cash dividend)/(gross property, plant and equipment + long-term investment + other non-current assets + working capital). (Note 4)
6. Leverage:
    (1) Operating leverage = (net operating income - variable operating costs and expenses) / operating benefits (Note 5).
    (2) Financial leverage = operating benefits/ (operating benefits-interest expense).

Note 3:In the above formula for calculating the earnings per share, the following items should be paid special attention to in measurement:

1. Based on the weighted average number of common shares, rather than the number of issued shares at the end of the year.
2. Where there are cash increases or treasury stock transactions, the weighted average number of shares should be calculated by taking into account the circulation period.
3. For those who have earnings or capital reserve converted to increase capital, when

calculating earnings per share in previous years and half a year, they should be adjusted retrospectively according to the proportion of capital increase, without considering the issuance period of the capital increase.

4. If special shares are non-convertible cumulative special shares, their current-year dividend (whether it is issued or not) should be deducted from their net after-tax profit or increase their net after-tax loss. If special shares are non-cumulative, with net after-tax profits, special dividends should be deducted from net after-tax profits; if they are losses, they need not to be adjusted.

Note 4: In cash flow analysis, the following items should be paid special attention to in measurement:

1. Net cash flow of business activities refers to the net cash inflow of business activities in the statement of cash flows.
2. Capital expenditure refers to the cash outflow of capital investment each year.
3. Inventory increase is only counted when the end-of-period balance is greater than the beginning-of-period balance. If the end-of-year inventory decreases, it is counted as zero.
4. Cash dividends include cash dividends for common shares and special shares.
5. Gross property, plant and equipment refer to the total amount of property, plant and equipment before the accumulated depreciation is deducted.

Note 5: The issuer should divide the operating costs and operating expenses into fixed and variable ones according to their nature. If estimates or subjective judgments are involved, their reasonableness should be paid attention to and consistency should be maintained.

Note 6: The ratio of paid-in capital of a foreign company is calculated by the ratio in net value.

Note 7: Where the Company's shares have no par value or par value per share is not NT$10, the above ratio in paid-in capital should be calculated based on the equity ratio of the balance sheet attributable to shareholders of the parent.

(II) Financial Analysis-Based on IFRS (standalone)

Item (Note 2)	Year	2015	2016	2017	2018	2019	The year ended March 31, 2020
		Financial Analysis for the Past Five Years (Note 1)					
Financial structure %	Debt ratio	28	29	22	22	22	—
	Ratio of long-term capital to property, plant and equipment	382.06	347.77	479.39	851.25	1,009.42	—
Solvency (%)	Current ratio	147.50	141.31	123.5	96.19	159.78	—
	Quick ratio	92.76	90.1	67.73	67.56	137.79	—
	Interest earned ratio (times)	11.27	(22.98)	23.25	50.02	88.79	—
Operating performance	Accounts receivable turnover (times)	6.24	5.83	10.25	9.27	10.14	—
	Average collection period	58.49	62.61	35.61	39.37	36.00	—
	Inventory turnover (times)	7.06	5.65	5.64	8.65	21.38	—
	Accounts payable turnover (times)	9.19	7.72	9.84	16.52	21.19	—
	Average days in sales	51.7	64.6	64.7	42.2	17.1	—
	Property, plant and equipment turnover (times)	1.79	1.44	1.68	1.70	1.76	—
	Total assets turnover (times)	0.38	0.34	0.35	0.24	0.17	—
Profitability	Return on assets (%)	1.86	(4.96)	3.33	5.72	6.60	—
	Return on equity (%)	2.44	(7.24)	4.31	7.22	8.40	—
	Pre-tax income to paid-in capital (%) (Note 7)	11.54	(27.46)	17.32	34.55	39.68	—
	Net profit rate (%)	4.49	(15.3)	9.18	23.14	37.46	—
	Earnings per share (NT$)	0.93	(2.77)	1.80	3.36	3.86	—
Analysis of Cash Flow	Cash flow ratio (%)	(7.11)	16.26	2.07	0.11	68.36	—
	Cash flow adequacy ratio (%)	(6.95)	(5.41)	(6.3)	0.69	15.36	—
	Cash reinvestment ratio (%)	(3.88)	(0.22)	(2.04)	(4.56)	(1.56)	—
Leverage	Operating leverage	(1.12)	0.19	0.05	0.56	0.69	—
	Financial leverage	0.87	0.95	0.96	0.99	0.99	—

Please explain the reasons for the changes in financial ratios in the last two years. (If the increase or decrease is less than 20%, it can be exempted from analysis.) 1. Current ratio: Increased ratio of the Company due to receiving the dividend and repayment of the loan from the reinvestment company 2. Quick Ratio: Increased ratio of the Company due to receiving the dividend and repayment of the loan from the reinvestment company 3. Interest earned ratio (times): The increase of profits of the investment company results in the increase of relative pre-tax net income. 4. Inventory turnover (times): The solar products reduced relative costs due to reduced revenue. 5. Accounts payable turnover (times): The solar products reduced relative costs due to reduced revenue. 6. Average days in sales: The solar sector portfolio changed as its inventory turnover rate to increase, resulting in a decrease in the number of days of average sales 7. Return on total assets: Mainly due to the decrease of operating revenue of solar products. 8. Profit ratio: Mainly due to increased profit of the reinvestment company and decreased operating revenue of the solar business. 9. Cash flow ratio: Increased ratio of the Company due to receiving the dividend and repayment of the loan from the reinvestment company 10. Cash flow adequacy ratio: The solar sector portfolio changed caused cash inflows from operating activities. 11. Cash reinvestment ratio: The solar sector portfolio changed caused cash inflows from operating activities. 12. Operating leverage: Mainly due to reduction of the net sales of solar products.

Note 1: The financial information of the last five years has been checked by the CPA.

Note 2: At the end of this table in the annual report, the following calculation formulas should be listed:

1. Financial structure
   (1) Debt ratio = total liabilities/total assets.
   (2) Ratio of long-term capital to property, plant and equipment = (total equity + non-current liabilities) / net property, plant and equipment.
2. Solvency
   (1) Current ratio = current assets/current liabilities.
   (2) Quick ratio = (current assets-inventory-prepaid expenses)/ current liabilities.
   (3) Interest earned ratio (times) = net income before income tax and interest expense/ interest expenditure of the current period.
3. Operating performance
   (1) Accounts receivable (including receivables and notes receivable arising from business) turnover ＝ net sales/ average receivable balance of different periods (including receivables and notes receivable arising from business).
   (2) Average collection period = 365/receivables turnover.
   (3) Inventory turnover (times) = cost of sales/average inventory.
   (4) Accounts payable (including accounts payable and notes payable arising from business) turnover ＝ cost of sales/ average payable balance of different periods (including accounts payable and notes payable arising from business).
   (5) Average days in sales = 365/inventory turnover.
   (6) Property, plant and equipment turnover (times) = net sales/average net property, plant and equipment turnover.
   (7) Total assets turnover (times) = net sales/total average assets.
4. Profitability
   (1) Return on total assets (%) = after-tax profits and losses + interest expenses × (1-tax rate)/ average total assets.
   (2) Return on stockholders' equity (%) = after-tax profits and losses/total average equity.
   (3) Profit ratio (%)= after-tax profits and losses /net sales.
   (4) Earnings per share = profits and losses attributable to shareholders of the parent - special dividend) / weighted average number of issued shares. (Note 3)

5. Cash flow
   (1) Cash flow ratio = net cash flow of business activities/current liabilities.
   (2) Cash flow adequacy ratio = net cash flow of business activities in the last five years/ (capital expenditure + inventory increase + cash dividend) of the last five years.
   (3) Cash reinvestment ratio= (net cash flow of business activities - cash dividend)/(gross property, plant and equipment + long-term investment + other non-current assets + working capital). (Note 4)
6. Leverage:
   (1) Operating leverage = (net operating income - variable operating costs and expenses) / operating benefits (Note 5).
   (2) Financial leverage = operating benefits/ (operating benefits-interest expense).

Note 3: In the above formula for calculating the earnings per share, the following items should be paid special attention to in measurement:

1. Based on the weighted average number of common shares, rather than the number of issued shares at the end of the year.
2. Where there are cash increases or treasury stock transactions, the weighted average number of shares should be calculated by taking into account the circulation period.
3. For those who have earnings or capital reserve converted to increase capital, when calculating earnings per share in previous years and half a year, they should be adjusted retrospectively according to the proportion of capital increase, without considering the issuance period of the capital increase.
4. If special shares are non-convertible cumulative special shares, their current-year dividend (whether it is issued or not) should be deducted from their net after-tax profit or increase their net after-tax loss. If special shares are non-cumulative, with net after-tax profits, special dividends should be deducted from net after-tax profits; if they are losses, they need not to be adjusted.

Note 4: In cash flow analysis, the following items should be paid special attention to in measurement:

1. Net cash flow of business activities refers to the net cash inflow of business activities in the statement of cash flows.
2. Capital expenditure refers to the cash outflow of capital investment each year.
3. Inventory increase is only counted when the end-of-period balance is greater than the beginning-of-period balance. If the end-of-year inventory decreases, it is counted as zero.
4. Cash dividends include cash dividends for common shares and special shares.
5. Gross property, plant and equipment refer to the total amount of property, plant and equipment before the accumulated depreciation is deducted.

Note 5: The issuer should divide the operating costs and operating expenses into fixed and variable ones according to their nature. If estimates or subjective judgments are involved, their reasonableness should be paid attention to and consistency should be maintained.

Note 6: The ratio of paid-in capital of a foreign company is calculated by the ratio in net value.

Note 7: Where the Company's shares have no par value or par value per share is not NT$10, the above ratio in paid-in capital should be calculated based on the equity ratio of the balance sheet attributable to shareholders of the parent.

III. Audit Committee's Report in the Most Recent Years

Audit Committee's Audit Report

The Board of Directors has prepared the Company's 2019 Business Report, Consolidated and Standalone Financial Statements and Earnings Distribution Proposal. Sino-American Silicon Products Inc. Consolidated and Standalone Financial Statements have been audited and certified by Chen, Chen-Chien, CPA, and Cheng, An-Chih, CPA, of KPMG and audit review reports relating to the Financial Statements have been issued. The above business report, consolidated financial statements, individual financial statements and earnings distribution proposal have been audited by the Audit Committee. It is considered that there is no inconsistency. The above report is submitted in accordance with Clause 4 of Article 14 of the Securities and Exchange Law and Article 219 of the Company Law. Please examine and approve.

Sincerely

Shareholders' Regular Meeting in 2020

Sino-American Silicon Products Inc.

Convenor of the Audit Committee:

Ting-ko Chen

March 19, 2020

IV. Audited Consolidated Financial Statements for Most Recent Year: Please refer to Annex I of the annual report.

V. Audited Standalone Financial Statements for Most Recent Year: Please refer to Annex II of the annual report.

VI. Difficulties in Financial Turnover in the Most Recent Years and Up to the Date of Publication of the Annual Report of the Company and Its Affiliated Company: None.

VII. Review of Financial Conditions, Operating Results, and Risk Management

I. Analysis of Financial Status

Unit: NT$ thousands

Item / Year	2019	2018	Difference Amount	Difference %
Current assets	55,165,633	57,260,849	-2,095,216	-3.66
Financial assets measured based on fair value through other comprehensive profits and losses	332,185	1,204,924	-872,739	-72.43
Financial assets measured by post-amortization costs	267,612	281,366	-13,754	-4.89
Investment measured by using equity method	3,248,537	2,041,896	1,206,641	59.09
Property, plant and equipment	40,276,715	37,438,555	2,838,160	7.58
Intangible assets	3,227,583	3,649,397	-421,814	-11.56
Other assets	6,865,231	2,108,328	4,756,903	225.62
Total assets	109,383,496	103,985,315	5,398,181	5.19
Current liabilities	30,160,394	30,153,693	6,701	0.02
Non-current liabilities	30,607,061	25,917,757	4,689,304	18.09
Total liabilities	60,767,455	56,071,450	4,696,005	8.38
Equity capital (including equity capital to be written off)	5,862,217	5,862,877	-660	-0.01
Capital surplus	21,072,595	21,757,292	-684,697	-3.15
Retained earnings	3,566,891	2,332,634	1,234,257	52.91
Other equity interest	-3,831,462	-3,071,087	-760,375	-24.76
Non-controlling interest	21,945,800	21,032,149	913,651	4.34
Total shareholder’s equity	48,616,041	47,913,865	702,176	1.47

Note 1: Explain the main reasons for the major changes in assets, liabilities and shareholders' equity in the last two years (those with changes of more than 20% in the early and late stages and the amount of changes of NT$ 10 million) and their effects and future plans.

Description 1:

(1) Financial assets measured based on fair value through other comprehensive profits and losses: Mainly due to investments in the sale of shares and the transfer of equity methods.

(2) Investment measured by using equity method: Mainly due to the investment of financial assets measured based on fair value through other comprehensive profits and losses.

(3) Other assets: Mainly due to the increase of the cash from the overseas fund’s returning.

(4) Retained earnings: Mainly due to the disposal of the financial assets measured based on fair value through other comprehensive profits and losses as well as the continued gain of the profit.

(5) Other equity interest: Mainly due to the disposal of the financial assets measured based on fair value through other comprehensive profits and losses.

II. Analysis of Operation Results

(I) Comparative analysis of operation results

Unit: NT$ thousands

Item \ Year	2019	2018	Variation ratio	
			Increased or decreased amount	(%)
Operating revenues	65,510,225	69,238,945	-3,728,720	-5.39
Operating costs	46,242,686	50,597,092	-4,354,406	-8.61
Gross profit from operations	19,267,539	18,641,853	625,686	3.36
Operating expenses	5,752,118	5,464,348	287,770	5.27
Net operating profit	13,515,421	13,177,505	337,916	2.56
Non-operating income and expenses	408,748	140,728	268,020	190.45
Pre-tax net income	13,924,169	13,318,233	605,936	4.55
Income tax expenses	5,028,824	4,682,753	346,071	7.39
Net income for the current period	8,895,345	8,635,480	259,865	3.01
Total comprehensive income in the current period	7,998,871	8,581,630	-582,759	-6.79

Description of analysis on the change in the ratio of increase to decrease:

1. Non-operating income and expenses: Mainly due to the increased interest income.

III. Analysis of Cash Flow

(I) Liquidity analysis in the last two years

Item \ Year	2019	2018	Variance (%)
Cash Flow Ratio (%)	62.44%	119.68%	(57.24%)
Cash Flow Adequacy Ratio (%)	181.54%	192.05%	(10.51%)
Cash Reinvestment Ratio (%)	13.42%	28.29%	(14.87%)

Description of analysis on the change in the ratio of increase to decrease:

1. The decrease is mainly due to the company collected contract liabilities last year.

(II) Cash Flow Analysis for the Coming Year

Unit: NT$ thousands

Cash, Beginning of Year	Net Cash Flow from Operating Activities	Cash Outflow	Cash Surplus (Deficit)	Leverage of Cash Deficit	
				Investment Plans	Financing Plans
34,901,425	7,369,541	(14,594,543)	26,866,423	—	—

1. Cash Flow Analysis of 2020:
   A. Business activities: With the change in the solar portfolio, the aggressive development of power plants, and the profit from the operation of the semiconductor business, this year will result in a net cash inflow from business activities.
   B. Investment activities: The Company receives cash dividends from the investment company and pay for domestic investment, capital expenditure and distributed dividends with them.
   C. Financial activities: Mainly via repayment (borrowing) of loans and payment of dividends.
2. The remedial measures and liquidity analysis of the anticipated cash shortfall: None.

IV. Major Capital Expenditure Items influence on Financial Business

(I) The use of major capital expenditures and sources of funds: None.

(II) Major capital expenditures are expected to yield benefits: None.

V. Recent Reinvestment Policy, Major Reasons for Profits or Losses, Improvement Plan and Investment Plan for the Following Year

1. Reinvestment policy

   The Company's reinvestment policy is based on the Company's future direction of operation and implemented step by step. At this stage, the strategy alliance or reinvestment shareholding of various business links with higher added value in the supply chain of solar energy industry is used to provide comprehensive operation results.
2. Major reasons for profits or losses of reinvestment, improvement plan and investment plan for the next year

Unit: NT$ thousands

Reinvestment Company	2019 Recognized (Losses) Profits	Main Causes of Profits or Losses	Improvement Plan	Investment Plan for the Next Year
Sino Silicon Technology Inc.	11,694	This is mainly the interest generated by fixed deposit and exchange of banks.	None	None
GlobalWafers Co., Ltd.	6,981,683	This is mainly due to the profits generated by the hot semiconductor market.	None	None
Crystalwise Co., Ltd.	(307,020)	Mainly due to reduction of market demand of LED/LT/LN	Accelerate the development of new products to enhance added value.	None
Zhenmeijing Energy Co., Ltd.	(713)	Mainly due to a small number of tenders in the power plant	Accelerate tenders of the power plant	None
Aleo Solar GmbH	161,178	The development of solar modules in the European market is stable	Accelerate the development of efficient niche products to increase added value.	None
Aleo Solar Distribuzione Italia S.r.l	4,652	The development of solar modules in the European market is stable	Develop new products.	None
Aleo Sunrise GmbH	(194,488)	Processing the liquidation operation.	None	None
SAS Sunrise Inc.	(52,533)	Cayman Holdings, an overseas power plant	None	None
SAS Sunrise Pte. Ltd.	(25,460)	Singapore Holding, an overseas power plant	None	None
Sulu Electric Power and Light Inc.	(39,740)	The electricity tariff of overseas power plants has not yet been confirmed.	Actively seek strategic investment partners, combine with local energy companies, and confirm electricity tariff as soon as possible.	None
Sunrise PV World Co.	29,597	Mainly due to the power plant opening is highly competitive	None	None
Cathay Sunrise Corporation	8,847	Defects in the project of the power plant development case, resulting in reduced profit.	None	None
Taiwan Specialty Chemicals Co., Ltd.	(78,333)	Product sales are not up to the scale	Actively develop customers and create turnover	None
Sunrise PV Electric Power Five	(11)	Domestic power plant development	None	None
Actron Technology Corporation	12,458	Automotive semiconductor market is active.	None	None
Sunrise PV Three Co., Ltd.	1,488	Power generation business	None	None
Sunrise PV Four Co., Ltd.	449	Power generation business	None	None

Unit: NT$ thousands

Name of Reinvestment Undertakings	Investment (Losses) Profits Recognized in 2019	Main Causes of Profits or Losses	Improvement Plan	Investment Plan for the Next Year
GlobalWafers Inc.	2,074,206	The business condition is normal	None	None
GlobalSemiconductor Inc.	202,929	The business condition is normal	None	None
GlobalWafers Japan Co., Ltd.	1,903,960	Business and profits are stable	None	None
GWafers Singapore Pte. Ltd.	4,249,594	The business condition is normal	None	None
Topsil GlobalWafers A/S	51,353	The business condition is normal	None	None
Hongwang Investment Co., Ltd.	20,331	The business condition is normal	None	None
Taisil Electronic Materials Corp.	3,563,769	Business and profits are stable	None	None
Kunshan Sino Silicon Technology Co., Ltd.	195,307	The business condition is normal	None	None
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	(12,917)	The business condition is normal	None	None
MEMC Japan Ltd.	227,673	Business and profits are stable	None	None
Topsil Semiconductor sp z o.o.	13,719	The business condition is normal	None	None
GlobalWafers Singapore Pte. Ltd.	6,223,239	Business and profits are stable	None	None
GlobalWafers B.V.	3,547,609	The business condition is normal	None	None
MEMC Electronic Materials, SpA	1,425,916	Business and profits are stable	None	None
MEMC Electronic Materials France SarL	753	The business condition is normal	None	None
MEMC Electronic Materials GmbH	(617)	The business condition is normal	None	None
MEMC Holding B.V.(Note 1)	414,476	The business condition is normal	None	None
MEMC Korea Company	1,270,737	Business and profits are stable	None	None
GlobiTech Incorporated	947,639	Business and profits are stable	None	None
MEMC LLC	178,816	The business condition is normal	None	None
MEMC Electronic Materials SDN BHD	75,835	The business condition is normal	None	None
MEMC Ipoh Sdn Bhd	236	The business condition is normal	None	None
SunEdison Semiconductor Technology (Shanghai) Ltd	(557)	The business condition is normal	None	None

Note 1: MEMC Holding B.V was eliminated on September 3, 2019 due to the merger with GlobalWafers B.V.

VI. Risk Management and Assessment

(I) The organizational structure of the Company's risk management, its implementation and responsible units are as follows:

1. Board of Directors: Pay attention to relevant government decrees at all times, review relevant company management measures, and ensure the effectiveness of company management rights and operational risk management.
2. President’s Office: It is mainly responsible for evaluation and execution of response strategies of business decision-making risks, legal risks of the Company, and employee crisis risk management.
3. Audit Office: Mainly link the Company's objectives, risk tolerance and strategies, and actively assist company managers to deal with all the interrelated risks of the whole enterprise.
4. MIS: The responsible unit for the evaluation and execution of network information security and operational risks.
5. Administration: Responsible unit for the evaluation and control of human resources allocation and response, and the evaluation and execution of response strategies of relevant legal business and compliance.
6. Finance & Accounting Dept.: Responsible unit for the evaluation and execution of response strategies of relevant financial risk management of the Company, mainly for the evaluation and control of interest rate, exchange rate and financial risk, liquidity risk and credit risk.
7. Procurement: The executing unit which avoids the risk that the purchaser will drive up the price because of monopoly and avoids the risk of concentration of the purchasers.
8. Sales: Responsible unit for the evaluation and execution of response strategies of market risks, and customer accounts receivable management, in order to reduce risks of the Company's order receiving process.
9. Manufacturing: mainly responsible for product production, yield and abnormality management, use and scrap of raw materials, and capacity expansion planning and implementation.
10. R&D: Responsible unit for the evaluation and execution of response strategies for product design and process risks and product life cycle risks.
11. The Company systematically manages and controls risks of the products and processes.

Execution and responsible units: R&D unit is responsible for new product development, risk identification, evaluation and control of derivative products and other activities. Business unit is responsible for information monitoring after product launching, collection and customer feedback. The quality assurance, manufacturing, legal and intellectual property units are responsible for assisting the relevant processes of the process.

Responding measures: In the early stage of new product development, R&D unit began to analyze the patent distribution of international competitors based on TIPS and APQP operating system, formulated R&D strategies to avoid patent infringement, ensured the rights and interests of the Company and customers, and continuously grasped the world's technological trends in the process of product development and production, so as to respond to changes in product life cycle in advance.

The process unit regularly reviews whether it should introduce new processes or overcome the deficiencies of existing processes according to the functions of products and customer complaints, in order to prevent product risks.

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

(1) Changes in interest rates

The Company and subsidiaries have sound financial health and good credit history, allowing more favorable credit terms from financial institutions, that the Company can enjoy better terms on the cost of borrowing. The loans according to the real capital needs include short-term borrowings and medium- to long-term borrowings. The Company considers the cost of funds and repayment conditions as the benchmarks for the evaluation to the term of a loan. The Company will adjust financing tools to reduce the risk of interest rate fluctuation according to the fluctuation of interest rate.

(2) Exchange rate fluctuation

The foreign currency positions of the Company's and subsidiaries' purchase and sale transactions are based on the principle of natural hedging between the liabilities and asset positions. To minimize the net positions exposed to the fluctuation of exchange rates, the finance department closely monitors the exchange rate trend. If necessary, the Company will also use foreign exchange instruments for the purpose of hedging to reduce the impact of exchange rate fluctuations on operating costs.

(3) Inflation

There has been no significant influence in the Company's profit and loss in recent years due to inflation, so in terms of cost, inflation did not have a significant impact in 2019. The Company will continue to pay attention to the situation of inflation and take corresponding measures and make adjustments when necessary.

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

(1) According to policy considerations, the Company is not engaged in high-risk and highly leveraged investment.

(2) The Company and its subsidiaries are engaged in lending of funds, endorsement and guarantee and financial derivatives transactions in accordance with the Procedures for Lending Funds to Others, Procedures for Endorsement and Guarantees, Procedures for Financial Derivative Transactions and relevant regulations of the competent authorities and to make regular audit and announcement. The executing unit also makes internal audit and supervision in accordance with relevant management measures, which will not result in risks to operation.

(IV) Future Research & Development Projects and Corresponding Budget

Recent Annual Plan	Completion (%)	Expected Research Expenditure	Expected Completion Schedule	Main Influencing Factors of the Success of Future R&D
Technique Development of Ultra High Efficiency P-Type Mono-Si Solar Cell	P-Type Mono Celco Efficiency ~ 22.50%	NTD 250,000,000	September 2020	Introduction of advanced process technology and materials
Technique Development of Very High Efficiency P-Type Mono-Si Bi-facial Solar Cell	P-type Mono Bifacial Celco Efficiency = 22.50%(Front) / 15.00%(Rear)	NTD 50,000,000	September 2020	Introduction of advanced process technology and materials
Development of Ultra High Efficiency N-Type Mono-Si Solar Cell Technology	In R&D	NTD 460,000,000	March 2021	Development and introduction of new process technologies

(V) Effects of and Response to Changes in Policies and Regulations Relating to Corporate Finance and Sales in Recent Years at Home and Aboard:

Except that our daily operations are regulated by the relevant laws and regulations at home and abroad, the Company always pays attention to the development trend and change of policies and regulations at home and abroad, in order to fully grasp the changes of market environment, and timely take the initiative to propose response measures. Up to the date of publication of the prospectus, our group has not been affected by major changes in policies and laws at home and abroad.

(VI) Effects of and Response to Changes in Technology and the Industry Relating to Corporate Finance and Sales in Recent Years:

Looking forward to this year, large plants will continuously expand single crystal PERC, solar energy industry has put emphasis on single crystal over polycrystal. The polycrystal is over-supply and price is difficult to rise. The continuous price dropping in the supply chain make solar energy to move towards the direction of getting rid of subsidies and reach grid parity; and the popularity of non-subsidized systems and their actual Levelized Cost of Energy (LCOE) will become the price indicators of future supply chains. At present, there is a strong wait-and-see atmosphere in the market. The Company will continuously observe the market situation and take the following response measures.

(1) Maintain the leading advantages of solar cell technology simplify product categories and develop low-cost and high-efficiency cells, and serve customers via our vertical integration, thereby increase customers' willingness to switch to our products.

(2) Expedite development of new technologies and new products, and continuously invest in high-efficiency polycrystal ingot growth and the development of precision processing technology of customized silicon ingot, in order to create the core competitiveness.

(3) Actively expand the deployment of solar power generation system, respond to the government's policy of vigorous promotion of renewable energy, invest in new business opportunities after Taiwan's solar installation tide, and accumulate the integration capacity of after-sales operations and maintenance of power plant through the investments in Taiwan's solar power plant.

(VII) The Impact of Changes in Corporate Image on Corporate Risk Management, and the Company’s Response Measures in Recent Years:

Since its establishment, the Company has adhered to the business philosophy of "integrity, professionalism, teamwork and innovation", emphasizes the principle of integrity, stimulates individual creativity with cordiality, dedication, activeness and professionalism, and demonstrates the Company's unique culture through the tacit understanding of the team, and continuous innovation of technologies and management. In April 2020, the Company was awarded "Top 5% of TPEx Listed Companies" in the 6^{th} (2019) Corporate Governance Evaluation Ranking, which witnessed the Company's determination to strive for transparency, integrity and sustainable operation. At the same time, the Company will continue to adhere to the principle of good faith to show the blueprint of corporate governance, and strengthen the Company's structure to improve business performance and implement corporate social responsibility.

(VIII) Expected Benefits from, Risks Relating to and Response to Merger and Acquisition Plans in Recent Years:

Up to the date of publication of the annual report, the Company has no plan for merger and acquisition.

(IX) Expected Benefits from, Risks Relating to and Response to Factory Expansion Plans in Recent Years:

In December 2019, the board of directors of the company approved the purchase of plant and equipment from the affiliated company, Crystalwise Technology Inc. Facing the sluggish solar market, the Company will continue to launch innovative products with high conversion efficiency and stability. Through restless technology refinement and sales strategy of differentiated products policy, the Company successfully builds its core competitiveness by accurately seizing customers demand and providing customers with complete products and services, striving for more business opportunities. The Company will also plan the use of plants depending on the future operation and development.

(X) Risks Relating to and Response to Excessive Concentration of Purchasing Sources and Excessive Customer Concentration in Recent Years: None.

(XI) Effects of, Risks Relating to and Response to Large Share Transfers or Changes in Shareholdings by Directors, Supervisors, or Shareholders with Shareholdings of over 10% in Recent Years: No such situation.

(XII) Effects of, Risks Relating to and Response to the Changes in Management Rights in Recent Years: None.

(XIII) Litigation or Non-litigation Matters in Recent Years: major litigation, non-litigation or administrative litigation matters in which the Company and its directors, supervisors, Presidents, substantive responsible persons, major shareholders with over 10% shareholdings and affiliated companies which have been judged or are still in attribution should be listed. If the results may have a significant impact on shareholders' rights and interests or securities prices, the facts of the dispute, the amount of the subject matter, the date of commencement of the litigation, the principal parties involved and the handling of the case up to the date of publication of the annual report should be disclosed:

In March 2015, Hemlock Semiconductor Pte. Ltd. filed a lawsuit against the Company in New York State Court to claim compensation from the Company for breach of some silicon raw material supply contracts. In this case, agreement was reached between the two parties in May 2016, March 2018, February 2019, July 2019 and December 2019. The two parties stopped litigation until May 31, 2020.

(XIV) Other Major Risks:

Key Performance Indicator (KPI)

As the Company is in the manufacturing industry, the following key indicators are important benchmarks affecting the Company:

1. Financial structure:

   In 2019, the accounts receivable turnover of the Company was 7.13 times, the average collection period was 51.19 days, the inventory turnover was 6.05 times, the property, plant and equipment was 1.69 times and the total assets turnover was 0.61 times. Among them, "the accounts receivable turnover" and "the average collection period" are important indicators affecting the use of funds of the Company.

2. Customer structure:

   Customer satisfaction, customer complaint application and after-sales service ability are indicators considered by the Company. The average score of customer satisfaction of the Company in 2019 was 8.3 out of 10. In the detailed evaluation items of SAS, delivery, quality and overall service and product innovation these three main aspects were scored average 8.63(total 10 scores) after weighted. Compared with the results of previous years, the satisfaction score was stable and positive, which showed the Company is approved and recognized by the customers.

3. Internal process structure indicators:

   The Company's inventory turnover was 6.05 times in 2019. There are relevant internal procedures to control the rate of non-performing purchases. In addition, the delivery date and place specified by customers can be achieved on time.

4. Learning and growth structure indicators:

   The total person-time of internal and external training of employee education and training was 34,739. The information system capability of employees is regularly promoted by the Company through internal education and training. As of the date of publication of the annual report in 2019, 273 patents have been obtained at home and abroad.

VII. Other Major Events:

(I) (I)Information security risk evaluation and response measures:

The Company's information system is subject to annual information system and information security inspection led by the auditing unit, and the status of information security governance is regularly reported to the Board of Directors.

The main axis of information security strategy includes information security governance (executed according to the management measures for information security policy with timely introduction of new technologies to improve information security governance ability), compliance with laws (regular review of new regulations, and introduction of new technology products to enhance information security management), and application of science and technology (cooperation with well-known professional information security manufacturers to improve information security management ability). Through close combination, mutual support, and continuous improvement and optimization, the overall information security defense ability is improved.

In view of the current emerging trends of information security, such as DDoS attacks, extortion software, social engineering software, website record and bugs, the Company exchanges with well-known information security manufacturers every year (has become a member of SP-ISAC). Through project cooperation, it focuses on information security issues, makes response plan, conducts DDoS and APT offensive and defensive drill for different information security situations, and improve the responsiveness of the handling personnel, in order to detect and block in the first time.

In the first half of 2019, KPMG was commissioned to conduct an offensive and defensive drill of information security. The result of the drill was submitted to the Board of Directors (19 recommendation items, no deficiency). In 2020, the Company will keep working on the progress of improving the information security.

Considering that information security insurance is still a new type of insurance, which involves the relevant supporting facilities such as information security grade testing institutions, claim recognition and non-payment conditions, it needs to be evaluated before deciding whether to purchase information security insurance. The follow-up objectives will be to give priority to complete related norms of information security, make regular information security inspections, continuously strengthen information security protection and establish the joint defense mechanism, to be more active in the training of information security talents, and increase the training hours of information security-related courses year by year, so as to improve the ability of information security control and management.

(II) Intellectual property management and risk countermeasures:

Intellectual property management strategy

"Enhancing Innovation Capability" and "Strengthening Confidentiality Mechanism" is the two main management strategies of SAS. Not only performing independent research and development base on innovation capabilities but also via technological-industrial cooperation or strategic alliances to stimulate technological capabilities. As for the confidentiality mechanism, strengthen the control of various business secrets as well as establish specifications for the use of electronic mail and electronic storage devices in order to reduce the risk of confidential leakage.

Intellectual property management system

SAS began to introduce the "Taiwan Intellectual Property Management System (TIPS)" system in 2010, and gradually established an intellectual property management system, which included a patent management system for e-management and the use of a patent search system to improve the effectiveness of previous cases. At the same time, the Company conducts internal audits regularly to implement the management system. The Company successfully passed TIPS in-depth verification in 2012 and revised AA level verification in 2016, and has continued to introduce TIPS until now.

Possible risks and countermeasures

The Company implements confidentiality controls of personnel, equipment, environment, documents, etc., to prevent leakage by series of measures such as convening business secret training courses to strengthen employees' concept of confidentiality protection; with regards to equipments, through control measures over outbound email and electronic storage (USB) devices outbound e-mail, photo shooting in restricted areas; classify documents with clear definition and full implementation of authority management. With so many measures taken, SAS successfully manages confidential information and minimizes the risks of leakage.

Key achievements

The following list is the Company's participation in national R&D projects subsidized by the government, demonstrating the Company's abundant innovations. At the same time, the company owns 65 valid patents accumulatively, among which 57 are certified, 8 are under application. The subsidiary GlobalWafers Group's global valid patents have exceeded 1,300, of which the cumulative number of certified patents has reached 859 (as of 2019 end).

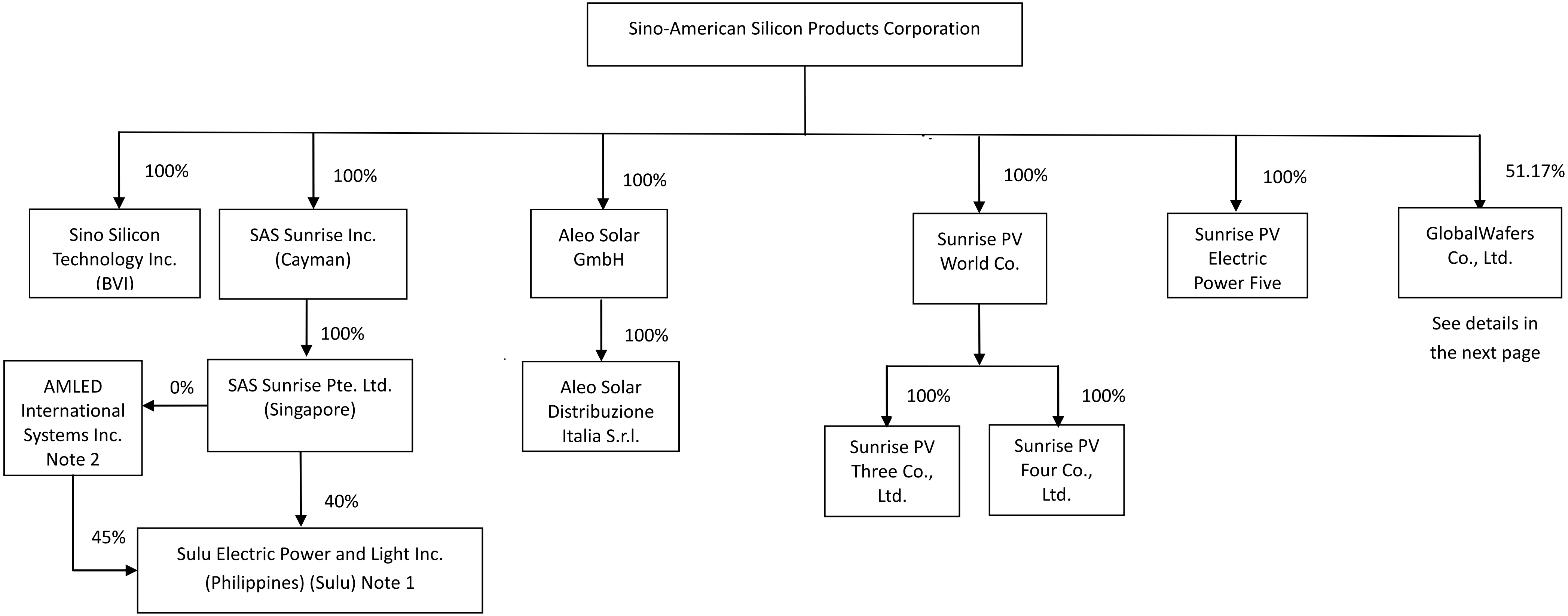
Subsidy Given Agency	Project Tile	Execution Period
Ministry of Economic Affairs, R.O.C.	Next generation high quality, robust DS-solar wafer and ultra high cell efficiency solar cell critical technology/material development project.	2017.09.01~2019.02.28
Ministry of Economic Affairs, R.O.C.	Silicon solar wafer high efficiency slicing diamond wire development project.	2017.02.10~2018.06.09
Ministry of Economic Affairs, R.O.C.	Next generation ultra high efficiency, ultra low power consumption 1.5 ton grade solar multi-crystalline ingot growth and ultra low reflectance wafer technology development.	2016.01.01~2016.12.31
Ministry of Economic Affairs, SR.O.C.	900 KG grade low power consumption, high quality solar multi-crystalline ingot growth heat/flow hotzone design and ingot growth technology development.	2015.01.01~2015.12.31

VIII. Special Disclosure

I. Affiliated Businesses

(I) Affiliated Business Consolidated Business Report

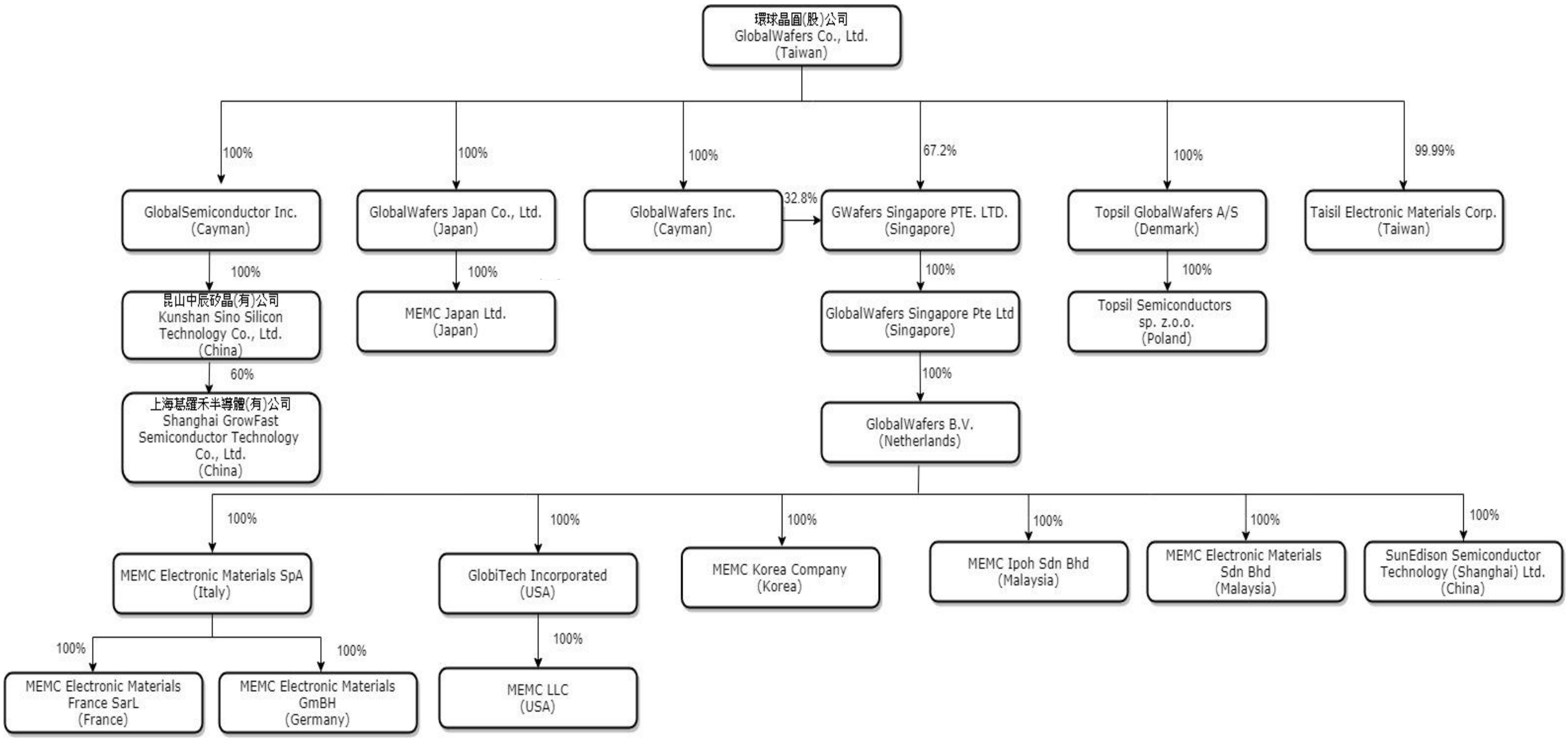
1. Affiliated Company Chart



Note 1: Although the merger company has less than 50% of Sulu's voting rights, it can control the Company's financial and operational strategies through effective agreements with other investors of Sulu, so Sulu is regarded as a subsidiary company.

Note 2: Although the merger company does not hold the owner's rights and interests of AMLED, AMLED is regarded as a subsidiary company because it can control the Company's financial and operational strategy and obtain all the benefits of its operation and net assets in accordance with the terms and conditions of the agreement signed by such individuals.

2019.12.31


環球晶圓(股)公司
GlobalWafers Co., Ltd.
(Taiwan)
100%
GlobalSemiconductor Inc.
(Cayman)
100%
GlobalWafers Japan Co., Ltd.
(Japan)
100%
GlobalWafers Inc.
(Cayman)
32.8%
67.2%
GWafers Singapore PTE. LTD.
(Singapore)
100%
Topsil GlobalWafers A/S
(Denmark)
99.99%
Taisil Electronic Materials Corp.
(Taiwan)
100%
昆山中辰矽晶(有)公司
Kunshan Sino Silicon Technology Co., Ltd.
(China)
60%
上海崑躍禾半導體(有)公司
Shanghai GrowFast Semiconductor Technology Co., Ltd.
(China)
100%
MEMC Japan Ltd.
(Japan)
100%
GlobalWafers Singapore Pte Ltd
(Singapore)
100%
GlobalWafers B.V.
(Netherlands)
100%
Topsil Semiconductors sp. z.o.o.
(Poland)
100%
MEMC Electronic Materials SpA
(Italy)
100%
GlobiTech Incorporated
(USA)
100%
MEMC Korea Company
(Korea)
100%
MEMC Ipoh Sdn Bhd
(Malaysia)
100%
MEMC Electronic Materials Sdn Bhd
(Malaysia)
100%
SunEdison Semiconductor Technology (Shanghai) Ltd.
(China)
100%
MEMC Electronic Materials France SarL
(France)
100%
MEMC Electronic Materials GmBH
(Germany)
100%
MEMC LLC
(USA)

2. Basic information of affiliated companies

December 31, 2019 Unit: NT$ thousands

Enterprise Name	Date of Incorporation	Address	Paid-in Capital	Major Business or Production Items
Sino Silicon Technology Inc.	1999/08/05	3rd Floor, Omar Hodge building, Wickhams Cay 1, P.O. Box 362, Road Town, Tortola British Virgin Islands	USD 48,526	Investment holding and international trade business
GlobalWafers Corporation	2011/10/01	No. 8, Industrial East Second Road, Hsinchu Science Industrial Park	NTD 4,372,500	Manufacturing and sales of semiconductor silicon materials and components
Aleo Solar GmbH	2014/01/23	Marius-Eriksen-Str.1,17291 Prenzlau, Germany	EUR 13,500	Manufacturing and sales of solar modules
Aleo Solar Distribuzione Italia S.r.l	2014/05/16	Viale Trento e Trieste 12/A 31100 Treviso, Italy	EUR 100	Sales of solar modules
SAS Sunrise Inc.	2015/06/04	Floor 4, Willow House, Cricket Square, P O Box 2804, Grand Cayman KY1-1112, Cayman Island	USD 24,500	Investment in various businesses
SAS Sunrise Pte. Ltd.	2015/12/01	8 Wilkie Road #03-01 Wilkie edge Sinagpore	USD 22,000	Investment in various businesses
Sulu Electric Power and Lights Inc.	2014/01/17	Eastwood, New National Highway, Barangay Salvacion, Municipality of Palo, Leyte, Philippines	PHP 1,050,000	Power generating business
AMLED International Systems Inc.	2016/01/09	3B Bakawan Bldg., Westmont Village, 8227 Dr. Santos Ave., Paranaque city, Philippines	PHP 187,500	Investment in various businesses
Sunrise PV World Co.	2015/12/09	2F, No. 1, Second Section, Ligong First Road, Chengxing Village, Wujie Township, Yilan County	NTD 300,000	Power generating business
Sunrise PV Three Co., Ltd.	2017/04/14	2F, No. 1, Second Section, Ligong First Road, Chengxing Village, Wujie Township, Yilan County	NTD 15,000	Power generating business
Sunrise PV Four Co., Ltd.	2017/04/14	2F, No. 1, Second Section, Ligong First Road, Chengxing Village, Wujie Township, Yilan County	NTD 15,000	Power generating business
Sunrise PV Electric Power Five	2019/11/21	2F, No. 1, Second Section, Ligong First Road, Chengxing Village, Wujie Township, Yilan County	NTD 1,000	Power generating business

December 31, 2019 Unit: NT$ thousands

Enterprise Name	Date of Incorporation	Address	Paid-in Capital	Major Business or Production Items
GlobalWafers Inc.	2011/05/03	2nd Floor, The Grand Pavilion Commercial Centre, 802 West Bay Road, P.O. Box 10338,Grand Cayman KY1-1003, Cayman Islands	USD 0.001	Investment in various businesses and triangular trade center with subsidiaries in China
GlobalSemiconductor Inc.	2011/05/03	2nd Floor, The Grand Pavilion Commercial Centre, 802 West Bay Road, P.O. Box 10338,Grand Cayman KY1-1003, Cayman Islands	USD 26,555	Investment in various businesses
GlobalWafers Japan Co.,Ltd.	1991/06/18	6-861-5 Seiro-machi Higashiko, Kitakanbara-gun, Niigata 957-0197 Japan	JPY 6,967,000	Manufacturing and trading of semiconductor silicon wafer
GWafers Singapore Pte. Ltd.	2016/02/02	9 Battery Road,15-01 MYP Centre, Singapore, 049910	USD 541,674	Investment in various businesses
Topsil GlobalWafers A/S	2016/07/01	Siliciumvej 1, 3600 Frederikssund, Copenhagen, Denmark	DKK 1,000	Manufacturing and trading of semiconductor silicon wafer
Taisil Electronic Materials Corp.	1994/09/26	No. 2, Creation Road 1, HsinChu Science Park, Hsin chu, Taiwan	NTD 100,000	Manufacturing and sales of semiconductor silicon wafer
Kunshan Sino Silicon Technology Co., Ltd.	1999/08/17	No. 303, Hanpu Road, Chengbei High-tech Industrial Park, Kunshan City, Jiangsu Province, China	USD 26,555	Processing trade of silicon ingot, silicon wafer, etc.
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	2016/05/20	Room 2013 B, Building C, No. 155 ,Fute West Road, China (Shanghai) Free Trade Pilot Area	RMB 5,000	Sales and marketing business
MEMC Japan Ltd.	1979/12/11	11-2 Kiyohara Industrial Park, Utsunomiya City, Tochigi 3213296 Japan	JPY 100,000	Manufacturing and sales of semiconductor silicon wafer
Topsil Semiconductor sp z o.o.	2008/10/01	133 Wolczynska St., 01-919 Warsaw, Poland	PL 5	Manufacturing and trading of semiconductor silicon wafer
GlobalWafers Singapore Pte. Ltd.	2013/12/20	9 Battery Road,15-01 MYP Centre, Singapore, 049910	SGD0.001 USD 544,875	Investment, marketing and trade business
GlobalWafers B.V.	2013/11/26	A tower, 7 floor, Laan van Langerhuize 1, 1186 DS Amstelveen, The Netherlands	USD 0.1	Investment in various businesses
MEMC Electronic Materials, SpA	1960/01/29	Viale Gherzi, 31 28100 Novara, Italy	EUR 31,200	Manufacturing and sales of semiconductor silicon wafer
MEMC Electronic Materials France SarL	1998/07/27	5-7 BLD EDGAR QUINET 92700 COLOMBES, France	EUR 16	Trade business
MEMC Electronic Materials GmbH	1998/02/10	c/o Rene Schaeffler-Steinsdorfstr, 13, D-80538 Muenchen, Germany	EUR 0.2	Trade business
MEMC Korea Company	1990/12/18	854, Manghyang-ro, Sunggeo-eup, Cheonan-si, Chungchongnam-do, Korea	KRW 126,000,000	Manufacturing and sales of semiconductor silicon wafer

Enterprise Name	Date of Incorporation	Address	Paid-in Capital	Major Business or Production Items
GlobiTech Incorporated	1998/12/15	200 FM 1417 West/Sherman, TX 75092, U S A	USD 0.001	Epitaxial silicon wafer production, epitaxy processing and other trades
MEMC LLC	2013/08/28	501 Pearl Drive St. Peters, MO 63376, USA	USD 0.01	R&D, manufacturing and sale of semiconductor silicon wafers
MEMC Electronic Materials, Sdn Bhd	1972/06/15	Sungai Way Free Industrial Zone, 47300 Petaling Jaya, Selangor Darul Ehsan, Malaysia	MYR 1,036	R&D, manufacturing and sale of semiconductor silicon wafers
MEMC Ipoh Sdn. Bhd.	2007/10/10	Unit 30-01, Level 30, Tower A, Vertical Business Suite, Avenue 3, Bangsar South, No 8, Jalan Kerinchi, Kuala Lumpur	MYR 612,300	R&D, manufacturing and sale of semiconductor silicon wafers
SunEdison Semiconductor Technology (Shanghai) Ltd	2015/04/25	Room 03B, Floor 16, Jiaqi Building, 666 Gubei Road, Changning District, Shanghai, China	RMB 1,500	Trade business

3. The same shareholder information presumed to have a controlling and subordinate relationship: None.

4. Industries covered by the operation of affiliated companies: Detailed information of affiliated companies please find in the basic information that listed.

5. Information of directors, supervisors and managers of affiliated companies

December 31, 2019

Enterprise Name	Title	Name or Representative	Shareholding	
			Number of Shares	Proportion
Sino Silicon Technology Inc.	Director	Sino-American Silicon Products Corporation Representative: Ming-Kuang Lu	48,526	100%
GlobalWafers Corporation	Chairman and CEO	Hsiu-Lan Hsu	222,727	51.17%
	Director	Sino-American Silicon Products Corporation Representative: Ming-Kuang Lu		
	Director	Sino-American Silicon Products Corporation Representative: Tang-liang Yao		
	Director	Chen Guozhou		
	Independent Director	Zheng Jiqiong		
	Independent Director	Zheng Zhengyuan		
Aleo Solar GmbH	No Board of Directors		—	100%
Aleo Solar Distribuzione Italia S.r.l	No Board of Directors		—	100%
SAS Sunrise Inc.	Director and President	Sino-American Silicon Products Corporation Representative: Huang Zhenghong	24,500	100%
	Director	Sino-American Silicon Products Corporation Representative: Ming-Kuang Lu		
	Director	Sino-American Silicon Products Corporation Representative: Hsiu-Lan Hsu		
SAS Sunrise Pte. Ltd.	Director	Sino-American Silicon Products Corporation Representative: Ming-Kuang Lu	30,934	100%
	Director	Sino-American Silicon Products Corporation Representative: Hsiu-Lan Hsu		
	Director	Sino-American Silicon Products Corporation Representative: Tang-liang Yao		
	Director	Sino-American Silicon Products Corporation Representative: Huang Zhenghong		
	Director	Sino-American Silicon Products Corporation Representative: Woo Heng Thong		
Sulu Electric Power and Lights Inc.	Chairman	Sino-American Silicon Products Corporation Representative: Huang Zhenghong	892,500	85%
	Director and President	Ben-Hur F. Castillo		
	Director	Sino-American Silicon Products Corporation Representative: Mike Da Silva		
	Director	Sino-American Silicon Products Corporation Representative: Gilbert S. Castro		
	Director	Sino-American Silicon Products Corporation Representative: Dr. Arcelie T. Castillo		
AMLED international System	Director and President	Mike Da Silva	—	0%
	Director	Gilberto S. Castro		

Enterprise Name	Title	Name or Representative	Shareholding	
			Number of Shares	Proportion
	Director	Magdalena Dela Cruz		
	Director	Alfonso De la Cruz		
	Director	Thess Quicho		
Sunrise PV World Co.	Chairman	Sino-American Silicon Products Corporation Representative: Ming-Kuang Lu	30,000	100%
	Director and President	Sino-American Silicon Products Corporation Representative: Huang Zhenghong		
	Director	Sino-American Silicon Products Corporation Representative: Hsiu-Lan Hsu		
	Supervisor	Sino-American Silicon Products Corporation Representative: Tang-liang Yao		
Sunrise PV Three Co., Ltd.	Chairman	Representative of Sunrise PV World Co.: Corporation: Huang Zhenghong	1,500	100%
	Director	Representative of Sunrise PV World Co.: Hsiu-Lan Hsu		
	Director	Representative of Sunrise PV World Co.: Tang-liang Yao		
	Supervisor	Representative of Sunrise PV World Co.: Ming-huei Chien		
Sunrise PV Four Co., Ltd.	Chairman	Representative of Sunrise PV World Co.: Corporation: Huang Zhenghong	10,000	100%
	Director	Representative of Sunrise PV World Co.: Hsiu-Lan Hsu		
	Director	Representative of Sunrise PV World Co.: Tang-liang Yao		
	Supervisor	Representative of Sunrise PV World Co.: Ming-huei Chien		
Sunrise PV Electric Power Five	Chairman	Sino-American Silicon Products Corporation Representative: Ming-huei Chien	100	100%

<table>
<tr><th rowspan="2">Enterprise Name</th><th rowspan="2">Title</th><th rowspan="2">Name or Representative</th><th colspan="2">Shareholding</th></tr>
<tr><th>Number of Shares (Thousands)</th><th>Proportion</th></tr>
<tr><td>GlobalWafers Inc.</td><td>Director</td><td>Hsiu-Lan Hsu</td><td>90,000</td><td>100%</td></tr>
<tr><td>GlobalSemiconductor Inc.</td><td>Director</td><td>Hsiu-Lan Hsu</td><td>25,000</td><td>100%</td></tr>
<tr><td rowspan="6">GlobalWafers Japan Co., Ltd.</td><td>Chairman</td><td>Hsiu-Lan Hsu</td><td rowspan="6">128</td><td rowspan="6">100%</td></tr>
<tr><td>Vice Chairman</td><td>Takashi Araki</td></tr>
<tr><td>Director and President</td><td>Katsuaki Koutari</td></tr>
<tr><td>Director</td><td>Ming-Kuang Lu</td></tr>
<tr><td>Director</td><td>Tang-liang Yao</td></tr>
<tr><td>Supervisor</td><td>Chen Weiwen</td></tr>
<tr><td rowspan="4">GWafers Singapore Pte. Ltd.</td><td>Chairman</td><td>Hsiu-Lan Hsu</td><td rowspan="4">541,674</td><td rowspan="4">100%</td></tr>
<tr><td>Director</td><td>Tang-liang Yao</td></tr>
<tr><td>Director</td><td>Ming-Kuang Lu</td></tr>
<tr><td>Director</td><td>Chen Ye Huang</td></tr>
<tr><td rowspan="5">Topsil GlobalWafers A/S</td><td>Director</td><td>Hsiu-Lan Hsu</td><td rowspan="5">1,000</td><td rowspan="5">100%</td></tr>
<tr><td>Director</td><td>Chen Weiwen</td></tr>
<tr><td>Director</td><td>Hans Peder Mikkelsen</td></tr>
<tr><td>Director</td><td>Mauro Pedrotti</td></tr>
<tr><td>Director</td><td>Liang Shi</td></tr>
<tr><td rowspan="4">Taisil Electronic Materials Corp.</td><td>Chairman</td><td>Hsiu-Lan Hsu</td><td rowspan="4">9,999</td><td rowspan="4">99.99%</td></tr>
<tr><td>Director</td><td>Xue Yinsheng</td></tr>
<tr><td>Director</td><td>Mark England</td></tr>
<tr><td>Supervisor</td><td>Ming-huei Chien</td></tr>
<tr><td rowspan="6">Kunshan Sino Silicon Technology Co., Ltd.</td><td>Chairman</td><td>Tang-liang Yao</td><td rowspan="6">—</td><td rowspan="6">100%</td></tr>
<tr><td>Vice Chairman</td><td>Hsiu-Lan Hsu</td></tr>
<tr><td>Director and President</td><td>Ching-Chang Chin</td></tr>
<tr><td>Director</td><td>Hong Shengxiong</td></tr>
<tr><td>Director</td><td>Ming-huei Chien</td></tr>
<tr><td>Supervisor</td><td>Chen Weiwen</td></tr>
<tr><td rowspan="6">Shanghai GROWFAST Semiconductor Technology Co. Ltd.</td><td>Chairman</td><td>Ching-Chang Chin</td><td rowspan="6">—</td><td rowspan="6">60%</td></tr>
<tr><td>Director</td><td>Hsiu-Lan Hsu</td></tr>
<tr><td>Director</td><td>Hsien-Han He</td></tr>
<tr><td>President</td><td>Hong Shengxiong</td></tr>
<tr><td>Supervisor</td><td>Chen Weiwen</td></tr>
<tr><td>Supervisor</td><td>Takanori Suzuki</td></tr>
<tr><td rowspan="6">MEMC Japan Ltd.</td><td>Chairman</td><td>Hsiu-Lan Hsu</td><td rowspan="6">750</td><td rowspan="6">100%</td></tr>
<tr><td>Director and President</td><td>Katsuaki Koutari</td></tr>
<tr><td>Director</td><td>Masashi Sugahara</td></tr>
<tr><td>Director</td><td>Kobayashi Toru</td></tr>
<tr><td>Director</td><td>Hironobu Nakazawa</td></tr>
<tr><td>Supervisor</td><td>Chen Weiwen</td></tr>
<tr><td>Topsil Semiconductor sp z o.o.</td><td>Director</td><td>Hans Peder Mikkelsen</td><td>0.1</td><td>100%</td></tr>
</table>

Enterprise Name	Title	Name or Representative	Shareholding	
			Number of Shares (Thousands)	Proportion
GlobalWafers Singapore Pte. Ltd.	Director	Hsiu-Lan Hsu	299,445	100%
	Director	Mark Lynn England		
	Director	Chen Ye Huang		
GlobalWafers B.V.	Director	Hsiu-Lan Hsu	0.1	100%
	Director	Liang Shi		
MEMC Electronic Materials, SpA	Chairman	Mauro Pedrotti	65,000	100%
	Director	Ming-huei Chien		
	Director	Lu Zhihang		
	Director	Prof. Gianluigi Tosato		
	Supervisor	Richard Murphy		
	Supervisor	PierMario Barzaghi		
	Supervisor	Eleonora Guerriero		
MEMC Electronic Materials France SarL	Director	Marco Maffè	0.5	100%
MEMC Electronic Materials GmbH	Director	Marco Sciamanna	0.002	100%
MEMC Korea Company	Chairman	Charlie Cho	25,200	100%
	Director	Hsiu-Lan Hsu		
	Director	Mark England		
	Supervisor	Lu Zhihang		
GlobiTech Incorporated	Chairman and CEO	Hsiu-Lan Hsu	1	100%
	Director	Ming-Kuang Lu		
	Director	Tang-liang Yao		
	Director and President	Mark Lynn England		
	Director	Curtis Hall		
MEMC LLC	President	Mark England	—	100%
	Vice President	Rick Boston		
MEMC Electronic Materials, Sdn Bhd	Director	Ching-Chang Chin	1,036	100%
	Director	Tony Wang		
	Director	Joanne Leung		
	Director	Lu Zhihang		
MEMC Ipoh Sdn. Bhd.	Director	Ching-Chang Chin	612,300	100%
	Director	Tony Wang		
	Director	Joanne Leung		
SunEdison Semiconductor Technology (Shanghai) Ltd	Director and President	Hong Shengxiong	—	100%

6. General situation of operation of affiliated companies

Financial status and operating results of affiliated companies

December 31, 2019 Unit : NT$ thousands

Enterprise Name	Capital	Total Assets	Total Liabilities	Net Value	Operating revenues	Operating profit	After-tax Profits and Losses in the Current Period	After-tax Earnings Per Share (NT$)
Sino Silicon Technology Inc.	1,425,603	987,074	15,186	971,888	—	(2,647)	11,694	—
GlobalWafers Co., Ltd.	4,372,500	96,585,753	51,512,503	45,073,250	58,094,331	17,897,221	13,635,656	31.35
Aleo Solar GmbH	558,139	689,091	303,808	385,283	1,394,524	(79,710)	161,178	—
Aleo Solar Distribuzione Italia S.r.l	4,078	116,567	113,573	2,994	360,456	4,714	4,652	—
SAS Sunrise Inc.	794,373	592,802	131,685	461,117	—	(5,539)	(52,533)	—
Sulu Electric Power and Light Inc.	737,896	2,406,847	2,014,957	391,890	192,614	25,907	(46,753)	—
SAS Sunrise Pte. Ltd.	719,292	550,292	1,191	549,101	0	(229)	(25,460)	—
Sunrise PV World Co.	300,000	468,760	192,430	276,330	809,267	(30,826)	29,842	—
Sunrise PV Three Co., Ltd.	15,000	77,500	60,877	16,623	11,167	3,350	1,488	—
Sunrise PV Four Co., Ltd.	15,000	16,858	1,368	15,490	1,679	419	449	—
Sunrise PV Electric Power Five	1,000	989	—	989	—	(11)	(11)	

Enterprise Name	Capital	Total Assets	Total Liabilities	Net Value	Operating revenues	Operating profit	After-tax Profits and Losses in the Current Period	After-tax Earnings Per Share (NT$)
GlobalWafers Inc.	—	4,360,907	—	4,360,907	—	—	2,074,206	—
GlobalSemiconductor Inc.	796,119	1,521,431	—	1,521,431	38,665	6,880	202,929	—
GlobalWafers Japan Co., Ltd.	1,922,892	19,741,067	4,478,649	15,262,418	11,757,056	2,299,874	1,903,960	—
GWafers Singapore Pte. Ltd.	16,239,384	27,632,759	296	27,632,463	—	(4,228)	5,553,670	—
Topsil GlobalWafers A/S	4,490	2,071,845	410,984	1,660,861	1,399,300	101,463	64,041	—
Taisil Electronic Materials Corp.	100,000	21,824,889	4,095,164	17,729,725	12,667,111	4,314,147	3,546,184	—
Kunshan Sino Silicon Technology Co., Ltd.	796,119	1,825,253	400,153	1,425,100	1,851,849	216,041	195,307	—
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	21,525	66,237	53,525	12,712	417,648	(21,221)	(21,528)	—
MEMC Japan Ltd.	27,600	4,582,032	1,515,088	3,066,944	4,660,171	358,185	227,673	—
Topsil Semiconductor sp z o.o.	39	21,374	21,374	-	185,369	(18,673)	13,719	—
GlobalWafers Singapore Pte. Ltd.	16,335,356	49,670,008	24,518,302	25,151,706	23,360,081	2,972,671	6,223,239	—
GlobalWafers B.V.	3	47,157,382	6,238,833	40,918,549	-	(11,366)	3,547,609	—
MEMC Electronic Materials, SpA	1,048,008	14,471,886	2,622,569	11,849,317	10,785,175	1,621,589	1,425,916	—
MEMC Electronic Materials France SarL	537	4,672	3,865	807	—	1,214	753	—
MEMC Electronic Materials GmbH	7	5,503	686	4,817	—	(723)	(617)	—
MEMC Holding B.V.(Note 3)	—	—	—	—	—	690	414,476	—

MEMC Korea Company	2,227	19,787,060	4,413,357	15,373,703	7,113,580	1,528,358	1,270,737	—
GlobiTech Incorporated	—	10,437,093	950,306	9,486,787	6,162,601	892,733	947,639	—
MEMC LLC	—	4,925,480	662,247	4,263,233	2,456,737	(160,326)	178,816	—
MEMC Electronic Materials, Sdn Bhd	7,565	976,509	235,933	740,576	1,686,794	74,228	75,835	—
MEMC Ipoh Sdn Bhd	4,470,138	4,095	288	3,807	—	(269)	236	—
SunEdison Semiconductor Technology (Shanghai) Ltd	6,458	8,915	1	8,914	—	(815)	(557)	—

Exchanges rate on December 31, 2019 US Dollar: NTD = 29.98: 1 JPY: NTD = 0.276: 1 EUR: NTD = 33.59: 1

Note 1: All affiliated companies should be disclosed, regardless of their size.

Note 2: If an affiliated company is a foreign company, the relevant figures should be converted to NT$ at the exchange rate on the reporting date.

Note 3: MEMC Holding B.V merged with GlobalWafers B.V. and dissolved on September 3rd, 2019.

(III) Consolidated Statements of Affiliated Companies: Please refer to Annex I of this annual report (Consolidated Financial Report of 2019)

(IV) Report of Affiliated Companies: Not applicable

II. Private Placement Securities in the Most Recent Years: None.

III. The Shares in the Company Held or Disposed of By Subsidiaries in the Most Recent Years: None.

IV. Other Necessary Supplement: None.

V. Any Events And as of the Date of this Annual Report that Had Significant Impacts on Shareholders' Rights or Security Prices as Stated in Item 3 Paragraph 2 of Article 36 of Securities and Exchange Law of Taiwan: None.

Attachment 1

Stock code: 5483

Sino-American Silicon Products Inc.
and Subsidiaries

Consolidated Financial Statements

With Independent Auditors' Report

For the Years Ended December 31, 2019 and 2018

Address: No.8, Industrial East Road 2, Science Based Industrial Park, Hsinchu, Taiwan, R.O.C.

Tel.: (03) 577-2233

(English translation of consolidated financial statements originally issued in Chinese is unaudited and for information purpose only; The Chinese version shall prevail.)

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Representation Letter

The entities that are required to be included in the combined financial statements of Sino-American Silicon Products Inc. as of and for the year ended December 31, 2019 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 endorsed by the Financial Supervisory Commission, "Consolidated Financial Statements". In addition, the information required to be disclosed in the combined financial statements is included in the consolidated financial statements. Consequently, Sino-American Silicon Products Inc. and Subsidiaries do not prepare a separate set of combined financial statements.

Sino-American Silicon Products Inc.

Chairman: Ming-Kuang Lu

March 19, 2020

Independent Auditors' Report

To the Board of Directors of Sino-American Silicon Products Inc.

Opinion

We have audited the consolidated financial statements of Sino-American Silicon Products Inc. and its subsidiaries ("the Group"), which comprise the consolidated balance sheets as of December 31, 2019 and 2018, 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, based on the audit results of the accountant and the audit report of other accountants the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and with the International Financial Reporting Standards ("IFRSs"), International Accounting Standards ("IASs"), Interpretations developed by the International Financial Reporting Interpretations Committee ("IFRIC"), and the former Standing Interpretations Committee ("SIC") endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and 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 Auditors' 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. Based on the audit results of the accountant and the audit report of other accountants, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis of our opinion.

Other Matter

Among the investments included in the consolidated company under equity method, the financial statements of Crystalwise Technology Inc. have not been checked by the accountant and have been checked by other accountants. Therefore, among the opinions expressed by the accountant on the consolidated financial statements, the amount booked in the financial statements of is based on the audit report of other accountants. The amount of investment in Crystalwise Technology Inc. under equity method was 0.4% On December 31. The share of gain or loss of related companies under equity method for January 1 to December 31, 2018 accounted for (3)% of the net profit before tax respectively.

The consolidated company has prepared standalone financial statements for 2019 and 2018, and the audit report issued by the accountant with unqualified opinions plus other matters is available for reference.

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 audits of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. Based on our judgment, the key audit matters that should be disclosed in this audit report are as follows:

1. Revenue recognition of customer contracts

Please refer to note 4(15) “Revenue recognition” for accounting policy and note 6(25) “Revenue from contracts with customers” of the consolidated financial statements for further information.

Description of key audit matter:

The main source of Revenue of the semiconductor business unit of the consolidated company is the sales of semiconductor silicon crystal materials and their components. The recognition of operating revenue is determined according to the trading conditions agreed with the customers. As the transaction volume is large and from globalized operation locations, as a result, the accountant has recognized the Revenue as one of the important evaluation items for the implementation of the consolidated financial report audit.

How the matter was addressed in our audit:

In relation to the key audit matter above, we have performed certain key audit procedures that included understanding of revenue recognition policies and assessing whether revenue recognition policies are appropriate based on sales terms and revenue recognition criteria; understanding the design and process of implementation of internal controls and testing operating effectiveness; testing selected sales samples and agreeing to customer orders, delivery note and related documentation supporting sales recognition; testing sales cut-off, on a sample basis, for transactions incurred within a certain period before or after the balance sheet date by reviewing related sales terms, inspecting delivery documents, and other related supporting document to evaluate whether the revenue was recorded in proper period.

2. Assessment of impairment loss on property, plant and equipment

For the accounting policy of asset impairment, please refer to Note 4 (13) of the consolidated financial statements for impairment of non-financial assets; for accounting hypothesis and estimated uncertainty of assessment of impairment loss on property, plant and equipment(including right of use assets), please refer to Note 5 (1) of the consolidated financial statements. For notes to the assessment of impairment loss on property, plant and equipment, please refer to Note 6 (11) and 6(12) of the consolidated financial statements.

Description of key audit matters:

The industry in which the solar power business unit of the consolidate company is located is subjected to fluctuations due to the market environment and the energy policies of various governments, with fierce market competition and continuous price drop of products. Therefore, the assessment of impairment loss on property, plant and equipment is important; the asset impairment assessment includes Identifying the cash-generating unit, determining the evaluation method, selecting important assumptions, and calculating the recoverable amount that must rely on the subjective judgment of the management. The evaluation process is complicate d and contains the subjective judgment of the management. Therefore, the accountant booked it as one of the important audit matters.

Audit procedure implemented:

The principal audit procedures for the above key audit matters by the accountant include:

assessing whether the cash-generating unit and its related tested assets that the consolidated company management has identified to impair show possible signs of impairment, and further understanding and testing the evaluation models and key assumptions such as future cash flow projections, use period and weighted average cost of capital that the management use in the impairment test, including expected product Revenue, costs and expenses, and assessing the accuracy of previous management forecasts; and carrying out sensitivity analysis of results. Furthermore, the management authority is also consulted on relevant procedures in order to identify whether there will be matters capable of affecting the impairment test result in the future after the financial statements. And assess whether the consolidated company has properly disclosed the policy of long-term non-financial asset impairment and other related information

3. Impairment of goodwill

Please refer to the note 4(13) “Intangible assets” for accounting policy, note 5(2) “Significant accounting assumptions and judgments, and major sources of estimation uncertainty” for impairment assessment, and note 6(13) “Intangible assets” for further details.

Description of key audit matter:

The Group is in a capital intensive industry, with goodwill arising from business combinations' Moreover, the Group operates in an industry in which the operations are easily influenced by various external factors, such as market conditions and governmental policies. Therefore, the assessment of impairment of goodwill is one of the key areas in our audit. The assessment procedures, including identification of cash-generating units, valuation models, selection of key assumptions and calculations of recoverable cash inflows, depend on the management’s subjective judgments, which contained uncertainty in accounting estimations. Consequently, this is one of the key areas in our audit.

How the matter was addressed in our audit:

In relation to the key audit matter above, we have performed certain key audit procedures that included: assessing triggering events identified by management for impairment indicators existing in a cash-generating unit, assessing whether the assumptions used for evaluating the recoverable amount are reasonable; evaluating the achievement of prior year financial forecasts; inspecting the calculations of recoverable amounts; assessing the assumptions used for calculating recoverable amounts and cash flow projections; performing the sensitivity analysis based on key factors; assessing whether the accounting policies for goodwill impairment and other relevant information have been appropriately disclosed.

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 with the IFRSs, IASs, IFRIC, and SIC endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

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

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

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

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

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

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

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

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

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

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

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

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

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

The engagement partners on the audit resulting in this independent auditors' report are Cheng-Chien, Chen and An-Chih, Cheng.

KPMG

Taipei, Taiwan (Republic of China)
March 19, 2020

Sino-American Silicon Products Inc. and subsidiaries

Consolidated Balance Sheet

December 31, 2019 and 2018

Expressed in thousands of New Taiwan Dollars

		2019.12.31		2018.12.31	
	Assets	**Amount**	**%**	**Amount**	**%**
	Current assets:				
1100	Cash and cash equivalents (Note 6(1))	$ 34,901,425	32	36,829,131	35
1110	Financial assets at fair value through profit or loss－current (Note 6(2))	1,883,576	2	323,548	-
1136	Current financial assets at amortized cost (Note 6(4) and 7)	240,068	-	-	-
1170	Notes and accounts receivable, net (Note 6(5)and 25)	8,434,249	7	9,767,417	9
1180	Accounts receivable due from related parties, net (Note 6(25) and 7)	72,965	-	113,915	-
130X	Inventories (Note 6(6))	7,398,293	7	7,881,367	8
1476	Other financial assets – current (Note 8)	913,823	1	770,117	1
1479	Other current assets	1,321,234	1	1,575,354	2
		55,165,633	50	57,260,849	55
	Non-current Assets:				
1513	Financial assets at fair value through profit or loss－non current (note 6(2))	95,163	-	-	-
1517	Financial assets at fair value through other comprehensive income - non-current (Note 6 (3))	332,185	-	1,204,924	1
1535	Financial assets measured at amortized cost - non-current (Note 6 (4) and 7)	267,612	-	281,366	-
1550	Investments accounted for using equity method (Note 6 (7))	3,248,537	3	2,041,896	2
1600	Property, plant and equipment (Note 6 (11) and 8)	40,276,715	37	37,438,555	36
1755	Right of use assets (Note 6 (12))	913,609	1	-	-
1780	Intangible assets (Note 6 (13))	3,227,583	3	3,649,397	4
1840	Deferred tax assets (Note 6 (21))	1,927,636	2	1,514,843	2
1990	Other non-current assets (Note 6 (20) and 8)	788,017	1	267,825	-
1980	Other financial assets – non-current (Note 8)	3,140,806	3	325,660	-
		54,217,863	50	46,724,466	45
	Total assets	**$ 109,383,496**	**100**	**103,985,315**	**100**

		2019.12.31		2018.12.31	
	Liabilities and Equity	**Amount**	**%**	**Amount**	**%**
	Current Liabilities:				
2100	Short-term borrowings (Note 6 (14) and 8)	$ 11,465,075	11	9,334,809	9
2120	Financial liabilities at fair value through profit or loss–current (Note 6(2))	216,700	-	119	-
2130	Contract liabilities - current (Note 6 (25), 7 and 9)	4,128,893	4	4,662,837	5
2170	Notes and accounts payable	4,171,687	4	5,184,889	5
2180	Accounts payable to related parties (Notes 7)	8,008	-	51,342	-
2201	Payroll and bonus payable	2,851,934	3	2,295,168	2
2250	Provision – current (Note 6 (18) and 9)	232,256	-	10,074	-
2230	Current tax liabilities	2,692,745	2	2,127,809	2
2399	Other current liabilities (Note 6 (16),(17) and 7)	4,393,096	4	6,486,646	6
		30,160,394	28	30,153,693	29
	Non-current Liabilities:				
2527	Contract liabilities-non-current (Note 6 (25), 7 and 9)	17,280,344	16	15,712,134	15
2540	Long-term borrowings (Note 6 (15) and 8)	-	-	2,040,200	2
2550	Provision – non current (Note 6 (18) and 9)	4,674,648	4	1,014,869	1
2570	Deferred tax liabilities (Note 6 (21))	4,813,876	4	3,664,664	4
2600	Other non-current liabilities (Note 6 (16) and (17))	887,803	1	312,861	-
2640	Net defined benefit liabilities-non-current (Note 6 (20))	2,950,390	3	3,173,029	3
		30,607,061	28	25,917,757	25
	Total liabilities	60,767,455	56	56,071,450	54
	Equity (Note 6 (22)and (23))				
3110	Ordinary shares	5,862,367	5	5,863,207	6
3170	Pending share capital	(150)	-	(330)	-
		5,862,217	5	5,862,877	6
3200	Capital surplus	21,072,595	19	21,757,292	21
	Retained earnings:				
3310	Legal reserve	462,354	-	311,579	-
3320	Special reserve	513,302	1	513,302	1
3350	Unappropriated retained earnings (accumulated loss)	2,591,235	2	1,507,753	1
		3,566,891	3	2,332,634	2
3400	Other equity interest	(3,831,462)	(3)	(3,071,087)	(3)
	Total equity attributable to shareholders of Sino-American Silicon Products Inc.	26,670,241	24	26,881,716	26
36XX	Non-controlling interests (Note 6 (8 and 9))	21,945,800	20	21,032,149	20
	Total equity	48,616,041	44	47,913,865	46
	Total liabilities and equity	**$ 109,383,496**	**100**	**103,985,315**	**100**

(Please read the attached notes to the consolidated financial statements for details)

Sino-American Silicon Products Inc. and subsidiaries
Consolidated Statements of Comprehensive Income
from January 1 to December 31, 2019 and 2018

Expressed in thousands of New Taiwan dollars

		2019		2018	
		Amount	**%**	**Amount**	**%**
4000	**Operating revenue** (Note 6 (25) and 7)	$ 65,510,225	100	69,238,945	100
5000	**Operating costs** (Note 6 (6), (12),(13),(19),(20),(26) and 7)	46,242,686	71	50,597,092	73
	Gross profit from operations	19,267,539	29	18,641,853	27
	Operating expenses (Note 6 (12),(13),(19),(20),(26) and 7)				
6100	Selling expenses	1,396,627	2	1,416,904	2
6200	Administrative expenses	2,513,345	4	2,094,839	3
6300	Research and development expenses	1,844,789	3	1,849,867	3
6450	Impairment loss determined in accordance with IFRS 9 (Note 6(5))	(2,643)	-	102,738	-
	Total operating expenses	5,752,118	9	5,464,348	8
	Net operating income	13,515,421	20	13,177,505	19
	Non-operating income and expenses:				
7010	Other Revenue (Note 6 (27) and 7)	767,209	2	517,896	-
7020	Other gains and losses, net (Note 6 (28))	136,376	-	71,244	-
7050	Financial costs	(150,407)	-	(212,003)	-
7060	Shares of profit of associates and joint ventures accounted for using equity method (Note 6 (7))	(344,430)	(1)	(236,409)	-
		408,748	1	140,728	-
7900	**Income before income tax**	13,924,169	21	13,318,233	19
7950	Income tax expenses (Note 6 (21))	5,028,824	7	4,682,753	7
	Net income for the year	8,895,345	14	8,635,480	12
8300	**Other comprehensive income (loss):**				
8310	**Items that may not be reclassified subsequently to profit or loss**				
8311	Gains (losses) on remeasurements of defined benefit plans (Note 6 (20))	179,386	-	(265,423)	-
8316	Unrealized gains (losses) from investments in equity instruments measured at fair value through other comprehensive income	5,450	-	(521,764)	(1)
8349	Income tax related to components of other comprehensive income that will not be reclassified to profit or loss (Note 6 (21))	(120,951)	-	68,152	-
		63,885	-	(719,035)	(1)
8360	**Items that may be reclassified subsequently to profit or loss**				
8361	Exchange differences on translation of foreign operations	(1,535,230)	(2)	940,983	1
8370	Share of other comprehensive income of associates and joint ventures accounted for using equity method (Note 6 (19))	269,600	-	(173,644)	-
8399	Income tax related to components of other comprehensive income that will be reclassified to profit or loss (Note 6 (21))	305,271	-	(102,154)	-
	Total Items that may be reclassified subsequently to profit or loss	(960,359)	(2)	665,185	1
8300					
	Other comprehensive income (after tax)	(896,474)	(2)	(53,850)	-
	Total comprehensive income	$ 7,998,871	12	8,581,630	12
	Net income attributable to:				
	Shareholders of Sino-American Silicon Products Inc.	$ 2,248,386	4	1,950,503	2
	Non-Controlling Interests	6,646,959	10	6,684,977	10
		$ 8,895,345	14	8,635,480	12
	Total comprehensive gain or loss attributable to:				
	Shareholders of Sino-American Silicon Products Inc.	$ 1,774,007	3	1,604,225	2
	Non-Controlling Interests	6,224,864	9	6,977,405	10
		$ 7,998,871	12	8,581,630	12
	Basic earnings per share (NT dollars) (Note 6 (26))				
9750	Basic earnings per share	$	3.86		3.36
9850	Diluted earnings per share	$	3.83		3.34

(Please read the attached notes to the consolidated financial statements for details)

Sino-American Silicon Products Inc. and subsidiaries
Consolidated statement of changes in equity
From January 1, 2018 to December 31, 2019

Expressed in thousands of New Taiwan Dollars

	Equity attributable to the owners of the parent company																
				Retained earnings				Other equity items									
	Ordinary shares	Pending share capital	Capital surplus	Legal reserve	Special reserve	Unappropriated retained earnings (Accumulated loss)	Total	Exchange differences on translation of foreign financial statements	Financial assets at fair value through other comprehensive income	Unrealized gains (losses) on available for sale financial assets	Employees' unearned remuneration	Other	Total	Treasury shares	Total	Non-Controlling Interests	Total Equity
Balance at January 1, 2018	5,920,587	-	24,205,831	311,579	513,302	(317,629)	507,252	(1,973,334)	-	(1,109,281)	(236,020)	(4,302)	(3,322,937)	(169,861)	27,140,872	16,636,039	43,776,911
Effects of retrospective application of new accounting standards	-	-	-	-	-	1,222,787	1,222,787	-	(2,338,298)	1,109,281	-	-	(1,229,017)	-	(6,230)	(6,024)	(12,254)
Balance at January 1, 2018 after adjustments	5,920,587	-	24,205,831	311,579	513,302	905,158	1,730,039	(1,973,334)	(2,338,298)	-	(236,020)	(4,302)	(4,551,954)	(169,861)	27,134,642	16,630,015	43,764,657
Net income for the year	-	-	-	-	-	1,950,503	1,950,503	-	-	-	-	-	-	-	1,950,503	6,684,977	8,635,480
Other comprehensive income for the year	-	-	-	-	-	(107,341)	(107,341)	387,093	(626,030)	-	-	-	(238,937)	-	(346,278)	292,428	(53,850)
Comprehensive income for the year	-	-	-	-	-	1,843,162	1,843,162	387,093	(626,030)	-	-	-	(238,937)	-	1,604,225	6,977,405	8,581,630
Loss made up by capital reserve	-	-	(317,629)	-	-	317,629	317,629	-	-	-	-	-	-	-	-	-	-
Cash dividends distribution from capital surplus	-	-	(1,759,511)	-	-	-	-	-	-	-	-	-	-	-	(1,759,511)	-	(1,759,511)
Share of net worth changes of subsidiaries, associates and joint ventures accounted for using equity method	-	-	124	-	-	-	-	-	-	-	-	922	922	-	1,046	-	1,046
Retirement of treasury stock	(55,550)	-	(114,311)	-	-	-	-	-	-	-	-	-	-	169,861	-	-	-
Donated surplus	-	-	239	-	-	-	-	-	-	-	-	-	-	-	239	-	239
Non-controlling equity changes	-	-	(245,804)	-	-	-	-	-	-	-	-	-	-	-	(245,804)	(425,701)	(671,505)
Expiration of restricted employee stock	-	-	(9,487)	-	-	-	-	-	-	-	160,686	-	160,686	-	151,199	-	151,199
Restrictions on employee rights invalid, pending for cancellation	(1,830)	(330)	(2,160)	-	-	-	-	-	-	-	-	-	-	-	(4,320)	-	(4,320)
Disposal of investments in equity instruments designated at fair value through other comprehensive income	-	-	-	-	-	(1,558,196)	(1,558,196)	-	1,558,196	-	-	-	1,558,196	-	-	-	-
Cash dividends paid by subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(2,149,570)	(2,149,570)
Balance at December 31, 2018	**$ 5,863,207**	**(330)**	**21,757,292**	**311,579**	**513,302**	**1,507,753**	**2,332,634**	**(1,586,241)**	**(1,406,132)**	**-**	**(75,334)**	**(3,380)**	**(3,071,087)**	**-**	**26,881,716**	**21,032,149**	**47,913,865**
Net income for the year	-	-	-	-	-	2,248,386	2,248,386	-	-	-	-	-	-	-	2,248,386	6,646,959	8,895,345
Other comprehensive income for the year	-	-	-	-	-	29,819	29,819	(638,103)	133,905	-	-	-	(504,198)	-	(474,379)	(422,095)	(896,474)
Comprehensive income for the year	-	-	-	-	2,278,205	2,278,205	2,278,205	(638,103)	133,905	-	-	-	(504,198)	-	1,774,007	6,224,864	7,998,871
Appropriation and distribution of retained earnings:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legal reserve	-	-	-	150,775	-	(150,775)	-	-	-	-	-	-	-	-	-	-	-
Cash dividends on ordinary shares	-	-	-	-	-	(1,356,963)	(1,356,963)	-	-	-	-	-	-	-	(1,356,963)	-	(1,356,963)
Cash dividends distribution from capital surplus	-	-	(401,900)	-	-	-	-	-	-	-		-	-	-	(401,900)	-	(401,900)
Share of net worth changes of subsidiaries, associates and joint ventures accounted for using equity method	-	-	(279,229)	-	-	-	-	-	-	-	-	112	112	-	(279,117)	1,984	(277,133)
Non-controlling equity changes	-	-	(21)	-	-			-		-	-	-	-	-	(21)	(447)	(468)
Expiration of restricted employee stock	-	-	(3,115)	-	-	-	-	-	-	-	56,726	-	56,726	-	53,611	-	53,611
Restrictions on employee rights invalid, pending for cancellation	(840)	180	(660)	-	-	-	-	-	-	-	-	-	-	-	(1,320)	-	(1,320)
Donated surplus	-	-	228	-	-	-	-	-	-	-	-	-	-	-	228	-	228
Disposal of investments in equity instruments designated at fair value through other comprehensive income	-	-	-	-	-	313,015	313,015	-	(313,015)	-	-	-	(313,015)	-	-	-	-
Cash dividends paid by subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(5,312,750)	(5,312,750)
Balance at December 31, 2019	**$ 5,862,367**	**(150)**	**21,072,595**	**462,354**	**513,302**	**2,591,235**	**3,566,891**	**(2,224,344)**	**(1,585,242)**	**-**	**(18,608)**	**(3,268)**	**(3,831,462)**	**-**	**26,670,241**	**21,945,800**	**48,616,041**

(Please read the attached notes to the consolidated financial statements for details)

Sino-American Silicon Products Inc. and subsidiaries
Consolidated Statements of Cash Flows
From January 1, 2018 to December 31, 2019
Expressed in thousands of New Taiwan dollars

	2019	2018
Cash flows from operating activities:		
Income before income tax	$ 13,924,169	13,318,233
Adjustments:		
Adjustments to reconcile profit (loss)		
Depreciation expense	5,030,426	5,628,233
Amortization expenses	364,830	354,779
Expected credit losses / Provisions for bad debt expense	(2,643)	102,738
Net gains on financial assets or liabilities at fair value through profit or loss	286,287	(44,659)
Interest expenses	150,407	212,003
Interest income	(757,732)	(482,902)
Dividend income	(9,477)	(34,994)
Share-based payment remuneration cost	53,611	151,199
Share of profit of subsidiaries and associates accounted for using equity method	344,430	236,409
(Gains) losses on disposal of property, plant and equipment	23,276	(129,992)
Gains on disposal of investment	(72,584)	-
Loss on disposal of intangible assets	1,141	-
Impairment loss of finance assets	25,973	-
Provision for (reversal of) inventory valuation	(109,158)	(37,345)
Impairment loss for (reversal of) non-finance assets	(8,779)	1,436,217
Provision for liability	3,883,063	443,404
Total adjustments	9,203,071	7,835,090
Changes in operating assets and liabilities:		
Notes and accounts receivable (including related parties)	1,374,487	(1,153,986)
Inventories	592,232	2,203,883
Prepayments for purchase of materials	4,248	1,079,561
Other financial assets	70,638	(524,740)
Other current assets	(325,743)	(408,244)
Notes and accounts payable (including related parties)	(1,055,681)	(115,644)
Contract liabilities	(2,037,234)	14,252,038
Net defined benefit liabilities	(3,293)	5,838
Other operating liabilities	(229,612)	811,517
Total changes in operating assets and liabilities	(1,609,958)	16,150,223
Total adjustments	7,593,113	23,985,313
Cash inflow generated from operations	21,517,282	37,303,546
Interest received	782,061	452,590
Dividends received	9,477	34,994
Interest paid	(159,532)	(233,845)
Income tax paid	(3,318,168)	(1,467,974)
Net cash flows from operating activities	18,831,120	36,089,311

(Continued on next page)

(Please read the attached notes to the consolidated financial statements for details)

Sino-American Silicon Products Inc. and subsidiaries
Consolidated Statements of Cash Flows (Continued)
From January 1, 2018 to December 31, 2019
Expressed in thousands of New Taiwan dollars

	2019	2018
Cash flows from investing activities:		
Acquisition of financial assets at fair value through other comprehensive income	(197,610)	(197,197)
Proceeds from disposal of financial assets at fair value through other comprehensive income	553,385	-
Proceeds from capital reduction of financial assets at fair value through other comprehensive income	28,239	8,732
Acquisition of financial assets measured at amortized cost	(250,000)	-
Acquisition of financial assets at fair value through profit or loss	(1,907,850)	(276,529)
Proceeds of financial assets at fair value through profit or loss	194,245	-
Acquisition of investments accounted for using equity method	(1,132,310)	(990,000)
Cash dividends from investments accounted for using equity method	55,068	6,422
Proceeds of subsidiary	166,668	
Acquisition of property, plant and advance payments received for equipment	(7,719,440)	(6,597,886)
Proceeds from disposal of property, plant and equipment	105,349	560,149
Decrease in other financial assets	(3,067,397)	56,023
Net cash flows used in investing activities:	(13,171,653)	(7,430,286)
Cash flows from financing activities:		
Decrease in short term borrowings	2,163,041	(4,464,007)
Increase in long term borrowings	-	1,026,000
Repayments of long term borrowings	(2,040,200)	(4,632,672)
Increase (decrease) in guarantee deposits received	(145,179)	17,858
Payment of lease liabilities	(201,027)	-
Distribution of cash dividends out of capital reserve	(1,758,863)	(1,759,511)
Restrictions on employee rights invalid of write-off	(1,320)	(4,320)
Change in non-controlling interests	(468)	(575,394)
Donated surplus	228	239
Cash dividends of distributing non-controlling interests	(5,312,750)	(2,149,570)
Net cash flows used in financing activities	(7,296,538)	(12,541,377)
Effect of exchange rate changes	(290,635)	368,703
Net increase in cash and cash equivalents	(1,927,706)	16,486,351
Cash and cash equivalents at beginning of period	36,829,131	20,342,780
Cash and cash equivalents at end of period	**$ 34,901,425**	**36,829,131**

(Please read the attached notes to the consolidated financial statements for details)

Sino-American Silicon Products Inc. and subsidiaries

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

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

1. Company history

Sino-American Silicon Products Inc. ("SAS" or "the Company") was incorporated in accordance with the Company Act of the Republic of China in January 1981; also, the Chunan Branch was established in June 2005 at No.8, Industrial East Road 2, Science Based Industrial Park, Hsinchu, Taiwan, R.O.C. The company, as well as its subsidiaries (together referred to as the "Group") mainly engages in the design, production and sale of semi-conductor silicon materials and components, rheostat, optical and communications wafer materials; also the related technology, management consulting business, and technical services of the photo-voltaic power system generation and installation.

The parent company's stocks have been traded publicly at the Taipei Exchange (referred hereinafter as TPEx) since March 2001.

For the purpose of reorganization and provision of professional work to enhance competitiveness and business performance, a resolution was reached at the shareholders' meeting of the parent company on June 17, 2011 to have the semiconductor business and sapphire business (including the related assets, liabilities and business operations) split and transfer the businesses o the parent company's 100% owned subsidiaries, GlobalWafers Co., Ltd. (hereinafter referred to as "GlobalWafers") and Sino Sapphire Co., Ltd. (hereinafter referred to as "Sino Sapphire") with the base date of split as scheduled on October 1, 2011. The parent company based on the net carrying value of the semiconductor business paid NT$ 38.50 per share to acquire 180,000 thousand shares at NT$ 10 par value per share of GlobalWafers; also, based on the sapphire business net assets the parent company paid NT$ 40 per share to acquire 40,000 thousand shares at NT$ 10 par value per share of Sino Sapphire.

A resolution merging with Sunrise Global Solar Energy Co., Ltd. (hereinafter referred to as "Sunrise Global") was reached by the Board of Directors on August 12, 2013 with the base date of merger scheduled as August 1, 2014. The parent company is the surviving corporation and Sunrise Global is discontinued after the merger.

The shares of GlobalWafers were approved for trading over the counters through the Taiwan Stock Exchange. They were booked on the counters on September 25, 2015 and were closed for trading over emerging counters the same day.

The consolidated company acquired all outstanding ordinary shares of SunEdison Semiconductor Limited (hereinafter referred to as SunEdison) on December 2, 2016 so that it aquired the control over SunEdison Semiconductor Limited and its subsidiaries. SunEdison is the world's leading semiconductor wafer manufacturer and supplier. Since its inception, SunEdison has been a leader in wafer design and R&D technology. SunEdison's R&D and manufacturing bases are located throughout the United States, Europe and Asia to develop next-generation high-performance semiconductor wafers. Through this acquisition, the consolidated company will be able to increase its global market share, customer base and other wafer technology and capacity and expand operations.

2. Approval date and procedures of the consolidated financial statements

These consolidated financial statements were authorized for issuance by the board of directors on March 19, 2020.

3. New standards, amendments and interpretations adopted

(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, 2019.

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

Except for the following items, the Group believes that the 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:

1. 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.

The Group applied IFRS 16 using the modified retrospective approach, under which the cumulative effect of initial application is recognized in retained earnings on January 1, 2019. The details of the changes in accounting policies are disclosed below,

1) Definition of a lease

Previously, the Group determined at contract inception whether an arrangement is or contains a lease under IFRIC 4. Under IFRS 16, the Group assesses whether a contract is or contains a lease based on the definition of a lease, as explained in Note 4(11).

On transition to IFRS 16, the Group elected to apply the practical expedient to grandfather the assessment of which transactions are leases. The Group applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed for whether there is a lease. Therefore, the definition of a lease under IFRS 16 was applied only to contracts entered into or changed on or after January 1, 2019.

2) As a lessee

As a lessee, the Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and rewards incidental to ownership of the underlying asset to the Group. Under IFRS 16, the Group recognizes right-of-use assets and lease liabilities for most leases – i.e. these leases are on-balance sheet.

The Group decided to apply recognition exemptions to short-term leases and leases of low-valve assets, including other equipment.

● Leases classified as operating leases under IAS 17

At transition, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as at January 1, 2019. Right-of-use assets are measured at either:

— their carrying amount as if IFRS 16 had been applied since the commencement date, discounted using the lessee's incremental borrowing rate at the date of initial application; or

— an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments – the Group applied this approach to all other lease.

In addition, the Group used the following practical expedients when applying IFRS 16 to leases.

— Applied a single discount rate to a portfolio of leases with similar characteristics.

— Adjusted the right-of-use assets by the amount of IAS 37 onerous contract provision immediately before the date of initial application, as an alternative to an impairment review.

— Applied the exemption not to recognize right-of-use assets and liabilities for leases with less than 12 months of lease term.

— Excluded initial direct costs from measuring the right-of-use asset at the date of initial application.

- Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

- Leases previously classified as finance leases

  For leases that were classified as finance leases under IAS 17, the carrying amount of the right-of-use asset and the lease liability at January 1, 2019 are determined at the carrying amount of the lease asset and lease liability under IAS 17 immediately before that date.

3) As a lessor

The Group is not required to make any adjustments on transition to IFRS 16 for leases in which it acts as a lessor, except for a sub-lease. The Group accounted for its leases in accordance with IFRS 16 from the date of initial application.

4) Impacts on financial statements

On transition to IFRS 16, the Group recognized additional right-of-use assets and lease liabilities both of $1,150,876 thousands. When measuring lease liabilities, the Group discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted-average rate applied is 1.18%.

The explanation of differences between operating lease commitments disclosed at the end of the annual reporting period immediately preceding the date of initial application, and lease liabilities recognized in the statement of balance sheets at the date of initial application disclosed as follows:

		January 1, 2019
Operating lease commitment at December 31, 2018 as disclosed in the Group's consolidated financial statements	$	1,114,945
Recognition exemption for:		
short-term leases and leases of low-value assets		(21,894)
Extension and termination options reasonably certain to be exercised		83,429
	$	**1,176,480**
Discounted using the incremental borrowing rate at January 1, 2019	$	1,150,876
Finance lease liabilities recognized as at December 31, 2018		28,392
Lease liabilities recognized at January 1, 2019	**$**	**1,179,268**

2. IFRIC 23 "Uncertainty over Income Tax Treatments"

In assessing whether and how an uncertain tax treatment affects the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits, as well as tax rates, an entity shall assume that a taxation authority will examine the amounts it has the right to examine and have a full knowledge on all related information when making those examinations.

If an entity concludes that it is probable that the taxation authority will accept an uncertain tax treatment, the entity shall determine the taxable profit (tax loss), tax bases, unused tax losses, unused tax credits, as well as tax rates consistently with the tax treatment used or planned to be used in its income tax filings. Otherwise, an entity shall reflect the effect of uncertainty for each uncertain tax treatment by using either the most likely amount or the expected value, depending on which method the entity expects to better predict the resolution of the uncertainty.

There was no material impact on the cash flows during the said period.

(b) The impact of IFRS endorsed by 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, 2020 in accordance with Rule No. 1080323028 issued by the FSC on July 29, 2019:

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 9, IAS39 and IFRS7 “Interest Rate Benchmark Reform”	January 1, 2020
Amendments to IAS 1 and IAS 8 “Definition of Material”	January 1, 2020

The Group assesses that the adoption of the abovementioned standards would not have any material impact on its consolidated financial statements.

(c) The impact of IFRS issued by International Accounting Standards Board but not yet endorsed by the FSC

As of the date, the following IFRSs that have been issued by the International Accounting Standards Board (IASB), but have yet to be endorsed by the FSC:

New, Revised or Amended Standards and Interpretations	Effective date per IASB
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 “Classification of Liabilities as Current or Non-current”	January 1, 2022

The Group is evaluating the impact of its initial adoption of the abovementioned standards or interpretations on its consolidated financial position and consolidated financial performance. 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 summarized below. Except for those specifically indicated, the following accounting policies were applied consistently throughout the periods presented in the consolidated financial statements.

(1) Statement of compliance

The consolidated financial statements have been prepared in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers" (hereinafter referred to as the Regulations), International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations endorsed and issued into effect by the Financial Supervisory Commission, R.O.C (hereinafter referred to as the "IFRSs endorsed by the FSC").

(2) Basis of preparation

A. Basis of measurement

Except for the following significant accounts, the consolidated financial statements have been prepared on a historical cost basis:

(a) Financial instruments at fair value through profit or loss are measured at fair value;

(b) Financial assets at fair value through other comprehensive income are measured at fair value;

(c) Cash-settled shared-based-payment liability is measured at fair value;

(d) The defined benefit liabilities (assets) are measured at fair value of the plan assets less the present value of the defined benefit obligation, limited as explained in note 4(16).

B. 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 consolidated financial statements are presented in New Taiwan dollars, which is the Company's functional currency. All financial information presented in New Taiwan dollars has been rounded to the nearest thousand.

(3) Basis of consolidation

A. Principles of preparation of the consolidated financial statements

The consolidated financial statements comprise the Company and subsidiaries. Subsidiaries are entities controlled by the Group. The Group 'controls' an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

The financial statements of the subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases. Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions are eliminated in preparing the consolidated financial statements. The Group attributes the profit or loss and each component of other comprehensive income to the owners of the parent and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

The Group prepares consolidated financial statements using uniform accounting policies for alike transactions and other events in similar circumstances.

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. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received will be recognized directly in equity, and the Group will attribute it to the owners of the parent.

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

2. List of subsidiaries in the consolidated financial statements:

Name of Investor	Name of subsidiary	Business	Percentage of Ownership		Note
			2019.12.31	2018.12.31	
Sino-American Silicon Products Inc.	Sino Silicon Technology Inc. (SSTI)	Investment and triangular trade center with subsidiaries in China	100%	100%	
Sino-American Silicon Products Inc.	GlobalWafers	Manufacturing and trading of semiconductor silicon materials and components,	51.17%	51.17%	
Sino-American Silicon Products Inc.	Aleo Solar GmbH (Aleo Solar)	Solar cell manufacturing and sale and wholesale of electronic materials	100%	100%	
Sino-American Silicon Products Inc.	SAS Sunrise Inc.	Investment activities	100%	100%	

Sino-American Silicon Products Inc.	Sunrise PV World Co. (Sunrise PV World)	Power generating business	100%	100%	
Sino-American Silicon Products Inc.	Sunrise PV Electric Power Five Co., Ltd. (Sunrise PV Electric Power Five)	Power generating business	100%	-	Note6
SAS Sunrise Inc.	SAS Sunrise Pte. Ltd.	Investment activities	100%	100%	
SAS Sunrise Pte.Ltd.	Sulu Electric Power and Light Inc.(Sulu)	Power generating business	40%	40%	Note 1
SAS Sunrise Pte.Ltd.	AMLED International Systems Inc.(AMLED)	Reinvestments in various businesses	-	-	Note 2
AMLED	Sulu	Power generating business	45%	45%	
Aleo Solar	Aleo Solar Distribuzione Italia S.r.l	Solar cell manufacturing and sale and wholesale of electronic materials	100%	100%	
Aleo Solar	Aleo Sunrise GmbH (Aleo Sunrise)	Manufacturing of solar cell as well as sale and wholesale of electronic materials	-	100%	Note3 (1)
Sunrise PV World Co.	Sunrise PV Two Co., Ltd. (Sunrise PV Two)	Power generating business	-	100%	Note5
Sunrise PV World Co.	Sunrise PV Electric Power Two (Sunrise PV Electric)	Power generating business	-	100%	Note4
Sunrise PV World Co.	Sunrise PV Three Co., Ltd. (Sunrise PV Three)	Power generating business	100%	100%	
Sunrise PV World Co.	Sunrise PV Four Co., Ltd. (Sunrise PV Four)	Power generating business	100%	100%	
Sunrise PV World Co.	Sunrise PV Five Co., Ltd. (Sunrise PV Five)	Power generating business	100%	100%	Note4
GlobalWafers	GlobalSemiconductor Inc. (GSI)	Investment activities	100%	100%	
GlobalWafers	GlobalWafers Inc. (GWI)	Investment activities	100%	100%	
GlobalWafers	GlobalWafers Japan Co., Ltd. (GWJ)	Manufacturing and trading of silicon wafers	100%	-	
GlobalWafers	GWafers Singapore Pte. Ltd.(GWafers Singapore)	Investment activities	67.2%	67.2%	
GlobalWafers	Topsil GlobalWafers A/S (Topsil A/S)	Manufacturing and trading of silicon wafers	100%	100%	
GlobalWafers	Taisil Electronic Materials Corp. (Taisil)	Manufacturing and trading of silicon wafers	99.99%	99.98%	
GSI	Kunshan Sino Silicon Technology Co., Ltd. (SST)	Processing and trading of ingots and wafers	100%	100%	
GWI	GWafers Singapore	Investment activities	32.8%	32.8%	
GWJ	MEMC Japan Ltd. (MEMC Japan)	Manufacturing and trading of silicon wafers	100%	100%	
Kunshan Sino	Shanghai GrowFast Semiconductor Technology Co., Ltd.	Sale and marketing	60%	60%	
Topsil A/S	Topsil Semiconductor sp z o.o. (Topsil PL)	Manufacturing and trading of silicon wafers	100%	100%	

GWafers Singapore	GlobalWafers Singapore Pte. Ltd. (Formerly known as SunEdison Semiconductor Limited, GWS)	Investment, marketing and trading activities	100%	100%	
GWS	GlobalWafers B.V. (Formerly known as SunEdison Semiconductor B.V., GWBV)	Investment activities	100%	100%	
GWBV	MEMC Electronic Materials, SpA (MEMC SpA)	Manufacturing and trading of silicon wafers	100%	100%	
MEMC SpA	MEMC Electronic Materials France SarL(MEMC SarL)	Trading	100%	100%	
MEMC SpA	MEMC Electronic Materials GmbH (MEMC GmbH)	Trading	100%	100%	
MEMC SpA	MEMC Holding B.V. (MEMC BV)	Investment activities	-	100%	Note3 (2)
GWBV、MEMC BV	MEMC Korea Company (MEMC Korea)	Manufacturing and trading of silicon wafers	-	100%	Note3 (3)
GWBV	MEMC Korea	Manufacturing and trading of silicon wafers	100%	-	Note3 (3)
GWBV	MEMC Electronic Materials, Sdn Bhd (MEMC Sdn Bhd)	Research and development, manufacturing and trading of silicon wafers	100%	100%	
GWBV	SunEdison Semiconductor Technology (Shanghai) Ltd. (SunEdison Shanghai)	Trading	100%	100%	
GWBV	MEMC Ipoh Sdn Bnd (MEMC Ipoh)	Manufacturing and trading of silicon wafers	100%	100%	
GWBV	GTI	Manufacturing of epitaxial wafers and silicon wafers	100%	100%	
GTI	MEMC LLC	Research and development and manufacturing and trading of silicon wafers	100%	100%	

Note 1: The consolidated company is able to control the financial and operating strategies of Sulu through effective agreements with its other investors, so Sulu is considered as a subsidiary.

Note 2: The consolidated company does not hold the interests of the AMLED owners, but the consolidated company can control the financial and operating strategies of AMLED and obtain all the benefits of its operations and net assets in accordance with the terms of the agreements entered into, so AMLED is considered as a subsidiary.

Note 3: The consolidated company adjusted its organizational structure as follows:

(1) Aleo Sunrise was transferred to SAS since March, 2019, and was liquidated in June 2019.

(2) MEMC BV was transferred from MEMC SpA to GWBV since June 18, 2019, and was liquidated in September 2019;

(3) MEMC Korea was transferred from GWBV and MEMC BV to GWBV.

Note 4: The Group sold Sunrise PV Five and Sunrise PV Electric in March and July 2019 respectively due to operating strategy.

Note 5: Sunrise PV Two was liquidated in May 2019 due to operating strategy.

Note 6: SAS established Sunrise PV Electric Power Five in December 2019 due to operating strategy

3. Subsidiaries not included in the consolidated financial statements: None.

(4) Foreign currencies

1. Foreign currency transactions

Transactions in foreign currencies are translated into the respective functional currencies of Group entities at the exchange rates at the dates of the transactions. At the end of each subsequent reporting period, monetary items denominated in foreign currencies are translated into the functional currencies using the exchange rate at that date.

Non monetary items denominated in foreign currencies that are measured at fair value are translated into the functional currencies using the exchange rate at the date that the fair value was determined. Non monetary items denominated in foreign currencies that are measured based on historical cost are translated using the exchange rate at the date of the transaction.

Exchange differences are generally recognized in profit or loss, except for an equity investment in equity securities designated as at fair value through other comprehensive income, which are recognized in other comprehensive income.

2. Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated into New Taiwan Dollars at the exchange rates at the reporting date. The income and expenses of foreign operations are translated into New Taiwan Dollars at the average rate. Exchange differences are recognized in other comprehensive income.

When a foreign operation is disposed of such that control, significant influence, or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal. When the Group disposes of only part of its interest in a subsidiary that includes a foreign operation while retaining control, the relevant proportion of the cumulative amount is reattributed to non controlling interests. When the Group disposes of only part of its investment in an associate or joint venture that includes a foreign operation while retaining significant influence or joint control, the relevant proportion of the cumulative amount 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, exchange differences arising from such a monetary item that are considered to form part of the net investment in the foreign operation are recognized in other comprehensive income.

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

An asset is classified as current under one of the following criteria, and all other assets are classified as non-current:

A. It is expected to be realized, or intended to be sold or consumed, in the normal operating cycle;

B. It is held primarily for the purpose of trading;

C. It is expected to be realized within twelve months after the reporting period; or

D. The asset is cash or cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

A liability is classified as current under one of the following criteria, and all other liabilities are classified as non-current:

A. It is expected to be settled in the normal operating cycle;

B. It is held primarily for the purpose of trading;

C. It is due to be settled within twelve months after the reporting period; or

D. The Group does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting period. Terms of a liability that could, at the option of the counterparty, result in its settlement by issuing equity instruments do not affect its classification.

(6) Cash and cash equivalent

Cash comprises cash on hand and demand deposits. Cash equivalents are short-term, 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 which meet the above definition and are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes should be recognized as cash equivalents.

(7) Financial instruments

1. Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Group becomes a party to the contractual provisions of the instrument. A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

(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.

These assets are subsequently measured at amortized cost, which is the amount at which the financial asset is measured at initial recognition, plus/minus, the cumulative amortization using the effective interest method, adjusted for any loss allowance. Interest income, foreign exchange gains and losses, as well as impairment, are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

(2) Fair value through other comprehensive income (FVTOCI)

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

  Debt instrument investment meeting the following conditions and not specified to be measured at fair value through gain or loss, are measured at fair value through other comprehensive gain or loss

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.

Equity investments at FVTOCI are subsequently measured at fair value. Dividends 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 are recognized in other comprehensive income and are never reclassified to profit or loss.

Dividend income is recognized in profit or loss on the date on which the Group's right to receive payment is established.

(3) Fair value through profit or loss (FVTPL)

All financial assets not classified as amortized cost or FVOCI described as above are measured at FVTPL, including derivative financial assets. Trade receivables that the Group intends to sell immediately or in the near term are measured at FVTPL; however, they are included in the 'trade receivables' line item. 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.

These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend 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.

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 (ECL) on financial assets measured at amortized cost (including cash and cash equivalents, notes and accounts receivables, guarantee deposit paid and other financial assets).

The Group measures loss allowances at an amount equal to lifetime ECL, except for the following which are measured by 12 month ECL:

・ debt securities that are determined to have low credit risk at the reporting date； and

・ other debt securities and 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 trade receivables and contract assets are always measured at an amount equal to lifetime ECL.

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.

The Group considers a debt security to have low credit risk when its credit risk rating is equivalent to the globally understood definition of 'investment grade which is considered to be BBB- or higher per Standard & Poor's, Baa3 or higher per Moody's or twA or higher per Taiwan Ratings'.

The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when the financial asset is more than 180 days past due or the debtor is unlikely to pay its credit obligations to the Group in full.

Lifetime ECL are the ECL that result from all possible default events over the expected life of a financial instrument.

12-month ECL are the portion of ECL 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 ECL is the maximum contractual period over which the Group is exposed to credit risk.

ECL are a 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). ECL are discounted at the effective interest rate of the financial asset.

At each reporting date, the Group assesses whether financial assets carried at amortized cost and debt securities at FVOCI are credit-impaired. A financial asset is ‘credit-impaired’ when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred. Evidence that a financial assets is credit-impaired includes the following observable data:

- significant financial difficulty of the borrower or issuer；
- a breach of contract such as a default or being more than 90 days past due
- the lender of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession that the lender would not otherwise consider
- it is probable that the borrower will enter bankruptcy or other financial reorganization；or
- the disappearance of an active market for a security because of financial difficulties.

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 when the Group has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof. For corporate customers, the Group individually makes an assessment with respect to the timing and amount of write off based on whether there is a reasonable expectation of recovery. The Group expects no significant recovery from the amount written 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

The Group derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognized in its statement of balance sheet, but retains either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

2. Financial liabilities and equity instruments

(a) Classification of debt or equity

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

(b) Equity instrument

An equity instrument is any contract that evidences residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued are recognized as the amount of consideration received, less the direct cost of issuing.

(c) Treasury shares

When shares recognized as equity are repurchased, the amount of the consideration paid, which includes directly attributable costs, is recognized as a deduction from equity. Repurchased shares are classified as treasury shares. When treasury shares are sold or reissued subsequently, the amount received is recognized as an increase in equity, and the resulting surplus or deficit on the transaction is recognized in capital surplus or retained earnings (if the capital surplus is not sufficient to be written down).

(d) Financial liabilities

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognized in profit or loss.

Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

(e) Derecognition of financial liabilities

The Group derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expire. The Group also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

On derecognition of a financial liability, the difference between the carrying amount of a financial liability extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

(f) Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount presented in the statement of balance sheet when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

C. Derivative financial instruments and hedge accounting

The Group holds derivative financial instruments to hedge its foreign currency and interest rate exposures. Embedded derivatives are separated from the host contract and accounted for separately if the host contract is not a financial asset and certain criteria are met.

Derivatives are initially measured at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are generally recognized in profit or loss.

(8) Inventories

Inventories are measured at the lower of cost or net realizable value. The cost of inventories is based on the weighted average cost method and includes expenditure incurred in acquiring the inventories, production or conversion cost, and other costs incurred in bringing them to their present location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on operating capacity.

Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses necessary to make the sale.

(9) Investment in associates

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

Investments in associates are accounted for using the equity method and are recognized initially at cost. The cost of the investment includes transaction costs. The carrying amount of the investment in associates includes goodwill arising from the acquisition, less any accumulated impairment losses.

The consolidated financial statements include the Group’s share of the profit or loss and other comprehensive income of those associates, after adjustments to align their accounting policies with those of the Group, from the date on which significant influence commences until the date on which significant influence ceases. The Group recognizes any changes of its proportionate share in the investee within capital surplus, when an associate's equity changes due to reasons other than profit and loss or comprehensive income, which did not result in changes in actual significant influence.

Gains and losses resulting from transactions between the Group and an associate are recognized only to the extent of unrelated Group's interests in the associate.

When the Group's share of losses of an associate equals or exceeds its interests in an associate, it discontinues recognizing its share of further losses. After the recognized interest is reduced to zero, 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 the Group subscribes to additional shares in an associate at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment will differ from the amount of the Group's proportionate interest in the net assets of the associate. The Group records such a difference as an adjustment to investments, with the corresponding amount charged or credited to capital surplus. The aforesaid adjustment should first be adjusted under additional paid in capital. If the additional paid in capital resulting from changes in ownership interest is not sufficient, the remaining difference is debited to retained earnings. If the Group's ownership interest is reduced due to the additional subscription to the shares of the associate by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate will 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.

(10) Property, plant and equipment

1. Recognition and measurement

Items of property, plant and equipment are measured at cost, which includes capitalized borrowing costs, less accumulated depreciation and any accumulated impairment losses.

If significant parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Any gain or loss on disposal of an item of property, plant and equipment is recognized in profit or loss.

B. Subsequent cost

Subsequent expenditure is capitalized only if it is probable that the future economic benefits associated with the expenditure will flow to the Group.

C. Depreciation

Depreciation is calculated on the cost of an asset less its residual value and is recognized in profit or loss on a straight line basis over the estimated useful lives of each component of an item of property, plant and equipment.
Land is not depreciated.

The estimated useful lives of property, plant and equipment for current and comparative periods are as follows:

(a) Buildings: 2 to 50 years

(b) Machinery and equipment: 1 to 15 years

(c) Other equipment and leased assets: 1 to 25 years

(d) Buildings constitute mainly buildings, mechanical and electrical power equipment, and related engineering, wastewater treatment and sewage system, etc. Each such part is depreciated based on its useful life of 25 to 50 years, 25 years, and 4 to 25 years, respectively.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(11) Lessee
Applicable from January 1, 2019

A. Identifying a lease

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether:

(a) the contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified; and

(b) the customer has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and

(c) the customer has the right to direct the use of the asset throughout the period of use only if either:

- the customer has the right to direct how and for what purpose the asset is used throughout the period of use; or

- the relevant decisions about how and for what purpose the asset is used are predetermined and:
  - the customer has the right to operate the asset throughout the period of use, without the supplier having the right to change those operating instructions; or
  - the customer designed the asset in a way that predetermines how and for what purpose it will be used throughout the period of use.

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices. However, for the leases of land and buildings in which it is a lessee, the Group has elected not to separate non-lease components and account for the lease and non-lease components as a single lease component.

B. As a leasee

The Group recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be reliably determined, the Group’s incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement of the lease liability comprise the following:

(a) fixed payments, including in-substance fixed payments;

(b) variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;

(c) amounts expected to be payable under a residual value guarantee; and

(d) payments for purchase or termination options that are reasonably certain to be exercised.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when:

(a) there is a change in future lease payments arising from the change in an index or rate; or

(b) there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee; or

(c) there is a change in the lease term resulting from a change of its assessment on whether it will exercise an option to purchase the underlying asset, or

(d) there is a change of its assessment on whether it will exercise a extension or termination option; or

(e) there are any lease modifications

When the lease liability is remeasured, other than lease modifications, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or in profit and loss if the carrying amount of the right-of-use asset has been reduced to zero.

When the lease liability is remeasured to reflect the partial or full termination of the lease for lease modifications that decrease the scope of the lease, the Group accounts for the remeasurement of the lease liability by decreasing the carrying amount of the right-of-use asset to reflect the partial or full termination of the lease, and recognize in profit or loss any gain or loss relating to the partial or full termination of the lease.

The Group has elected not to recognize right-of-use assets and lease liabilities for short-term leases with 12 months or less and leases of low-value assets, including other equipment. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

C. As a lessor

When the Group acts as a lessor, it determines at lease commencement whether each lease is a finance lease or an operating lease. To classify each lease, the Group makes an overall assessment of whether the lease transfers to the lessee substantially all of the risks and rewards of ownership incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then the lease is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

If an arrangement contains lease and non-lease components, the Group applies IFRS15 to allocate the consideration in the contract.

Applicable before January 1, 2019

Leases in which the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. On initial recognition, the lease asset is measured at an amount equal to the lower of its fair value or the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to the asset.

Minimum lease payments made under finance leases are apportioned between the finance cost and the reduction of the outstanding liability. The finance cost is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Other leases are operating leases and are not recognized in the Group's consolidated statements of balance sheets.

Payments made under an operating lease (excluding insurance and maintenance expenses) are recognized in profit or loss on a straight-line basis over the term of the lease.

Expenditures for obtaining land use rights are recognized as acquisition cost. Based on the shorter of the contract period or the estimated useful life, the cost of land use rights is amortized over 50 or 99 years.

(12) Intangible Assets

1. Recognition and measurement

Goodwill arising on the acquisition of subsidiaries is measured at cost, less accumulated impairment losses.

Expenditure on research activities is recognized in profit or loss as incurred.

Development expenditure is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to, and has sufficient resources to, complete development and to use or sell the asset. Otherwise, it is recognized in profit or loss as incurred. Subsequent to initial recognition, development expenditure is measured at cost, less accumulated amortization and any accumulated impairment losses.

2. Other intangible assets

Other intangible assets that are acquired by the Group and have finite useful lives are measured at cost less accumulated amortization and any accumulated impairment losses.

3. Subsequent expenditure

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in profit or loss as incurred.

4. Amortization

Amortization is calculated over the cost of the asset, less its residual value, and is recognized in profit or loss on a straight line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use.

(a) Patents and trademarks: 4 to 6 years
(b) Development costs: 10 years

Amortization methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(13) Impairment of non-financial assets

At each reporting date, the Group reviews the carrying amounts of its non-financial assets (other than inventories and deferred tax assets) to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill is tested annually for impairment.

For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or cash-generating units ("CGUs"). Goodwill arising from a business combination is allocated to CGUs or groups of CGUs that are expected to benefit from the synergies of the combination.

The recoverable amount of an asset or a cash-generating unit ("CGU") is the greater of its value in use and its fair value less costs to sell. Value in use is based on the estimated future cash flows, discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or a CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount.

Impairment losses are recognized in profit or loss. They are allocated first to reduce the carrying amount of any goodwill allocated to the CGU, and then to reduce the carrying amounts of the other assets in the CGU on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. For other assets, an impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(14) Provisions

A provision is recognized if, as a result of a past event, the Group has a present obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as interest expense.

A. Site restoration

In accordance with the Group's published environmental policy and applicable legal requirements, a provision for site restoration in respect of contaminated land and the related expense are recognized when the land is contaminated. A provision for site restoration of lease land and the related expense are recognized over the term of the lease.

B. Onerous contracts

A provision for onerous contracts is recognized when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract or the expected net cost of continuing with the contract. Before a provision is established, the Group recognizes any impairment loss on the assets associated with that contract.

(15) Revenue recognition

1. Revenue from contracts with customers

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

The accounting policies for the Group's main types of revenue are explained below.

A. Sale of goods

The Group engages mainly in the research, development, production, design, and sales of semiconductor ingots and wafers, varistors, optoelectronics and communication wafer materials. The Group recognizes revenue when control of the products has been transferred, being when the products are delivered to the customer, the customer has full discretion over the channel and price to sell the products, and there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or 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.

B. Product Processing Services

The Group provides processing of the company's products and recognizes the relevant Revenue during the financial reporting period of the labor service.

Revenue recognition for fixed-price contracts is based on the ratio of services actually provided to total services as of the reporting date, which is determined by the percentage of labor performed to the total amount of labor to be performed.

If the situation changes, the estimates of revenue, cost, and degree of completion will be revised, and the increase or decrease in the period when the management is aware of the change in the situation will be reflected in profit or loss.

Under the fixed price contract, the customer pays a fixed amount in accordance with the agreed time schedule. When the services provided exceed the payment, the contract assets are recognized; if the payment exceeds the services provided, the contract liabilities are recognized.

If the contract is valued based on the number of hours in which the service is provided, the Revenue is recognized by the amount in which the consolidated company has the right to open an invoice. The consolidated company will ask for a monthly payment from the customer and will receive the consideration after opening the invoice.

The Group recognizes the accounts receivable when the goods are delivered, because the consolidated company has the right to unconditionally collect the consideration at that time.

C. Engineering contract

The Group is engaged in the contracting business of solar power plants. Since the assets are controlled by the customers at the time of construction, the revenue is gradually recognized over time based on the proportion of the engineering costs incurred to date to the estimated total contract costs. A fixed amount paid by the customer in accordance with the agreed time schedule. Certain changes in consideration are estimated using expectations from past experience; other changes are estimated at the most probable amount. The consolidated company recognizes revenue only within the scope of the cumulative Revenue level where it is highly probable that no significant reversal will occur. If the amount of Revenue recognized has not been requested, it is recognized as a contract asset and the contract asset is transferred to the accounts receivable when there is an unconditional right to the consideration.

If the degree of completion of the performance obligation of the construction contract cannot be reasonably measured, the contract revenue is recognized only within the range of expected recoverable costs.

When the consolidated company expects that the inevitable cost of performance of an engineering contract exceeds the economic benefit expected from the contract, the liability provision for the loss-making contract is recognized.

If the circumstances change, the estimates of revenue, cost and completion will be revised and the changes will be reflected in gain or loss when the management is informed of the change in circumstances and the amendment is made.

D. Services

The Group provides services to its customers. Revenue from services rendered is recognized in profit or loss in proportion to the stage of completion of the transaction at the reporting date.

Revenue recognition for fixed-price contracts is based on the ratio of services actually provided to total services as of the reporting date, which is determined by the percentage of labor performed to the total amount of labor to be performed.

If the situation changes, the estimates of revenue, cost, and degree of completion will be revised, and the increase or decrease in the period when the management is aware of the change in the situation will be reflected in profit or loss.

E. Power electric revenue

The company recognized the Power electric revenue is base on the actual electric units and electric rate.

2. Financing components

The company does not expect to have any contracts where the period between the transfer of the promised goods or services 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.

(16) Employee Benefits

1. Defined contribution plans

Obligations for contributions to defined contribution pension plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

2. Defined benefit plans

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.
Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income, and accumulated in retained earnings within equity. The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability (asset). Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

3. Short term employee benefits

Short-term employee benefit are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

(17) Share based payment

The grant date fair value of share based payment awards granted to employees is recognized as employee expenses, with a corresponding increase in equity, over the period that the employees become unconditionally entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards whose related services are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related services at the vesting date.

The non-vested conditions relating to the share-based payment incentives are reflected in the measurement of the fair value of the share-based payment and the difference between the expected and actual results is not subject to verification adjustment.

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in liabilities, over the period during which the employees become unconditionally entitled to payment. The liability is remeasured at each reporting date and at settlement date based onthe fair value of the share appreciation rights. Any changes in the liability are recognized in profit or loss.

Please refer to note 6(23) for grant date of a share-based payment award.

(18) Income tax

Income taxes comprise current taxes and deferred taxes. Except for items related to business combinations, or items recognized directly in equity or other comprehensive income, all current and deferred taxes are recognized in profit or loss.

The Group has determined that interest and penalties related to income taxes, including uncertain tax treatment, do not meet the definition of income taxes, and therefore accounted for them under IAS37.

Current taxes comprise the expected tax payables or receivables on the taxable profits (losses) for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current tax payables or receivables are the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date.

Deferred taxes arise due to temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their respective tax bases. Deferred taxes are not recognized except for the following:

A. temporary differences on the initial recognition of assets and liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profits (losses) at the time of the transaction;

B. temporary differences related to investments in subsidiaries and associates to the extent that the Group is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future; and

C. taxable temporary differences arising on the initial recognition of goodwill.

Deferred taxes are measured at tax rates that are expected to be applied to temporary differences when they reserve, using tax rates enacted or substantively enacted at the reporting date, and reflect uncertainty related to income taxes, if any.

Deferred tax assets and liabilities are offset if the following criteria are met:

A. the Group has a legally enforceable right to set off current tax assets against current tax liabilities; and

B. the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either:

(a) the same taxable entity; or

(b) different taxable entities which intend to settle current tax assets and liabilities on a net basis, or to realize the assets and liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Deferred tax assets are recognized for the carry forward of unused tax losses, unused 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 are reduced to the extent that it is no longer probable that the related tax benefits will be realized; such reductions are reversed when the probability of future taxable profits improves.

(19) Earnings per share

The Group discloses the Company's basic and diluted earnings per share attributable to ordinary shareholders of the Company. Basic earnings per share is calculated as the profit attributable to ordinary shareholders of the Company divided by the weighted-average number of ordinary shares outstanding. Diluted earnings per share is calculated as the profit attributable to ordinary shareholders of the Company divided by the weighted-average number of ordinary shares outstanding after adjustment for the effects of all potentially dilutive ordinary shares, such as employee remuneration that could be settled in the form of stock. The Company's potential diluted ordinary share includes non-vested shares of restricted employee right and employee remuneration that has not been resolved by the board of directors and has been issued in the form of shares.

(20) Operating segment

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 about resources to be allocated to the segment and to assess its performance. Each operating segment consists of standalone financial information.

5. Significant accounting assumptions and judgments, and major sources of estimation uncertainty

The preparation of the consolidated financial statements in conformity with the IFRSs endorsed by the FSC requires management to make judgments, estimations 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 management continues to monitor the accounting estimates and assumptions. The management recognizes any changes in the accounting estimates during the period and the impact of those changes in the following period.

Information about judgments made in applying accounting policies that have the most significant effects on the amounts recognized in the consolidated financial statements is as follows:

(1) Impairment of property, plant and equipment, and intangible assets

In the process of evaluating the potential impairment of tangible and intangible assets other than goodwill, the Group is required to make subjective judgments in determining the independent cash flows, useful lives, expected future income and expenses related to the specific asset groups considering of the nature of the industry. Any changes in these estimates based on changed economic conditions or business strategies and could result in significant impairment charges or reversal in future years. Refer to note 6(11) for further description of the key assumptions used to determine the recoverable amount.

(2) Impairment assessment of goodwill

The assessment of impairment of goodwill requires the Group to make subjective judgments to identify CGUs, allocate the goodwill to relevant CGUs, and estimate the recoverable amount of relevant CGUs. Refer to note 6(13) for further description of the impairment of goodwill.

The Group's financial instrument valuation group conducts independent verification on fair value by using data sources that are independent, reliable, and representative of exercise prices. This financial instrument valuation group also periodically adjusts valuation models, conducts back testing, renews input data for valuation models, and makes all other necessary fair value adjustments to assure the rationality of fair value.

The Group strives to use the observable market inputs when measuring assets and liabilities. The hierarchy of the fair value categorized by the valuation techniques used is as follows:

Level 1: quoted prices (unadjusted) in active markets for identified assets or liabilities.
Level 2: inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
Level 3: inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).

For any transfer within the fair value hierarchy, the Group recognizes the transfer on the reporting date. For the assumption used in fair value measurement, please refer to note 6(30) of the financial instruments.

6. Explanation of significant accounts

(1) Cash and cash equivalents

	2019.12.31	2018.12.31
Cash on hand	$ 12,884	12,175
Demand deposits	20,497,057	10,475,332
Time deposits	13,646,957	26,267,152
Repurchase agreement	744,527	74,472
	$ 34,901,425	**36,829,131**

Please refer to note 6(25) for the interest rate risk and sensitivity analysis of the financial assets and liabilities of the Group.

(2) Financial assets and liabilities at fair value through profit or loss

	2019.12.31	2018.12.31
Mandatorily measured at fair value through profit or loss-current:		
Overseas securities held	$ 1,876,656	-
Privately offered funds	-	64,697
Forward exchange contracts	6,920	81,798
Stocks listed on domestic markets	-	177,053
	$ 1,883,576	**323,548**
Mandatorily measured at fair value through profit or loss- non current:		
Privately offered funds	**$ 95,163**	**-**
Financial liabilities designated as at fair value through profit or loss:		
Forward exchange contract	$ 216,632	119
Swap exchange contract	68	-
	$ 216,700	**119**

The Group uses derivative instruments to hedge certain currency risk arising from the Group’s operating activities. The Group held the following derivative instruments not used for hedging and accounted them as mandatorily measured at fair value through profit or loss and held-for-trading financial liabilities as of December 31, 2019 and 2018:

	2019.12.31			
	Contract amount (in thousands)		**Currency**	**Maturity date**
Forward exchange contracts:				
Forward exchange contracts sold	USD	21,050	USD against EUR	2020.01.24-2020.02.26
Forward exchange contracts sold	USD	2,838	USD against KRW	2020.01.23
Forward exchange contracts purchased	JPY	19,000,000	JPY against NTD	2020.01.23
Forward exchange contracts purchased	JPY	50,000	JPY against KRW	2020.02.26
Forward exchange contracts purchased	EUR	3,508	EUR against KRW	2020.01.23
Forward exchange contracts purchased	JPY	17,000,000	JPY against NTD	2019.01.15-2019.6.14
Swap exchange contracts:				
Currency exchange	USD	3,000	USD against NTD	2020.3.17

	2018.12.31			
	Contract amount (in thousands)		**Currency**	**Maturity date**
Forward exchange contracts sold	USD	17,850	USD against EUR	2019.01.24-2019.02.26
Forward exchange contracts sold	USD	10,197	USD against KRW	2019.01.24
Forward exchange contracts purchased	JPY	50,000	JPY against EUR	2019.02.26
Forward exchange contracts purchased	EUR	18	EUR against KRW	2019.01.24
Forward exchange contracts purchased	JPY	100,412	JPY against KRW	2019.01.24
Forward exchange contracts purchased	JPY	17,000,000	JPY against NTD	2019.01.15-2019.6.14

Please refer to Note 6 (31) for the remeasured amount recognized in gain or loss at fair value.
Please refer to Note 6 (31) for market risk information.
The financial assets mentioned above were not pledged as collateral.

(3) Financial assets at fair value through other comprehensive income

	2019.12.31	2018.12.31
Equity instruments measured at fair value through other comprehensive gain or loss:		
Domestic booked (OTC) company stock - Actron Technology Corporation	$ -	319,427
Domestic booked (counter) company stock – United Renewable Energy Co., Ltd.	-	270,073
Domestic booked (OTC) company stock – Phoenix Silicon International Corporation	-	127,920
Domestic non-booked (OTC) company stock - SILFAB SPA stock	326,090	352,282
Domestic non-booked (OTC) company stock – Powertech Energy Corp.	-	130,764
Domestic non-booked (OTC) company stock - GIGA Electronic Technology Corporation	6,095	4,458
Total	$ 322,185	1,204,924

The Group's investments in these equity instruments are long-term strategic investments and are not held for trading purposes and have been designated as measured at fair value through other comprehensive gain or loss.

Solartech Energy Corp. (hereinafter referred to as Solartech Energy) and Gintech Energy Corporation (hereinafter referred to as Gintech Energy Corporation) and Neo Solar Power Corporation (hereinafter referred to as Neo Solar Power) jointly signed the merger contract on January 29, 2018. The Neo Solar Power was the existing company (the name of the company after the merger was changed to United Renewable Energy Co., Ltd., hereinafter referred to as URE), and Gintech Energy and Solartech Energy were cancelled. The base date for the merger is October 1, 2018. Solartech Energy’s shareholders, in accordance with the issued ordinary shares (including private placement of shares and restrictions on employee rights shares, if issued) they hold, renewed 1.17 shares of Neo Solar Power’s shares per share.

The Group was deemed to have sold the shares of Solartech Energy, which were measured at fair value through other comprehensive gain or loss, for the above reasons on October 1, 2018. The fair value of the disposition was NT$ 348,730 thousand and the cumulative loss was NT$ 1,558,196 thousand. The aforementioned cumulative disposed losses have been transferred from other equity to retained earnings.

Based on the Group's operating performance considerations, the Group sold the shares of URE and Phoenix Silicon International Corporation, which were measured at fair value through other comprehensive gain or loss. The fair value of the disposition was NT$ 313,622 thousand with cumulative disposal loss NT$34,708 thousand and 239,723 thousand with cumulative disposal gain NT$126,095 respectively. The aforementioned cumulative disposed gain and loss have been transferred from other equity to retained earnings.

Dividend Revenue recognized in 2019 and 2018 were NT$5,248 and NT$ 12,776 thousands respectively.

The Group's investments in Actron Technology Corporation has transferred as investment in using the equity method, please refer to Note6(7).

Powtec ElectroChemical Corp. (hereinafter referred to as Powtec ElectroChemical) filed for bankruptcy on February 26, 2020.The Group assessed the Powtec ElectroChemical financial difficulties and recognized the unrealized loss on financial assets at fair value through other comprehensive income of Powtec ElectroChemical.

For market risk information, please refer to Note 6 (31).

The above financial assets are not pledged as collateral.

(4) Financial assets measured at amortized cost

	2019.12.31	2018.12.31
Current:		
Corporate debt - Crystalwise Technology	$ 240,068	-
Non-Current:		
Corporate debt - Crystalwise Technology	$ 267,612	281,366

The Group's assessment is to hold the assets to the maturity date to collect the contractual cash flow, and the cash flows of these financial assets are solely for the payment of the principal and the interest on the outstanding principal amount. Therefore, since January 1, 2018 financial assets measured at amortized cost are recognized.

In January 2019, the Group purchased the private equity corporate bonds of Crystalwise Technology Inc. for a one-year period at a nominal amount of NT$ 250,000 thousands. The coupon rate and effective interest rate were 2.00%, which mature on January, 2020.

The impairment loss of the financial assets measured at amortized cost in 2019 was NT$25,973 thousand.

Please refer to Note 6 (31) for credit risk information.

The above financial assets are not pledged as collateral.

(5) Notes and accounts receivable, net

	2019.12.31	2018.12.31
Notes receivable	$ 168,881	187,522
Accounts receivable	8.315,492	9,598,538
Accounts receivable-fair value through other comprehensive income	7,487	42,578
Less: Allowance for doubtful accounts	(57,611)	(61,221)

Allowance for sales discounts and returns		-	-
	$	8,434,249	9,767,417

The Group has assessed a portion of its accounts receivables that was held within a business model whose objective is achieved by selling financial assets; therefore, such accounts receivables were measured at fair value through other comprehensive income.

The Group applied the simplified approach to provide for its expected credit losses, i.e. the use of lifetime expected loss provision for all receivables. To measure the expected credit losses, accounts receivable have been grouped based on shared credit risk characteristics and the days past due, as well as incorporated forward looking information.

The loss allowance provision of solar energy business (including related parties) was determined as follows:

	2019.12.31		
	Carrying amount of receivables	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 327,675	0%	-
1 to 30 days past due	35,248	0%-2.41%	-
More than 91 days past due	43,482	52.55%-100%	41,935
Total	$ 406,405		41,935

	2018.12.31		
	Carrying amount of receivables	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 627,514	0%	-
1 to 30 days past due	21,981	0%-1.43%	-
31 to 60 days past due	2,009	0%-9.44%	-
More than 91 days past due	53,045	59.09%-100%	50,023
Total	$ 704,549		50,023

The loss allowance provision of semiconductor business (including related parties) was determined as follows:

	2019.12.31		
	Carrying amount of receivables	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 7,871,268	0%	-
1 to 30 days past due	241,061	0%	-

31 to 60 days past due	17,797	0%-15%	325
61 to 90 days past due	1,385	30%	416
91 to 120 days past due	13,626	50%	6,806
More than 151 days past due	8,269	90%-100%	8,129
Total	$ 8,153,406		15,676

	2018.12.31		
	Carrying amount of receivables	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 8,696,346	0%	-
1 to 30 days past due	480,384	0%	-
31 to 60 days past due	46,169	0%-15%	3,507
61 to 90 days past due	464	25%	120
91 to 120 days past due	231	50%	115
121 to 150 days past due	408	70%	286
More than 151 days past due	7,170	90%-100%	7,170
Total	$ 9,231,172		11,198

The movements in the allowance for doubtful accounts related to notes and accounts receivable were as follows:

	2019	**2018**
Balance on January 1	$ 61,221	$ 99,852
Impairment losses recognized(reversed)	(2,643)	35,446
Amounts written off	-	(73,536)
Foreign exchange losses	(967)	(541)
Balance on December 31	$ 57,61	$ 61,221

The other receivable loss allowance provision of the Group was NT$67,292 thousand in 2017.

The Group factored its accounts receivable to manage credit risks as of each reporting date as follows:

The Group entered into an agreement with banks to factor certain of its accounts receivable without recourse. According to the agreement, within the factoring line, the Group does not have to ensure the ability of debtors to pay when transferring the rights and obligations. The Group derecognized the above accounts receivables because it has transferred substantially all of the risks and rewards of their ownership, and it does not have any continuing involvement in them.

As of the reporting dates, details of accounts receivable factoring were as follows:

(Unit: Foreign currency/JPY in thousands)

December 31, 2019

Purchaser	Amounts derecognized	Factoring Line	Advanced Amount		Range of Interest Rate	Collateral
Mitsubishi UFJ, etc.	$ 329,440	-	329,440	-	1.175% 1.475%	None

December 31, 2018

Purchaser	Amounts derecognized	Factoring Line	Advanced Amount		Range of Interest Rate	Collateral
Mitsubishi UFJ, etc.	$ 502,978	-	502,978	-	1.175% 1.475%	None

The factoring agreements above include a factoring line that is intended for revolving use.

The notes and accounts receivable mentioned above were not pledged as collateral.

(6) Inventories

	2019.12.31	2018.12.31
Finished goods and products	$ 2,096,373	2,047,805
Work in progress	2,085,206	2,160,209
Raw materials	3,216,714	3,673,353
	$ 7,398,293	7,881,367

Component of operating cost are as follows:

	2019	2018
Cost of sales	$ 42,202,259	48,156,805
Accrual of impairment loss of property, plant and equipment (Note 6 (11))	-	1,497,261
Reversal of inventory valuation	(109,158)	(37,345)
Unallocated fixed manufacturing expense	266,522	536,967
Provision (Note 6 (18))	3,883,063	443,404
	$ 46,242,686	50,597,092

The inventories mentioned above were not pledged as collateral.

(7) Investments accounted for using equity method

A summary of financial information for investments accounted for using the equity method at the reporting date is as follows:

Names of affiliated companies	Relationship with the Company	Main location/ country registered in	Percentage of equity ownership interests and voting rights 2019.12.31	2018.12.31
Actron Technology Corporation.	Mainly engages in the manufacturing of electronic component .	Taiwan	15.50%	-
Taiwan Special Chemicals Corporation (hereinafter referred to as Taiwan Special Chemicals)	The main business is manufacturing of semiconductor special gas and chemical materials.	Taiwan	30.93%	30.93%
Cathy Sunrise Corporation (hereinafter referred to as Cathy Sunrise)	The main business is manufacturing of power generation, transmission and distribution machinery.	Taiwan	30.00%	30.00%
Crystalwise Technology Inc.	Mainly engages in the manufacturing and trading of optoelectronic wafers and substrate material.	Taiwan	41.93%	40.11%
Hongwang Investment Co., Ltd. (Hereinafter referred to as Hongwang)(Note)	The main business is general trading	Taiwan	30.98%	24.39%

Accu Solar Corporation (Hereinafter referred to as TSCS)	The main business is providing solar modules.	Taiwan	24.70%	24.70%

Note: It is transferred from GlobalWafers' investment.

1. The affiliated companies that are significant to the parent company and booked with TPEX.

	2019.12.31	2018.12.31
Crystalwise Technology Inc.	$ 1,030,041	791,079

The following consolidated financial information of significant affiliates has been adjusted according to individually prepared IFRS financial statements of these affiliates:

Financial Summary of Crystalwise Technology:

	2019.12.31	2018.12.31
Current Assets	$ 1,069,050	1,055,915
Non-current Assets	1,513,959	2,134,030
Current Liabilities	(1,027,371)	(1,225,269)
Non-current Liabilities	(843,098)	(872,017)
Net assets attributed to owner of the investee parent company	$ 712,540	1,092,659

	2019	2018
Operating revenues	$ 617,436	1,317,193
Loss from continuing operations	$ (751,496)	(449,780)
Other comprehensive income	(49,885)	(59,599)
Total comprehensive income attributed to the Group	$ (801,381)	(509,379)
Share of net assets of affiliates as of January 1	$ 415,391	849,211
Recognized change in equity net worth of affiliated companies under equity method this period	204,960	-
Change in equity of affiliates accounted for using equity method	(12,106)	124
Operating income attributed to the Group and impairment loss	(307,020)	(410,495)
Comprehensive income attributed to the Group and other	(20,671)	(23,449)
Share of net assets of affiliates as of December 31	$ 280,554	415,391

2. The Group's financial information for investments accounted for using the equity method that are individually insignificant was as follows:

	2019.12.31	2018.12.31
Carrying amount of individually insignificant associates' equity	$ 2,967,983	1,626,505

In 2019 and 2018, the Group's share of the net income of associates was as follows

	2019	2018
Attributable to the Group:		
Net loss of the period	$ (37,410)	(53,306)
Other comprehensive income (loss)	291,516	(149,273)
Total comprehensive income	$ (254,106)	(202,579)

3. The difference in the investment cost of the newly added investment and the fair value of the identifiable net assets of the investee is mainly attributable to the intangible assets.

4. Based on the group's operating performance considerations, the Group increased Crystalwise Technology Inc. capital by $204,960 thousand in May 2019. The difference between the investment cost and the net equity value of $12,101 thousand was recognized as capital surplus, and the shares held increased from 40.13% to 41.93%.

5. The Group obtained significant influence since it was elected as corporate director of Actron Technology Corporation in May 2019. Therefore, the original account under fair value through other comprehensive income financial assets was removed and reclassified as investment accounted for using the equity method at fair value. The amount of profit related to the investment that was previously recognized in other comprehensive income NT$237,118 thousand that will not be reclassified to profit or loss was reclassified to retained earnings. In addition, between October and December 2019, the Group increased capital to Actron Technology Corporation by cash and continued to purchase its shares, and the difference between the investment cost and the net equity value was NT$376,638 thousand recognized as capital surplus.

6. The Group acquired equity interests of Hongwang Investment Co., Ltd. for $109,760 thousand in 2019, which was recognized as additions to investments accounted for using the equity method. The difference of $4,063 thousand between the investment cost and the equity is recognized in additional paid in capital. Ownership increased from 24.39% to 30.98% as a result of the acquisition.

7. For the years ended December 31, 2019 and 2018, the cash dividends of the invested companies were $55,068 thousand and $6,422 thousand, respectively, which were recognized as deductions of investments accounted for using the equity method.

8. The investments accounted for using equity method mentioned above were not pledged as collateral as of December 31, 2019 and 2018

(8) Changes in a parent's ownership interest in a subsidiary

1. Acquisitions of additional shares of the subsidiary

The Group did not have any transaction with non-controlling interests in 2018.In March 2019, the Group acquired an additional interest in GlobalWafers for NT$91,006 in cash, increasing its ownership from 50.84 to 50.94%.

The effects of the changes in shareholdings were as follows:

	2018
Carrying amount of non-controlling interests purchased	$ 41,341
Consideration paid to non-controlling interests and other equity	(92,445)
Capital surplus differences between consideration and carrying amounts subsidiaries acquired	$ (51,104)

2. The subsidiary bought back the treasury shares did not result in the Group loss of control

GlobalWafers implemented the treasury stock in 2018 and bought back the company's shares at Taiwan Stock Exchange, which increased the company's interest in GlobalWafers by 0.23%.

The impact of the changes of the Company's equity of GlobalWafers on the equity attributable to the parent company is as follows:

	2018
Equity deduction after the subsidiary buying treasury shares	$ 194,600
Capital surplus - change of investments accounted for using equity method	$ (194,600)

(9) Material non-controlling interests of subsidiaries

The material non-controlling interests of subsidiaries were as follows:

Name of subsidiary	Main business place / company registered country	% of ownership interests under non-controlling interests as well as the voting rights 2019.12.31	2018.12.31
GlobalWafers	Taiwan	48.83%	48.83%

The following information of the aforementioned subsidiaries have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers. Included in these information are the fair value adjustment made during the acquisition and relevant difference in accounting principles between the Group as at the acquisition date. Intragroup transactions were not eliminated in this information.

		2019.12.31	2018.12.31
Current assets	$	51,492,745	53,200,515
Non-current assets		45,093,008	36,621,606
Current liabilities		(26,910,651)	(24,422,441)
Non- current liabilities		(24,601,852)	(22,243,567)
Net assets	$	45,067,015	43,156,113
Non-controlling interests	$	6,235	16,658

		2019	2018
Sales revenue	$	58,094,331	59,063,510
Net income	$	13,635,656	13,633,771
Other comprehensive income		(841,189)	431,248
Comprehensive income	$	12,794,467	14,065,019
Profit, attributable to non-controlling interests	$	(8,439)	3,098
Comprehensive income, attributable to non-controlling interests	$	(9,996)	9,762

		2019	2018
Net cash flows from operating activities	$	17,388,898	36,178,722
Net cash flows from investing activities		(12,434,497)	(6,368,165)
Net cash flows from financing activities		(6,784,347)	(13,767,728)
Effect of exchange rate changes on cash and cash equivalents		(562,865)	377,132
Net increase (loss) in cash and cash equivalents	$	(2,392,811)	16,419,961

(10) Loss control of subsidiaries

The Group disposed all of its shares in Sunrise PV Five with a consideration of NT$144,241 thousand at the end of March 2019 and recognized net gain on disposal of NT$69,104 thousand under other gains and losses in consolidated statements of comprehensive income.

The carrying amount of assets and liabilities of Sunrise PV Five at the end of March 2019 was as follow:

Cash and cash equivalents	$	6,564
Trade receivables		1,976
Current assets		302
Property, plant and equipment		231,584
Non-current Assets		36,202
Current liabilities		(165,269)
Non-current liabilities		(36,222)
Carrying amount of net assets	**$**	**75,137**

The Group disposed all of its shares in Sunrise PV Electric Power Two with a consideration of NT$47,770 thousand at the end of March 2019 and recognized net gain on disposal of NT$3.480 thousand under other gains and losses in consolidated statements of comprehensive income.

The carrying amount of assets and liabilities of Sunrise PV Five at the end of March 2019 was as follow:

Cash and cash equivalents	$	18,779
Trade receivables		1,265
Current assets		5,988
Property, plant and equipment		121,932
Non-current Assets		36,812
Current liabilities		(104,050)
Non-current liabilities		(36,436)
Carrying amount of net assets	**$**	**44,290**

For related parties transactions, please refer to Note 7.

(11) Property, plant and equipment

1. The movements of cost and depreciation of the property, plant and equipment of the Group were as follows:

	Land	Building	Machinery equipment	Other equipment	Construction in progress and quarantined equipment	Total
Cost:						
Balance of January 1, 2019	$ 3,466,034	18,593,462	60,038,560	4,634,177	3,379,135	90,111,368
Additions	-	16,715	143,401	416,447	8,514,621	9,091,184
Disposals	-	(41,964)	(4,364,736)	(80,522)	(9,845)	(4,497,067)
Reclassification	3,238	521,618	1,328,505	223,099	(2,765,898)	(689,438)
Transfer and other	-	-	(345)	56,945	(739)	55,861
Effect of changes in exchange rates	(61,912)	(309,943)	(929,293)	(79,999)	(266,903)	(1,648,050)
Balance of December 31, 2019	$ 3,407,360	18,779,888	56,216,092	5,170,147	8,850,371	92,423,858
Balance of January 1, 2018	$ 3,408,791	17,896,097	56,760,858	4,280,713	2,548,249	84,894,708
Additions	-	20,569	423,930	538,618	5,786,780	6,769,897
Disposition	(49,905)	(292,307)	(2,630,918)	(553,415)	(2,352)	(3,528,897)
Reclassification	-	319,147	3,656,152	254,317	(4,229,616)	-
Transfer and other	-	68,307	452,284	26,512	(725,585)	(178,482)
Effect of changes in exchange rates	107,148	581,649	1,376,254	87,432	1,659	2,154,142
Balance of December 31, 2018	$ 3,466,034	18,593,462	60,038,560	4,634,177	3,379,135	90,111,368
Depreciation and impairment loss:						
Balance of January 1, 2019	$ -	9,150,708	41,208,206	2,312,194	1,705	52,672,813
Depreciation for the year	-	763,046	3,653,004	422,887	-	4,838,937
Disposals	-	(41,716)	(3,906,267)	(65,238)	(1,705)	(4,014,926)
Reclassification	-	177	(686,600)	(3,015)	-	(689,438)
Transfer and other	-	-	(345)	14,476	-	14,131
Effect of changes in exchange rates	-	(106,477)	(505,674)	(62,223)	-	(674,374)
Balance of December 31, 2019	$ -	9,765,738	39,762,324	2,619,081	-	52,147,143
Balance of January 1, 2018	$ -	8,026,379	37,081,741	2,257,780	-	47,365,900
Depreciation for the year	-	759,686	4,397,963	470,584	-	5,628,233
Impairment loss		328,088	1,128,814	38,654	1,705	1,497,261
Disposal	-	(285,851)	(2,524,419)	(526,912)	-	(3,337,182)
Transfer and other	-	(8,548)	(147,653)	57,877	-	(98,324)
Effect of changes in exchange rates	-	330,954	1,271,760	14,211	-	1,616,925
Balance of December 31, 2018	$ -	9,150,708	41,208,206	2,312,194	1,705	52,672,813
Carrying amounts:						
December 31, 2019	$ 3,407,360	9,014,150	16,453,768	2,551,066	8,850,371	40,276,715
January 1, 2019	$ 3,408,791	9,869,718	19,679,117	2,022,933	2,548,249	37,528,808
December 31, 2018	$ 3,466,034	9,442,754	18,830,354	2,321,983	3,377,430	37,438,555

2. Impairment loss

In the fourth quarter of 2018, the consolidated company evaluated that as the production line of the solar energy division was affected by the global economy, the production output declined. Therefore, the recoverable amount of the production line must be evaluated.

The solar energy production line of the consolidated company is a cash-generating unit whose recoverable amount is based on its value in use as of December 31, 2018. The carrying amount of the property, plant and equipment is higher than its recoverable amount, so the impairment loss is recognized as NT$ 1,497,261 thousands, which is included in the operating cost of the consolidated income statement.

Based on the assessment in 2019, the recoverable amount was higher than its carrying amount and no impairment loss was recognized.

The pre-tax discount rate of estimated value in 2019 and 2018 were 7.39% and 8.94%, respectively.

3. Guarantees

Property, plant and equipment was pledged as collateral for long term borrowings, short term borrowings and credit lines. Please refer to note 8.

(12) Right-of-use assets

The Group leases many assets including land, buildings, machinery and other equipment. The carrying amounts about leases were presented below:

	Land	Buildings	Machinery	Other equipment	Total
Carrying amounts:					
Balance at December 31, 2019	$ 569,244	238,606	27,257	78,502	913,609

	2019
Additions	$ 10,464

	2019
Depreciation expense of right-of-use assets	
Land	$ 44,069
Buildings	54,700
Machinery	11,316
Other equipment	81,404
	$ 191,489

The Group leases buildings, machinery and equipment classified as property, plant and equipment under the finance lease for the year ended December 31, 2018. Please refer to note 6(17). The Group leases lands, offices, warehouses and factory facilities under an operating lease. Please refer to note 6(19).

The impairment loss assessment, please refer to note 6(11).

(13) Intangible assets

The cost and amortization of the intangible assets of the Group were as follows:

	Goodwill	Patent and trademark	Development cost	Total
Costs:				
Balance of January 1, 2019	$ 2,488,317	1,704,483	160,515	4,353,315
Disposals	-	-	(50,711)	(50,711)
Effect of changes in exchange rates	(67,261)	(1,738)	(5,133)	(74,132)
Balance of December 31, 2019	**$ 2,421,056**	**1,702,745**	**104,671**	**4,228,472**
Balance of January 1, 2018	$ 2,429,026	1,702,225	164,472	4,295,723
Effect of changes in exchange rates	59,291	2,258	(3,957)	57,592
Balance of December 31, 2018	**$ 2,488,317**	**1,704,483**	**160,515**	**4,353,315**
Amortization:				
Balance of January 1, 2019	$ -	666,222	37,696	703,918
Current amortization	-	332,113	15,767	347,880
Disposals	-	-	(49,570)	(49,570)
Effect of changes in exchange rates	-	(1,154)	(185)	(1,339)
Balance of December 31, 2019	**$ -**	**997,181**	**3,708**	**1,000,889**
Balance of January 1, 2018	$ -	333,694	22,895	356,589
Current amortization	-	331,763	16,576	348,339
Effect of changes in exchange rates	-	765	(1,775)	(1,010)
Balance of December 31, 2018	**$ -**	**666,222**	**37,696**	**703,918**
Carrying amount:				
December 31, 2019	**$ 2,421,056**	**705,564**	**100,963**	**3,227,583**
January 1, 2019	**$ 2,429,026**	**1,368,531**	**141,577**	**3,939,134**
December 31, 2018	**$ 2,488,317**	**1,038,261**	**122,819**	**3,649,397**

During the years ended December 31, 2019 and 2018, the amortization expenses of intangibles assets recognized under operating expenses in the statements of comprehensive income amounted to $347,880 thousand, and $348,339 thousand, respectively.

For the purpose of impairment testing, goodwill was allocated to the semiconductor business. The Group’s goodwill has been tested for impairment at least once at the end of each annual reporting period and the recoverable amount is determined based on discounted cash flows.

Based on the result of the Group’s assessment, there is no indication of goodwill impairment.

The intangible assets mentioned above were not pledged as collateral.

(14) Short-term borrowings

	2019.12.31	2018.12.31
Unsecured bank loans	$ 10,465,075	9,217,684
Purchase of materials loan	-	117,125
	$ 11,465,075	9,334,809
Unused credit lines	$ 28,430,716	23,333,968
Range of interest rates at year end	0.70% -3.00%	0.76% -3.88%

For assets pledged as collateral for borrowings, please refer to note 8.

(15) Long-term borrowings

The details were as follows:

	2019.12.31
	Amount
Unused credit lines	$ 400,000

	2018.12.31			
	Currency	Range of interest rates at year end	expiry date	Amount
Unsecured bank loans	NTD	1.04%-1.18%	2020.06-2020.11	$ 1,159,000
Secured Bank Loans	NTD	1.28%	2022.01-2033.01	881,200
Total				$ 2,040,200
Unused credit lines				$ 301,000

For assets pledged as collateral for borrowings, please refer to note 8.

(16) Lease liabilities

The carrying amounts of lease liabilities of the Group were as follows:

	December 31, 2019
Current(recognized under other current liabilities)	$ 178,913
Non-current (recognized under other non-current liabilities)	$ 752,484

For the maturity analysis, please refer to note 6(30) “Financial instruments”.

The amounts recognized in profit or loss were as follows:

	For the year ended December 31, 2019
Interest on lease liabilities	$ 12,051
Variable lease payments not included in the measurement of lease liabilities	$ 880
Expenses relating to short-term leases	$ 15,564
Expenses relating to leases of low-value assets, excluding short-term leases of low-value assets	$ 6,054

The amounts recognized in the statement of cash flows was as follows:

	For the year ended December 31, 2019
Total cash outflow for leases	$ 235,576

1. Land and Buildings lease

   The Group leases land and buildings for its facility and office space. The leases of office space typically run for a period of 20 years. Some leases include an option to renew the lease for an additional period of the same duration after the end of the contract term.

   Land leases' additional rent payments that are based on changes in local price indices and the public facilities construction costs re-invested annually in each park will be adjusted after being assessed.

2. Other leases

   The Group leases vehicles and equipment, with lease terms of two to five years. In some cases, the Group has options to purchase the assets at the end of the contract term; in other cases, it guarantees the residual value of the leased assets at the end of the contract term.

(17) Financial lease liabilities

The Group acquired portion of its property, plant and equipment through finance lease. Related finance lease liabilities were recognized as other current liabilities and non-current liabilities as follows:

	2018.12.31			
		Future minimum lease payments	**Interest**	**Present value of minimum lease payments**
Within 1 year	$	9,102	(1,315)	7,787
1-5 years		21,995	(1,390)	20,605
	$	**31,097**	**(2,705)**	**28,392**

(18) Provision

The details of the changes in the Group's provision were as follows:

		Site restoration	**Onerous contract**	**Total**
Balance of January 1, 2019	$	64,651	960,292	1,024,943
Provisions made during the year		9,688	4,193,975	4,203,663
Provisions used during the year		(11,232)	(309,368)	(320,600)
Effect of changes in exchange rates		(1,102)	-	(1,102)
Balance of December 31, 2019	**$**	**62,005**	**4,844,899**	**4,906,904**
Current	$	10,307	221,949	232,256
Non-current		51,698	4,622,950	4,674,648
Total	**$**	**62,005**	**4,844,899**	**4,906,904**
Balance of January 1, 2018	$	62,895	513,377	576,272
Provisions made during the year		5,620	533,292	538,912
Provisions used during the year		(6,255)	(89,253)	(95,508)
Effect of changes in exchange rates		2,391	2,876	5,267
Balance of December 31, 2018	**$**	**64,651**	**960,292**	**1,024,943**
Current	$	10,074	-	10,074
Non-current		54,577	960,292	1,014,869
Total	**$**	**64,651**	**960,292**	**1,024,943**

1. Site restoration

   Under the lease contract, if the Group does not intend to extend its leasehold, the Group needs to restore the plants. The Group estimates the provision based on the lease terms and in accordance with the Group's published environmental policy and applicable legal requirements. A provision for site restoration is made in respect of environmental cleanup costs.

2. Onerous contract

The Group entered into several non cancellable long term material supply agreements with the suppliers of silicon materials. The Group agrees to purchase the required quantity of raw materials on schedule based on the contractual price during the commitment periods and makes a non refundable prepayment to the suppliers. The suppliers need to deliver the required quantity of raw materials to the Group according to the contract. Provisions for the onerous contracts were made based on contractual terms and were recognized as cost of sales. For the related agreement, please refer to note 9.

(19) Operating lease

1. Lease of lessee

The rent payment of the irrevocable operating leases is as follows:

	2018.12.31
Within 1 year	$ 199,460
1-5 years	680,949
Over 5 years	539,558
	$ 1,419,967

For the year 2018, rental costs from operating leases of $249,592 thousand were recognized as expenses in profit or loss.

The Group entered into operating lease agreements with Covalent Materials Corporation for the rental of land, buildings, and other equipment in Oguni, Taino and Tokuyama. All the lease agreements covered the period from November 30, 2011 to March 31, 2035. The aggregate future rental payment is $30,155 thousand each year.

The Group entered into a land lease agreement with the Hsinchu Science Park Administration for the plant located in the Hsinchu Science Park. The land lease agreement has a lease term covering a period from October 1, 2000 to December 31, 2037. According to the lease agreement, rent is subject to adjustment based on the current land value which is announced by the government. The annual rental is approximately $41,764 thousand.

The consolidated company leased land and building materials from Ming Yang Co., Ltd. for the expansion of production capacity and the factory. The lease period lasted from July 2015 to July, 2025 for a total of ten years. Pursuant to the lease term, the rent is reviewed every two years. The rent payment is around NT$ 1,890 thousands per month.

To set up solar power plant, the consolidated company lease the roof of buildings and land to install solar power equipment. The lease period was from December 2016 to June 2038. Part of the agreed rental expenses are based on a certain percentage of the revenue generated. For a fixed-rate lease, the annual rent is about NT$ 3,344 thousands.

2. Prepaid Rent – Long Term

In 2018, the Group entered into operating lease agreements for land use right, with the lease terms of 50 years and 99 years, respectively, and rentals were paid once. The land use right of one of the subsidiaries was transferred to the assets to be sold in the fourth quarter of 2017 due to the expected sale of property, plant and equipment, and was accounted for under other current assets. The expenses for profit and loss reported in 2018 were NT$ 225 thousands. As of December 31, 2018, the balance that had not been amortized was NT$ 7,538 thousand. The above assets to be sold were sold in the first quarter of 2018.

(20) Employee benefits

1. Defined benefit plan

Reconciliation of defined benefit obligation at present value and plan asset at fair value was as follows:

		2019.12.31	2018.12.31
Total present value of obligations	$	(8,436,845)	(8,164,777)
Fair value of plan assets		5,489,559	4,994,981
Recognized liabilities for defined benefit obligations	$	(2,947,286)	(3,169,796)

The details of the account are as follows:

		2019.12.31	2018.12.31
Recognized assets for defined benefit obligations	$	3,104	3,233
Recognized liabilities for defined benefit obligations		(2,950,390)	(3,173,029)
	$	(2,947,286)	(2,898,535)

The plans entitle a retired employee to receive a pension benefit based on years of service prior to retirement.

(1) Movements in present value of the defined benefit obligations

The movements in present value of the defined benefit obligations of the Group were as follows:

		2019	2018
Defined benefit obligations at January 1	$	8,164,777	8,176,190
Current service cost and interest cost		489,118	463,686
Re measurements for defined benefit obligations			
- Actuarial gains and losses arising from experience adjustments		11,528	(25,922)
- Actuarial gains and losses resulting from changes in demographic assumptions		371,933	(172,289)

- Actuarial gains and losses resulting from changes in financial assumptions		78,187	72,519
Benefits paid		(493,490)	(573,870)
Effect of changes in exchange rates		(185,208)	224,463
Defined benefit obligations at December 31	$	8,436,845	8,164,777

(2) Movements in fair value of defined benefit plan assets

The movements in fair value of the defined benefit plan assets of the Group were as follows:

		2019	2019
Fair value of the plan assets at January 1	$	4,994,981	5,277,655
Interest income		160,435	144,935
Re measurements for defined benefit obligations			
- Return on plan asset (excluding interest revenue)		641,034	(391,115)
Contributions made		174,797	221,095
Benefits paid		(336,313)	(416,105)
Effect of changes in exchange rates		(145,375)	158,516
Fair value of the plan assets at December 31	$	5,489,559	4,994,981

The Group allocates pension funds in accordance with the Regulations for Revenues, Expenditures, Safeguard and Utilization of the Labor Retirement Fund, and such funds are managed by the Bureau of Labor Funds, Ministry of Labor. With regard to the utilization of the funds, minimum earnings shall be no less than the earnings attainable from two year time deposits with interest rates offered by local banks.

The Group’s Bank of Taiwan labor pension reserve account balance amounted to $249,111 thousand, as of December 31, 2019. For information on the utilization of the labor pension fund assets, including the asset allocation and yield of the fund, please refer to the website of the Bureau of Labor Funds, Ministry of Labor.

Under the employee defined benefit plans of a Group subsidiary in Korea, plan assets comprised of time deposits bearing annual interest rates ranging from 1.74%~2.20%.

In Italy, the Group’ s subsidiary contributes an amount to the National Social Security Pension Fund (INPS) for the employee defined benefit plan.

Under the employee defined benefit plans of the entities located in the United States, plan assets are comprised of trust funds with different grades of risks and returns. Plan asset portfolio consists of a variety of financial instruments including cash, equity securities, and income funds.

(3) Changes in the effect of the asset ceiling

As of December 31, 2019 and 2018, there was no effect of the asset ceiling.

(4) Expenses recognized in profit or loss

The expenses recognized in profit or loss for the Group were as follows:

		2019	2018
Current service costs	$	472,005	445,871
Net interest of net liabilities for defined benefit obligation		(143,322)	(127,120)
	$	**328,683**	**318,751**
Operating Costs	$	282,476	270,245
Selling expenses		27,854	13,750
Administrative expenses		8,847	19,318
Research and development expenses		9,506	15,438
	$	**328,683**	**318,751**

(5) Actuarial assumptions

The principal actuarial assumptions at the reporting date were as follows:

	2019.12.31	2018.12.31
Discount rate	0.32%-3.04%	0.26%-4.05%
Future salary increase rate	1.33%-9.96%	1.33%-9.96%

The estimated amount of contribution to be made by the Group to the defined benefit plans for the one year period after the reporting date is $635,969 thousand.

The weighted average durations of the defined benefit obligation are 4 years to 17.87 years

(7) Sensitivity analysis

When the actuarial assumptions had changed 0.25% as of the December 31, 2019 and 2018, the impact on the present value of the defined benefit obligation would be as follows:

		The impact to the defined benefit obligations	
		Increased by 0.25%	**Decreased by 0.25%**
December 31, 2019			
Discount rate	$	(203,951)	212,482
Future salary increase rate		93,533	(87,128)
December 31, 2018			
Discount rate	$	(183,551)	192,481
Future salary increase rate		80,785	(76,787)

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, assuming other assumptions remain constant, would have affected the defined benefit obligation by the amounts shown above. The method used in the sensitivity analysis is consistent with the calculation of pension liabilities in previous periods.

There was no change in the method and assumptions used in the preparation of sensitivity analysis for 2019 and 2018.

2. Defined Contribution Plan

The Group contributes at the rate of 6% of each employee's monthly wages to the labor pension personal account at the Bureau of Labor Insurance in accordance with the provisions of the Labor Pension Act. Under this defined contribution plan, the Company's contribution to the Bureau of Labor Insurance requires no additional legal or constructive obligations thereafter.

The pension costs of the Group's Taiwan companies incurred from contributions to the defined contribution plan were $85,230 thousand and $99,148 thousand for the years 2019 and 2018, respectively. Such contributions were made to the Bureau of the Labor Insurance.

The total periodic pension costs of other subsidiaries were recognized as current expenses in accordance with the local regulations of their respective jurisdictions where they are domiciled.

The foreign subsidiaries recognized the pension costs of $97,203 thousand and $80,721 thousand for the years 2019 and 2018, respectively.

(21) Income tax

1. Income tax expenses

The components of income tax expenses in 2019 and 2018 were as follows:

	2019	2018
Current tax expense	$ 4,117,829	2,640,682
Deferred tax expense		
Temporary differences	910,995	1,908,161
Adjustment in tax rate	-	133,910
	910,995	2,042,071
Income tax expenses	$ 5,028,824	4,682,753

The amounts of income tax (benefit) recognized in other comprehensive income in 2019 and 2018 were as follows:

	2019	2018
Items that will not be reclassified subsequently to profit or loss:		
Remeasurement from defined benefit obligations	$ 120,951	(68,152)
Items that may be reclassified subsequently to profit or loss		
Exchange differences on translation of foreign financial statements	$ (305,271)	102,154

Reconciliations of income tax and income before income tax for 2019 and 2018 are as follows:

	2019	2018
Income before income tax	$ 13,924,169	$ 13,318,233
Income tax using the Company's domestic tax rate	2,784,834	2,663,647
Effect of tax rates in foreign jurisdiction	504,291	353,279
Shares of profit of foreign subsidiaries accounted for using equity method	1,697,507	2,022,449
Tax effect of permanent differences	163,919	391,720
Adjustment in tax rate	-	133,910
Basic income tax	4,840	-
Tax preference of Returning Overseas Funds to Taiwan	(390,785)	-
Investment tax credits	(144,840)	(198,951)
Changes in unrecognized temporary differences and others	409,058	(683,301)
	$ 5,028,824	$ 4,682,753

2. Deferred Income tax assets and liabilities

(1) The deferred tax assets have not been recognized in respect of the following items:

		2019.12.31	2018.12.31
Tax effect of deductible temporary differences	$	1,721,216	1,444,153
Tax loss		679,200	611,452
	$	2,400,416	2,055,605

The R.O.C. Income Tax Act allows net losses, as assessed by the tax authorities, to offset taxable income over a period of ten years for local tax reporting purposes. Deferred tax assets have not been recognized in respect of these items because it is not probable that future taxable profit will be available against which the Company can utilize the benefits therefrom.

As of December 31, 2019, the information of the Group's unused tax losses for which no deferred tax assets were recognized are as follows:

Annual losses		Loss to be deducted	Deadline for deduction
2012 (verified)	$	1,403,648	2022
2013 (verified)		9,728	2023
2017 (verified)		1,021,784	2027
2018(declared)		960,839	2028
	$	3,395,999	

(2) The deferred tax liabilities have not been recognized in respect of the following items:

		2019.12.31	2018.12.31
Aggregate amount of temporary differences related to investments in subsidiaries	$	(997,762)	(673,788)

The Group is able to control the timing of the reversal of the temporary differences associated with investments in subsidiaries as at December 31, 2019 and 2018. Also, it is probable that the temporary differences will not reverse in the foreseeable future. Hence, such temporary differences were not recognized as deferred tax liabilities.

(3) Recognized deferred tax assets and liabilities

	2019.1.1	Recognized in profit or loss	Recognized in other comprehensive income	Effect of changes in exchange rates	2019.12.31
Assets:					
Allowance for inventory valuation	$ 198,554	(16,189)	-	(4,687)	177,678
Tax loss	29,726	83,084	-	(3,768)	109,042
Defined benefit obligations	395,594	(44,377)	101,353	(3,912)	448,658
Investment accounted for using equity method	109,783	40,399	20,490	-	170,672
Expected credit loss of accounts receivable	112,479	(13,458)	-	(5,741)	93,280
Depreciation life differences of property, plant and equipment	166,495	107	-	(3,035)	163,567
Unrealized exchange losses	114,144	17,625	-	(1,323)	130,446
Other	388,068	258,352	-	(12,127)	634,293
	$ 1,514,843	325,543	121,843	(34,593)	1,927,636

	2019.1.1	Recognized in profit or loss	Recognized in other comprehen sive income	Effect of changes in exchange rates	2019.12.31
Liabilities:					
Investment accounted for using equity method	$ (2,487,625)	(710,856)	265,915	-	(2,932,566)
Depreciation life differences of property, plant and equipment	(729,816)	(148,850)	-	26,633	(852,033)
Fair value adjustment for the net assets acquired in business combinations	(435,519)	15,224	-	9,963	(410,332)
Other	(11,704)	(392,056)	(203,438)	(11,747)	(618,945)
	$ (3,664,664)	(1,236,538)	62,477	24,849	(4,813,876)

	2018.1.1	Recognized in the Revenue statement	Recognized in other comprehensive Revenue statement	Effect of changes in exchange rates	2018.12.31
Assets:					
Allowance for inventory valuation	$ 178,021	20,693	-	(160)	198,554
Tax loss	408,709	(369,057)	-	(9,926)	29,726
Defined benefit obligations	294,438	44,631	43,731	12,794	395,594
Equity method investments	427,265	21,813	(339,295)	-	109,783
Expected credit loss of accounts receivable	9,987	100,992	-	1,500	112,479
Depreciation life differences of property, plant and equipment	265,569	(97,796)	-	(1,278)	166,495
Unrealized exchange losses	88,052	24,793	-	1,299	114,144
Other	342,691	38,731	-	6,646	388,068

	$ 2,014,732	**(215,200)**	**(295,564)**	**10,875**	**1,514,843**
Liabilities:					
Investment accounted for using equity method	$ (1,073,051)	(1,676,136)	261,562	-	(2,487,625)
Depreciation life differences of property, plant and equipment	(547,537)	(163,177)	-	(19,102)	(729,816)
Fair value adjustment for the net assets acquired in business combinations	(436,625)	14,842	-	(13,736)	(435,519)
Other	(9,058)	(2,400)	-	(246)	(11,704)
	$ (2,066,271)	**(1,826,871)**	**261,562**	**(33,084)**	**(3,664,664)**

3. Assessment of tax filings

As of December 31, 2019, income tax returns of the Company for the years through 2017 were assessed by the tax authority.

(22) Capital and other equity

As of December 31, 2019 and 2018, the authorized common stock of the Company amounted to NT$8,000,000 thousand, which was divided into 800,000 thousand shares, with a par value of $10 per share, of which $200,000 thousand was reserved for employee stock options, convertible preferred stock, and convertible corporate bonds. The issued and outstanding shares of common stock amounted to NT$5,862,367 thousand and NT$ 5,863,207 thousand respectively.

Reconciliation of shares outstanding for 2019 and 2018 was as follows:

	Common stock	
	2019	**2018**
Opening balance at January 1	582,845	580,504
new shares with restricting employee rights, restriction lifted	1,646	2,341
Closing balance at December 31	**584,491**	**582,845**

1. Issuance of common stock

The Company increased capital in GDRs of $610,000 thousand, and issued 61,000 thousand shares of common stock on the Luxembourg on September 9, 2010. The price issued per share was US$2.9048. The total issuance amount is US$177,193 thousand. The cash increase was approved by the Financial Supervisory Commission No. 0990041383

Letter on August 13, 2010. All shares issued were paid and registered on September 9, 2010. The total amount issued was US$177,193. The net amount issued was US$174,931 thousand after deducting the related agent cost US$2,262 thousand, was equivalent to NT$5,580,288 thousand on the day's closing exchange rates. The total premium amounting to $4,958,757 thousand was recognized on capital surplus after deducting the related issuance cost of $11,531 thousand.

As of December 31, 2018 and 2017, due to the resignation of employees, the recovered and written off restricted employee shares were 371 thousand shares and 251 thousand shares respectively. As of December 31, 2018, there were still 15 thousand shares whose legal registration procedures are unfinished and recognized as pending share capital.

2. Capital surplus

The balances of capital surplus were as follows:

	2019.12.31	2018.12.31
Additional paid in capital	$ 11,641,320	11,862,668
Difference between the consideration and the carrying amount of subsidiaries' share acquired or disposed	2,065,254	2,441,893
Capital surplus recognized under the equity method	6,665,682	6,568,293
Treasury stock transactions	33,314	33,314
New restricted employee shares	60,522	244,849
Employee stock options, etc.	606,503	606,275
	$ 21,072,595	21,757,292

According to the R.O.C Company Act, capital surplus can only be used to offset a deficit, and only the realized capital surplus can be used to increase the common stock or be distributed as cash dividends. The aforementioned realized capital surplus includes capital surplus arising from premium on issuance of capital stock and the fair value of donated assets received. According to the Regulations Governing the Offering and Issuance of Securities by Securities Issuers, to increase common stock by transferring paid in capital in excess of par value should not exceed 10% of the total common stock outstanding.

The Company distributed out of capital reserve cash of NT$ 401,900 thousands (NT$ 0.6855 per share) and NT$ 1,759,511 thousands (NT$ 3 per share) approved the shareholders' meeting resolution on June 27, 2019 and June 26, 2018. Relevant information can be found on the Market Observation Post System website

3. Legal reserve

When a company incurs no loss, it may, pursuant to a resolution by a shareholders' meeting, distribute its legal reserve by issuing new shares or by distributing cash, and only the portion of legal reserve which exceeds 25% of capital stock may be distributed.

4. Special reserve

When the parent company adopted the international financial reporting standards (IFRSs) approved by the FSC for the first time, the parent company had chosen to apply IFRS 1 “First-time Adoption of the IFRSs” exemptions, retained earnings was increased by NT$ 161,317 thousand due to the accumulated conversion adjustment (profit) under the shareholders’ equity, which exceeding the net increase of NT$ 102,349 thousand in retained earnings on the conversion date for the first-time adoption of IFRSs approved by the FSC. In accordance with Regulatory Permit No. 1010012865 as issued by the FSC on April 6, 2012, a special reserve is appropriated from retained earnings based on the aforementioned requirement. Under such regulation, the Company is also required to set aside an additional special reserve, as part of the distribution of its annual earnings, equal to the difference between the amount of the above-mentioned special reserve and the net debit balance of other components of the stockholders’ equity. The only distributable special reserve is the portion that exceeds the net debit balance of the other components of the shareholders’ equity. The carrying amounts of special reserve both were $102,349 thousand as of December 31, 2019 and 2018.

According to the Order referred to above, while distributing the distributable earnings, the parent company had additional special reserve appropriated from the current gain or loss and unappropriated earnings of the prior period for the difference between the net amount debited to other shareholder’s equity and the balance of the special reserve appropriated in the preceding paragraph. For the amount debited to other shareholders’ equity attributable to prior period accumulation, the special reserve was appropriated from the unappropriated earnings of the prior period and could not be distributed. The amount debited to the shareholders’ equity reversed subsequently can be distributed as earnings.

3. Earnings distribution and dividend policy

The Company's article of incorporation stipulate that Company's net earnings should first be used to offset the prior years' deficits, if any, before paying any income taxes. Of the remaining balance, 10% is to be appropriated as legal reserve, and then any remaining profit together with any undistributed retained earnings shall be distributed according to the distribution plan proposed by the Board of Directors and submitted to the stockholders’ meeting for approval.

After considering both the long term development of the business and the goal of stable growth of earnings per share, the distribution of dividends to shareholders should not be less than 50% of the distributable earnings, which is calculated using the net income of the current year, minus, legal reserve and special reserve. Distribution of cash dividends should not be less than 50% of the total dividends.

The Company 's shareholder meeting decided to offset the prior years' deficits on June 26, 2018, which did not differ from the proposed content of the board of directors.. Relevant information can be accessed from the Market Observation Post System website.

The distributions of dividends per share for the years 2018 approved by the stockholders during their meetings on June 27, 2019 was as follows:

	2018
Dividends distributed to ordinary shareholders:	
Cash (dividends per share was $2.3145)	$ 1,356,963

The above-mentioned earnings distribution is consistent with the resolution approved by the board of directors. The information is available on the Market Observation Post System website.

The board of directors proposed the 2019 annual earnings distribution on March 19, 2020. The above earrings distribution will be resolved by shareholders' meeting. After the resolution of the relevant meeting of the Company, the information can be accessed from the Market Observation Post System website.

4. Treasury share

The treasury shares bought back by the Company had been deregistered in 2018.

Unit: Thousand shares

	2018			
Reasons for buy back	**Beginning shareholdings**	**Increase of the year**	**Decrease of the year**	**Ending shareholdings**
Transferred to employee	5,555	-	5,555	-

Note : The deregistration was done in 2019 third quarter.

5. Other interests (net after tax)

	Exchange differences on translation of foreign operations	Gains (losses)from equity instruments measured at fair value through other comprehensive income	Unrealized gains (losses) on available for sale financial assets	Remuneration unearned by employees	Other	Total
January 1, 2019	$(1,586,241)	(1,406,132)	-	(75,334)	(3,380)	(3,071,087)
Foreign exchange differences (net of tax)	(631,106)	-	-	-	-	(631,106)
Exchange differences on subsidiaries accounted for using equity method	(6,997)	-	-	-	112	(6,885)

Unrealized losses from financial assets measured at fair value through other comprehensive income	-	(24,230)	-	-	-	(24,230)
Unrealized losses from financial assets measured at fair value through other comprehensive income of associates accounted for using equity method	-	158,135	-	-	-	158,135
Cost of shares issued with restrictions on employee rights	-	-	-	56,726	-	56,726
Disposition of equity instruments measured at fair value through other comprehensive income	-	(313,015)	-	-	-	(313,015)
Balance of December 31, 2019	**$(2,224,344)**	**(1,585,242)**	**-**	**(18,608)**	**(3,268)**	**(3,831,462)**

	Exchange differences on translation of foreign financial statements	Unrealized gain or loss on financial assets measured at fair value through other comprehensive gain or loss	Unrealized gains (losses) on available for sale financial assets	Remuneration unearned by employees	Other	Total
Balance of January 1, 2018	$(1,973,334)	-	(1,109,281	(236,020)	(4,302)	(3,322,937)
Effects of retrospective application of new standards	-	(2,338,298)	1,109,28	-	-	(1,229,017)
January 1, 2018 after adjusted	(1,973,334)	(2,338,298)	-	(236,020)	(4,302)	(4,551,954)
Foreign exchange differences (net of tax)	391,255	-	-	-	-	391,255
Exchange differences on subsidiaries accounted for using equity method	(4,162)	-	-	-	922	(3,240)
Unrealized losses from financial assets measured at fair value through other comprehensive income	-	(529,832)	-	-	-	(529,832)

Unrealized losses from financial assets measured at fair value through other comprehensive income of associates accounted for using equity method	-	(96,198)	-	-	-	(96,198)
Disposition of equity instruments measured at fair value through other comprehensive income	-	1,558,196	-	-	-	1,558,196
Cost of shares issued with restrictions on employee rights	-	-	-	160,686	-	160,686
Balance of December 31, 2018	**$(1,586,241)**	**(1,406,132)**	**-**	**(75,334)**	**(3,380)**	**(3,071,087)**

(23) Share-based payment

1. New Restricted stock

On June 27, 2017, the Company resolved through the shareholders' meeting to issue 6,000 thousand new restricted employee shares. The object is limited to manager-level (including) above supervisors and full-time employees with special contributions who have served for more than one year at the company since the granting day. The company has filed a declaration with the Securities and Futures Commission of FSC and all the shares were issued by the board of directors resolution on October 5, 2017. The fair value of the grant was NT$ 67.2.

The employees who have been allocated the above-mentioned new restricted employee shares will be able to subscribe for the shares allocated for NT$20 each. The vested condition is that after receiving the new restricted employee shares, they are still in service according to the following schedule, and their performance reaches A (including) above, then they can obtain the share percentage of the vested condition respectively:
(1) 1 year of service: 40%
(2) 2 year of service: 70%
(3) 3 year of service: 100%

After the employees subscribe for the new shares, they may not sell, pledge, transfer, donate, set or do other disposition of their shares until the vested conditions are fulfilled; new restricted employee shares are subject to the right to participate in the distribution of dividends, and the dividends they receive are not subject to the vested period; the proposal, speech, voting rights and other relevant shareholders' equity of the shareholders meeting of the Company before the vested conditions are the same as the other ordinary shares of the Company; after the issuance, the new restricted employee shares should be immediately delivered to the trust or custody and must not be returned to the trustee for any reason or manner until the vested conditions are fulfilled. If the employee is not eligible for the vested condition after the new share is subscribed, the shares will be bought back by the Company at the issue price.

Details of the restricted stock of the Company are as follows:

Unit: Thousand shares

	2019	**2018**
Outstanding at 1 January (number)	3,408	5,965
Vested during the year (number)	(1,646)	(2,341)
Forfeited during the year (number)	(66)	(216)
Outstanding at 31 December (number)	**1,696**	**3,408**

The remuneration costs recognized by the Company in 2019 and 2018 were NT$ 53,611 thousands and NT$ 151,199 thousands respectively, and recognized as the operating costs and operating expenses. The balance of the unpaid employee remuneration of the Company as of December 31, 2019 and 2018 were NT$ 18,608 thousands and NT$ 75,334 thousands, accounted for in reductions of other equity.

2. Cash delivery share-based payment

The Group issued a cash delivery share-based payment for a period of four years. The assigned employees are entitled to future cash payments when performing the conditions of service. The condition of the plan requires that employees who are entitled to the above share appreciation rights must be in service on each vested date at the consolidated company (February 28, 2019, February 28, 2020, February 28, 2021 and February 28, 2022) On each vested day employee is entitled to a 25% share appreciation right. In addition, the share appreciation rights are determined by the stock price of GlobalWafers on each vested day and individual performance.

As of December 31, 2019 and 2018, the price of GlobalWafers stock was NT$ 382.5 and NT$280.5 respectively, and the number of non-acquired shares was 1,000 thousand. As of December 31, 2019 and 2018, the consolidated company has recognized the remuneration cost amounted NT$92,739 thousand and NT$ 70,125 thousand respectively.

(24) Earnings per share

1. Basic earnings per share

	2019	**2018**
Net income attributable to the shareholders of the Company	**$ 2,248,386**	**1,950,503**
Weighted-average number of ordinary shares outstanding during the year (in thousands of shares)	**583,210**	**580,508**
Basic earnings per share (dollars)	**$ 3.86**	**3.36**

2. Diluted earnings per share

	2019	2018
Net income attributable to the shareholders of the Company	$ 2,248,386	$ 1,950,503
Weighted-average number of ordinary shares outstanding during the year (in thousands of shares)	581,210	581,058
Impact of dilution of potential ordinary shares (shares in thousands)	3,899	3,672
Weighted average number of outstanding common stock (shares in thousands)(diluted)	587,109	584,730
Diluted earnings per share (dollars)	$ 3.83	$ 3.34

(25) Revenue from contracts with customers

1. Details of revenues

	2019			2018		
	Semiconductor Department	Solar energy Department	Total	Semiconductor Department	Solar energy Department	Total
Primary geographical markets:						
Taiwan	$ 12,568,540	1,721,425	14,289,965	13,429,594	3,190,990	16,620,584
Northeast Asia (Japan and Korea)	17,852,401	1,104,253	18,956,654	17,263,975	1,420,473	18,684,448
Asia－others	9,100,112	1,311,136	10,411,248	9,676,930	2,034,623	11,711,553
America	8,410,577	1,511,115	9,921,692	8,340,541	1,421,750	9,762,291
Europe	7,165,983	1,697,439	8,863,422	6,971,277	1,601,502	8,572,779
Other areas	2,992,340	74,904	3,067,244	3,361,777	525,513	3,887,290
	$ 58,089,953	7,420,272	65,510,225	59,044,094	10,194,851	69,238,945
Major product categories:						
Semiconductor wafers	$ 57,721,510	-	57,721,510	58,447,151	-	58,447,151
Solar cell	-	2,877,421	2,877,421	-	3,141,457	3,141,457
Solar module	-	1,553,577	1,553,577	-	2,066,427	2,066,427
Solar ingot	-	792,922	792,922	-	1,608,721	1,608,721
Semiconductor ingot	275,284	-	275,284	492,114	-	492,114
Solar wafer	-	144,716	144,716	-	581,924	581,924
Other	93,159	2,051,636	2,144,795	104,829	2,796,322	2,901,151
	$ 58,089,953	7,420,272	65,510,225	59,044,094	10,194,851	69,238,945

2. Contract balance

	2019.12.31	2018.12.31	2018.1.1
Notes and accounts receivable(including related parties)	$ 8,502,200	$ 9,874,500	8,827,642
Contract liabilities	$ 21,409,237	$ 20,374,971	8,591,453

The major change in the balance of contract liabilities is the advance consideration received from customers for the contracts, in which revenue is recognized when products are delivered to customers. The amount of revenue recognized for the years ended December 31, 2019 and 2018, which was included in the contract liability balance at the beginning of the period, was NT$2,310,280 thousand and NT$1,676,859 thousand, respectively.

The contract liabilities primarily relate to the advance consideration received from customers for the semiconductor and soar products sales contracts, in which revenue is recognized when products are delivered to customers.

(26) Remuneration to employees and directors

In accordance with the articles of association of the Company if there is profit in the year, the company shall accrue 3%- 15% of the profit as employee's remuneration. The board of directors decides to distribute it by stock or cash, and the object of distribution includes employees meeting certain conditions; and the board of directors decides to accrue up to 3% of the above profit as directors' remuneration. The distribution of remuneration of employees and directors should be submitted and reported to the shareholders' meeting. In case the parent company has cumulative losses, it should reserve amount to make up losses before distributing remuneration to the employees and directors in pursuant to the percentage mentioned in the preceding paragraph.

For the years ended December 31, 2019 and 2018, the Company accrued and recognized its employee remuneration amounting to $622,810 thousand and $504,801 thousand and directors' amounting to $49,200 thousand and $50,060 thousand, respectively. These amounts were calculated by using the Company's pre-tax net profit for the period before deducting the amounts of the remuneration to employees and directors, multiplied by the distribution of ratio of the remuneration to employees and directors based on the Company's articles of incorporation, and expensed under operating costs or expenses. If there would be any changes in accounting estimates the changes shall be accounted for as profit or lost in the following year. If, however, the shareholders determine that the employee remuneration is to be distributed through stock dividends, the calculation, based on the shares, shall be calculated using the stock price on the day before the board of directors. If there would be any changes in accounting estimates the changes shall be accounted for as profit or lost in the following year

The amounts as stated in the consolidated financial statements are identical to those of the actual distributions for 2019 and 2018.Relevant information can be accessed from the

Market Observation Post System website.

(27) Other income

		2019	2018
Interest income	$	757,732	482,902
Dividend income		9,477	34,994
	$	767,209	517,896

(28) Other gains and losses

		2019	2018
Foreign exchange gains (losses)	$	(235,553)	(39,184)
Impairment loss of investments accounted for using equity method		-	(227,392)
Unrealized gains (losses) on financial assets (liabilities) measured at fair value through profit or loss		(286,287)	67,241
Realized gains (losses) on financial assets (liabilities) measured at fair value through profit or loss		378,105	79,466
Impairment loss on financial assets measured at amortized cost		(25,973)	-
Gain on disposal of subsidiaries		72,584	-
Other		233,500	191,113
	$	136,376	71,244

(29) Share of other comprehensive income of associates and joint ventures accounted for using equity method

		2019	2018
Exchange differences on translation of foreign operations	$	(6,997)	(4,162)
Unrealized gains (losses) from investments in equity instruments measured at fair value through other comprehensive income		276,597	(169,482)
	$	269,600	(173,644)

(30) Financial instruments

1. Credit Risk

(1) Credit risk exposure

The carrying amount of financial assets represents the maximum amount exposed to credit risk.

(2) Concentration of credit risk

The main customers of the Group are from the solar and silicon wafer industries. The Group generally sets credit limits to its customers according to their credit evaluations. Therefore, the credit risk of the Group is mainly influenced by the solar and silicon wafer industry. As of December 31, 2019 and 2018, 53% and 43%, respectively, of the Group's accounts receivable (including related parties) were from the top 10 customers. Although there is a potential for concentration of credit risk, the Group routinely assesses the collectability of the accounts receivable and makes a corresponding allowance for doubtful accounts.

(3) Receivables and debt securities

For credit risk exposure of notes and trade receivables, please refer to note 6(5).Other financial assets at amortized cost includes other receivables, investments in corporate bonds. Impairment loss on financial assets measured at amortized cost, please refer to note 6(4).

All of these financial assets are considered to have low risk, and thus, the impairment provision recognized during the period was limited to 12 months expected losses. Regarding how the financial instruments are considered to have low credit risk, please refer to note 4(7).

2. Liquidity Risk

The following table shows the contractual maturities of financial liabilities, including estimated interest payments and excluding the impact of netting agreements.

	Carrying Amount	Contractual cash flows	6 months within	6-12 months	1-2 years	2-5 years or more
December 31, 2019						
Non-derivative financial liabilities						
Short term borrowings	$ 11,465,075	(11,490,667)	(11,490,667)	-	-	-
Notes and accounts payable (including related parties)	4,179,695	(4,179,695)	(4,179,695)	-	-	-
Lease liabilities	931,397	(993,458)	(92,567)	(97,254)	(115,633)	(688,004)
Finance lease liabilities						
Swap exchange contracts:						
Inflow	68	(90,465)	(90,465)	-	-	-
Outflow	-	90,075	90,075	-		
Forward exchange contracts:						
Inflow	209,712	(6,745,031)	(6,745,031)	-	-	-
Outflow	-	6,535,319	6,535,319	-	-	-
	$ 16,785,947	(16,873,922)	(15,973,031)	(97,254)	(115,633)	(688,004)
December 31, 2018						
Non-derivative financial liabilities						
Short term borrowings	$ 9,334,809	(9,384,817)	(9,083,378)	(301,439)	-	-

Notes and accounts payable (including related parties)	5,236,231	(5,236,231)	(5,236,231)	-	-	-
Long term borrowings	2,040,200	(2,185,438)	(21,056)	(21,056)	(1,178,479)	(964,847)
Finance lease liabilities	28,392	(31,098)	(4,551)	(4,551)	(9,102)	(12,894)
Forward foreign exchange contracts:						
Inflow	-	(5,559,495)	(5,559,495)	-	-	-
Outflow	81,679	5,638,200	5,638,200	-	-	-
	$ 16,721,311	(16,758,879)	(14,266,511)	(327,046)	(1,187,581)	(977,741)

The Group does not expect the cash flows included in the maturity analysis to occur significantly earlier or at significantly different amounts.

3. Currency risk

(1) Exposure to foreign currency risk

The Group's significant exposure to foreign currency risk was as follows:

	2019.12.31		
	Foreign currency	**Exchange rate**	**NTD**
Financial assets			
Monetary items			
USD	$ 488,134	29.980	14,634,257
JPY	259,534	0.2760	71,631
EUR	14,666	33.590	492,631
Non-monetary items			
USD	22,238	29.980	Note
JPY	2,632,949	0.2760	Note
EUR	3,508	33.590	Note
Financial liabilities			
Monetary items			
USD	42,249	29.980	1,266,625
JPY	2,413,109	0.2760	666,018
EUR	18,246	33.590	612,883
Non-monetary items			
USD	4,650	29.980	Note
JPY	18,050,000	0.2760	Note

	2018.12.31		
	Foreign currency	**Exchange rate**	**NTD**
Financial assets			
Monetary items			
USD	$ 353,183	30.715	10,848,016
JPY	541,424	0.2782	150,624
EUR	23,098	35.200	813,049
Non-monetary items			
USD	24,747	30.715	Note
JPY	17,150,412	0.2782	Note
Financial liabilities			
Monetary items			
USD	45,953	30.715	1,411,446
JPY	1,036,822	0.2782	288,444
EUR	6,732	35.200	236,966
Non-monetary items			
USD	33,000	30.715	Note
EUR	18	35.200	Note

Note: The fair value of forward exchange contracts was measured at the reporting date. For related information, please refer to note 6.

(2) Sensitivity analysis

The Group’s exposure to foreign currency risk arises from the translation of the foreign currency exchange gains and losses on cash and cash equivalents, notes and accounts receivable, long and short-term loans, and note and accounts payables that are denominated in foreign currency. A weakening (strengthening) of 1% of the NTD against the USD, JPY and EUR as of December 31, 2019 and 2018, would have increased (decreased) the net income before income tax by $126,530 thousand and $98,748 thousand, respectively. The analysis is based on foreign currency exchange rate variances that the Group considered to be reasonably possible at the reporting date. The analysis assumes that all other variables remain constant and ignores any impact of forecasted sales and purchases. The analysis was performed on the same basis for comparative years.

(3) Foreign exchange gain and loss on monetary items

Since the Group has many kinds of functional currency, the information on foreign exchange gain (loss) on monetary items is disclosed by total amount. For years 2019 and 2018, foreign exchange gain (loss) (including realized and unrealized portions) amounted to NT$(235,553) thousand and NT$(39,184) thousand, respectively.

4. Interest rate analysis

Please refer to the notes on liquidity risk management and interest rate exposure of the Group's financial liabilities.

The following sensitivity analysis is based on the exposure to interest rates. Regarding liabilities with variable interest rates, the analysis is based on the assumption that the amount of liabilities outstanding at the reporting date was outstanding throughout the year.

If the interest rate had increased or decreased by 0.25%, the Group’s net income would have increased or decreased by NT$22,580 thousand and NT$2,219 thousand, for the years ended December 31, 2019 and 2018, respectively, assuming all other variable factors remain constant. This is mainly due to the Group’s bank deposits and borrowings with variable rates.

5. Other price risk

For the years ended December 31, 2019 and 2018, the sensitivity analyses for the changes in the securities price at the reporting date were performed using the same basis for the profit and loss as illustrated below:

	2019		**2018**	
Prices of securities at the reporting date	**Other comprehensive income after tax**	**Net income**	**Other comprehensive income after tax**	**Net income**
Increasing 5%	$ 16,609	93,833	60,247	8,853
Decreasing 5%	(16,609)	(93,833)	(60,247)	(8,853)

6. Fair value of financial instruments

(1) Fair value hierarchy

The fair value of financial assets and liabilities at fair value through profit or loss and financial assets at fair value through other comprehensive income is measured on a recurring basis. The carrying amount and fair value of the Group’s financial assets and liabilities, including the information on fair value hierarchy were as follows; however, except as described in the following paragraphs, for financial instruments not measured at fair value whose carrying amount is reasonably close to the fair value, and lease liabilities, disclosure of fair value information is not required:

	2019.12.31				
		Fair value			
	Carrying Amount	Level I	Level II	Level III	Total
Financial assets measured at fair value through gain or loss					
Forward exchange contract	$ 6,920	-	6,920	-	6,920
Overseas securities held	1,876,656	1,876,656	-	-	1,876,656
Subtotal	$ 1,883,576	1,876,656	6,920	-	1,883,576
Financial assets at fair value through profit or loss－non current	$ 95,163	-	-	95,163	95,163
Financial assets at fair value through other comprehensive income					
Non-public offer equity instrument measured at fair value	$ 332,185	-	-	332,185	332,185
Financial assets measured at amortized cost					
Cash and cash equivalents	$ 34,901,425	-	-	-	-
Notes and accounts receivable (including related parties)	8,507,214	-	-	-	-
Other financial assets - current and non-current	4,054,629	-	-	-	-
Corporate bonds - current and non-current	507,680	-	507,680	-	507,680
Subtotal	$ 47,970,948	-	507,680	-	507,680
Financial liabilities measured at fair value through profit or loss					
Swap exchange contracts	$ 68	-	68	-	68
Forward exchange contracts	216,632	-	216,632	-	216,632
Subtotal	$ 216,700	-	216,700	-	216,700
Financial liabilities measured with amortized costs					
Short term borrowings	$ 11,465,075	-	-	-	-
Notes and accounts payable (including related parties)	4,179,695	-	-	-	-
Lease liabilities-current and non-current	931,397	-	-	-	-
Subtotal	$ 16,576,167	-	-	-	-

	2018.12.31				
		Fair value			
	Carrying Amount	**Level I**	**Level II**	**Level III**	**Total**
Financial assets measured at fair value through gain or loss					
Forward exchange contract	$ 81,798	-	81,798	-	81,798
Stock listed on domestic market	177,053	177,053	-	-	177,053
Privately offered fund	64,697	-	-	64,697	64,697
Subtotal	$ 323,548	177,053	81,798	64,697	323,548
Financial assets at fair value through other comprehensive income					
Stock listed on domestic market	$ 717,420	717,420	-	-	717,420
Non-public offer equity instrument measured at fair value	487,504	-	-	487,504	487,504
	$ 1,204,924	717,420	-	487,504	1,204,924
Financial assets measured at amortized cost					
Corporate bonds	$ 281,366	-	285,466	-	285,466
Cash and cash equivalents	36,829,131	-	-	-	-
Notes and accounts receivable (including related parties)	9,881,332	-	-	-	-
Other financial assets - current and non-current	1,095,777	-	-	-	-
Subtotal	$ 48,087,606	-	285,466	-	285,466
Financial liabilities measured at fair value through other comprehensive gain or loss	$ 119	-	119	-	119
Financial liabilities measured with amortized costs					
Short term borrowings	$ 9,334,809	-	-	-	9,334,809
Notes and accounts payable (including related parties)	5,236,231	-	-	-	5,236,231
Long term borrowings (including current portion of long term borrowings payable)	2,040,200	-	-	-	2,040,200
Finance lease payable (current and non-current)	27,868	-	27,868	-	27,868
Subtotal	$ 16,639,108	-	27,868	-	16,639,108

(2) Valuation techniques for financial instruments not measured at fair value

The Group’s valuation techniques and assumptions used for financial instruments not measured at fair value are as follows:

Financial assets measured at amortized cost

If the quoted prices in active markets are available, the market price is established as the fair value. However, if quoted prices in active markets are not available, the estimated valuation or prices used by competitors are adopted.

(3) Valuation techniques for financial instruments measured at fair value

A. Non derivative financial instruments

A financial instrument is regarded as being quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm’s length basis. Whether transactions are taking place ‘regularly’ is a matter of judgment and depends on the facts and circumstances of the market for the instrument.

Quoted market prices may not be indicative of the fair value of an instrument if the activity in the market is infrequent, the market is not well established, only small volumes are traded, or bid ask spreads are very wide. Determining whether a market is active involves judgment.

If the financial instruments held by the consolidated company belong to an active market, the fair value is booked as follows by category and attribute:

For financial assets and financial liabilities of the listed company's stocks, notes of exchange and corporate bonds, which are subject to standard terms and conditions and are traded in the active market, the fair value is determined by reference to market quotations.

In addition to the above-mentioned financial instruments with active markets, the fair value of the remaining financial instruments is obtained by means of evaluation technologies or reference to counterparty quotes. The fair value obtained through the evaluation technology can be based on the current fair value of other financial instruments with similar characteristics and characteristics, the discounted cash flow method or other evaluation technology, including the calculation with the model and the market information available on the consolidated balance sheet date (such as the reference yield curve of Taiwan Stock Exchange, Reuters commercial promissory interest rate average offer).

If the financial instruments held by the consolidated company are in the non-active market, the fair value is booked as follows by category and attribute:

Equity instruments without public quotation: Estimates of fair value using the market comparable company method, the main assumptions are based on the earnings multiplier derived from the investee's net worth per share and the EV/EBIT comparable listed companies' quotes. The estimate has adjusted the depreciation impact of the lack of market liquidity of the equity securities.

B. Derivative financial instruments

Measurement of the fair value of derivative instruments are based on the valuation techniques generally accepted by market participants, such as the discounted cash flow or option pricing models. The fair value of forward currency is usually determined based by the forward currency exchange rate.

(4) Reconciliation of Level 3 fair value

The Group's financial instruments which were belongs to Level 3 fair value were financial assets measured at fair value through other comprehensive income and financial assets measured at fair value through profit or loss. The movement as follows:

		Financial assets measured at fair value through profit or loss	**Financial assets measured at fair value through other comprehensive income**
January 1, 2019	$	64,697	487,504
Addition		31,195	1,636
Recognized in profit or loss		(729)	-
Recognized in other comprehensive income		-	(119,960)
Refund		-	(28,239)
Effect of changes in exchange rates		-	(8,756)
December 31, 2019	**$**	**95,163**	**332,185**
January 1, 2018	$	-	838,181
Effects of retrospective application of new accounting standards		-	(12,254)
Restatement balance at January 1, 2018		-	825,927
Addition/ refund		-	33,977
Recognized in profit or loss		(481)	-
Recognized in other comprehensive income		-	(320,470)
Reclassification		65,178	(65,178)
Effect of changes in exchange rates		-	13,248
December 31, 2018	**$**	**64,697**	**487,504**

(5) Quantified information on significant unobservable inputs (Level 3) used in fair value measurement

The Group's financial instruments that use Level 3 inputs to measure fair value include "fair value through other comprehensive income – equity investments".

The favorable and unfavorable effects represent the changes in fair value, and fair value is based on a variety of unobservable inputs calculated using a valuation technique. The analysis above only reflects the effects of changes in a single input, and it does not include the interrelationships with another input.

Quantified information of significant unobservable inputs was as follows:

Item	**Evaluation technology**	**Significant unobservable input value**	**Relations between significant unobservable input value and fair value**
Financial assets at fair value through other comprehensive income equity investments without an active market	Comparable listed company method	• Equity value multiplier (Decemeber.31.2019 and 2018 are 0.73%-18.08% and 0.13-2.14 respectively) • Discount on lack of market liquidity (December.31 2019 and 2018 are 22.45%-28% and 19.4%-50.57% respectively)	• The higher the multiplier, the higher the fair value • The higher discount on lack of market liquidity, the lower the fair value

(6) The fair value of the Group's financial instruments that use Level 3 inputs to measure fair value was based on the price of the third party. The Group did not disclose quantified information and sensitivity analysis on significant unobservable inputs because the unobservable inputs used in fair value measurement were not established by the Group.

(7) As of December 31, 2019 and 2018, there were no transfers at fair value level

(31) Financial risk management

1. Overview

The Group has exposures to the following risks from its financial instruments:

(a) Credit risk

(b) Liquidity risk

(c) Market risk

The following likewise discusses the Group's objectives, policies and processes for measuring and managing the above-mentioned risks. For more disclosures about the quantitative effects of these risk exposures, please refer to the respective notes in the accompanying consolidated financial statements.

2. Structure of risk management

The board of directors has overall responsibility for the establishment and oversight of the risk management framework. The board is responsible for developing and monitoring company's risk management policies. Internal auditors assist the board of directors to monitor and review the risk management control and internal procedures regularly and report them to the board of directors.

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 risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Group's audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group audit committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the audit committee.

3. Credit Risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from customers and investments in debt securities.

(1) Accounts receivables and other receivables

The Group has established a credit policy under which each new customer is analyzed individually for creditworthiness before the Group's standard payment and delivery terms and conditions are offered. Purchase limits are established for each customer and reviewed quarterly. Customers that fail to meet the Group's benchmark creditworthiness may transact with the Group only on a prepayment basis.

(2) Investment

The exposure to credit risk for the bank deposits, fixed income investments, and other financial instruments is measured and monitored by the Group's finance department. The Group only deals with banks, other external parties, corporate organizations, government agencies and financial institutions with good credit rating. The Group does not expect any counterparty above fails to meet its obligations hence there is no significant credit risk arising from these counterparties.

(3) Guarantee

According to the Group's policy, the Group can only provide endorsements for companies with business dealing, the companies directly or indirectly owned more than 50% shares with voting right by the Group, or the companies directly or indirectly owned more than 50% shares with voting right of the Group. As of December 31, 2019 and 20178 the Group did not provide any endorsement guarantees except to its subsidiaries.

4. Liquidity Risk

There is no liquidity risk of being unable to raise capital to settle contract obligations since the Group has sufficient capital and working capital to fulfill contract obligations.

Loans and borrowings from the bank form an important source of liquidity for the Group. As of December 31, 2019 and 2018, the Group's unused credit line were amounted to NT$28,830,716 thousand and NT$23,634,968 thousand, respectively.

5. Market Risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices, which will affect the Group’s income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

(1) Currency risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in currencies other than the respective functional currencies of the Group’s entities, primarily the New Taiwan Dollar (NTD), but also include the Chinese Yen (CNY), US Dollar (USD), Japanese Yen (JPY) and Euro (EUR). These transactions are denominated in NTD, USD, JPY and EUR.

Interest is denominated in the currency used in borrowings. Generally, borrowings are denominated in currencies that match the cash flows generated by the underlying operations of the Group, primarily NTD, but also include USD.

In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when it is necessary to address short term imbalances.

(2) Interest rate risk

The Group holds variable rate assets and liabilities, which cause the exposure to interest rate risk in cash flows.

(3) Equity instrument price

The Group is exposed to equity price risk due to the investments in equity securities. This is a strategic investment and is not held for trading.

Please refer to Note 6 (30) for the risk of change.

(32) Capital Management

The board of directors' policy is to maintain a strong capital base in order to maintain investor, creditor and market confidence and to sustain future development of the business. Capital consists of share capital, capital surplus, retained earnings and non controlling interests of the Group. The board of directors monitors the return on capital as well as the level of dividends to ordinary stockholders.

The Group's debt to equity ratios at the end of the reporting periods were as follows:

	2019.12.31	2018.12.31
Total Liabilities	$ 60,767,455	56,071,450
Less: Cash and cash equivalent	(34,901,425)	(36,829,131)
Net liabilities	$ 25,866,030	19,242,319
Total Equity	$ 48,616,041	47,913,865
Debt to equity ratio	53.20%	40.16%

Due to an increase in provision, the debt to equity ratio increased.

(33) Investing and financing activities not affecting current cash flow

A. For acquiring right-of-use assets by lease, please refer to note 6(12).

B. Reconciliations of liabilities arising from financing activities were as follows:

	January 1, 2019	Cash flows	Foreign exchange movement and others	December 31, 2019
Short -term borrowings	$ 9,334,809	2,163,041	(32,775)	11,465,075
Long-term borrowings	2,040,200	(2,040,200)	-	-
Lease liabilities	1,179,268	(201,027)	(46,844)	931,397
Guarantee deposit received	342,861	(145,179)	(4,187)	193,495
Total liabilities from financing activities	$ 12,897,138	(223,365)	(83,806)	12,589,967

	January 1, 2018	Cash flows	Foreign exchange movement and others	December 31, 2018
Short -term borrowings	$ 13,753,204	(4,464,007)	45,612	9,334,809
Long-term borrowings	5,646,872	(3,606,672)	-	2,040,200
Guarantee deposit received	910,098	17,858	(585,095)	342,861
Total liabilities from financing activities	$ 20,310,174	(8,052,821)	(539,483)	11,717,870

7. Related party transactions

(1) Names and relationships of related parties

The parties involved in the transaction of the consolidated company during the period of the consolidated financial report are as follows:

Names of related parties	Relationships between the consolidated company
Solartech Energy Corp.	Main management of SAS. (Note 1)
URE	Main management of SAS. (Note 1)
Sunshine PV. Corporation (hereinafter referred to as Sunshine PV.)	Associate of URE
Song Long Electronics Corporation (hereinafter referred to Song Long Eletronics)	SAS's management is the director of the company
Actron Technology Corporation (hereinafter referred to as Actron Technology)	SAS's management is the director of the company/ Associate of the Group
Accu Solar Corporation	Associate of the Group
TSCS	Associate of the Group
Crystalwise Technology Inc.	Associate of the Group
Cathy Sunrise Corporation	Associate of the Group
Cathy Sunrise One Co., Ltd.	Subsidiary of the Group associate
Cathy Sunrise Two Co., Ltd.	Subsidiary of the Group associate
Cathy Sunrise Electric Power One Co., Ltd.	Subsidiary of the Group associate
Cathy Sunrise Electric Power Two Co., Ltd.	Subsidiary of the Group associate
Sunrise PV One Co., Ltd.	Subsidiary of the Group associate
Sunrise PV Five Co., Ltd.	Subsidiary of the Group associate(Note 2)

Note 1: Solartech Energy was merged and cancelled in October 2018. The existing company was renamed URE.
Note 2: Sunrise PV Five Co., Ltd was sold to Cathy Sunrise Corporation in 2019.

(2) Significant transactions with related parties

1. Sales

The amount of significant sales and engineering contract revenue by the Group related parties were as follows:

	2019	2018
Associate	$ 918,154	956,605
Other related parties	120,007	439,403
	$ 1,038,161	**1,396,008**

The sales price for sales and engineering to the related parties was determined by market value and adjusted according to the sales area and sales volume.

The credit terms for third parties were 0 to 210 days in 2019 and 2018, while those for related parties were 30 days after month-end, receipt in advanced to 180 days after month-end and 30 days after month-end to 180 days after shipment in 2019 and 2018.

The engineering sales of the Group and associate was refunded in 2018 due to the withdrawal of the project. The amount of the project received and returned was NT$ 50,227 thousands. As of December 31, 2018, it was booked under the item of related parties.

2. Purchase and outsourced processing

The amounts of purchases and process outsourcing by the Group from related parties were as follows:

	2019	2018
Associate	$ 79	12,949
Other related parties	11,248	25,324
	$ 11,327	38,273

The prices of purchases and process outsourcing were determined by market rates.

The payment terms to third parties were 0 to 150 days after month end both in 2019 and 2018, while those to related parties were prepayment to 90 days after month end and 15 to 60 days after month end in 2019 and 2018.

For the purchase of raw materials, the Company's prepayment to other related parties was NT$ 1,179 thousands, which is accounted for under the prepaid materials.

3. Receivables from related parties

The receivables from related parties were as follows:

Account	Categories	2019.12.31	2018.12.31
Receivables from related parties	Associate	$ 61,303	42,133
Receivables from related parties	Other related parties	6,648	64,950
		$ 67,951	107,083

In order to maintain a stable supply of raw materials required for production, the related parties successively signed short-term and long-term supply contracts with the Group, and the details of the receipts in advance to the related parties (recognized as contract liabilities - current / non-current) were as follows:

	2019.12.31	2018.12.31
Other related party-URE	$ 883,220	883,697

4. Payables to related parties

The payables to related parties were as follows:

Account	Categories	2019.12.31	2018.12.31
Receivable from related parties	Associate	$ 7,052	319

5. Transactions of property, plant and equipment

Disposals of property, plant and equipment to related parties are summarized as follows:

	2019		2018	
	Disposal price	Receivable from related parties	Disposal price	Receivable from related parties
Associate	$ 35,616	4,859	-	-

For the year end December 31, 2019 and 2018, the gain from disposal property, plant and equipment were NT$1,006 thousand and NT$0 thousand respectively.

Purchase amounts of property, plant and equipment from related parties were summarized as follows:

	2019		2018	
	Amount	Payable to related parties	Amount	Payable to related parties
Associate	$ -	-	5,092	-

6. Corporate bonds

In October 2016 and January 2019, the Group purchased the five-year private issued corporate bonds and the one-year private issued corporate bonds of Crystalwise Technology, by NT$ 280,000 thousand and NT$ 250,000 thousand respectively. The interest rate and the coupon rate were both 2%.

Interest income for the year 2019 and 2018 were NT$ 11,753 thousands and NT$ 5,600 thousands respectively. As of December 31, 2019 and 2018, the accumulated investment cost and interest receivable were NT$ 507,680 thousand and NT$ 281,366 thousand respectively, recognized as financial assets measured at amortized cost - current and non-current.

7. Payment on behalf of others

The receivables from related parties and payables to related parties generated from material purchases, insurance and utilities payments and manpower support of related parties as of December 31, 2019 and 2018 were as follows:

		2019.12.31	2018.12.31
Associate	$	155	6,832
Associate		(956)	(796)
	$	(801)	6,036

8. Others

The Group signed the plant lease contract with the related parties. The details of rental expenses and payables to the related parties were as follows:

		2019	2018
Associate	$	-	2,142

As of December 31, 2019 and 2018, the payable of the above transactions had been fully paid.

(2) The Group signed the plant lease contract with the related parties. The details of rental income and receivables to the related parties were as follows:

		2019	2018
Associate	$	310	225

As of December 31, 2019 and 2018, the receivable from the above transactions had been fully received.

(3) Key management

Key management personnel compensation comprised of:

		2019	2018
Short-term employee benefits	$	380,118	314,161
Post-employment benefits		1,460	1,590
Share-based payments		14,844	73,612
	$	396,422	389,363

The Group provided two cars costing $3,000 thousand, and four cars costing $4,444 thousand, for key management use in 2019 and 2018, respectively.

8. Pledged Assets

The carrying values of pledged assets were as follows:

Assets	Pledge or Mortgage underlying subject	2018.12.31	2017.12.31
Property, plant and equipment	Borrowings payable	$ 3,155,429	3,475,408
Time deposits (recognized in other financial assets - current)	Guarantees of acceptances bill	39,977	22,393
Refundable deposits (recognized in other financial assets－non-current)	Guarantee for the lease contract with the Hsinchu Science Industrial Park Bureau	48,571	40,838
Time deposits (recognized in other financial assets－non-current)	Guarantee for gas consumption from CPC Corporation	6,700	6,700
Time deposits (recognized in other financial assets－non-current))	Government grant	2,353	13,597
Time deposits (recognized in other financial assets－non-current))	Guarantee payment for import VAT	5,000	5,000
Time deposits (recognized in other financial assets－non-current))	Court guarantee	10,748	10,748
Time deposits (recognized in other financial assets－non-current)	Tax-Refunded Restricted Deposits for Returning Overseas Funds to Taiwan	2,998,120	-
Refundable deposits (recognized in other financial assets-non-current))	Deposits of material purchase	-	167,125
Refundable deposits (recognized in other financial assets-non-current))	Court litigation	22,020	22,440
		$ 6,288,918	3,764,249

9. Significant commitments and contingencies

Except as stated in Note 6 (21), other significant contingencies liabilities and unrecognized contractual commitments were as follows:

(1) Significant unrecognized contractual commitments

1. The purchase amounts for future delivery from suppliers under the existing agreements and the negotiated agreement were as follows:

(Expressed in thousands of foreign currency)

	2019.12.31	2018.12.31
USD	$ 942,387	1,236,606

EUR	$ 3,779	12,157
JPY	$ -	2,145,137

Silicon supplier Hemlock Semiconductor Pte. Ltd. (hereinafter referred to as Hemlock) sent a notice requesting that Sino-American Silicon Products Inc.'s confiscated prepayment, payment for goods not received and the interest related to the late payment in accordance with to the long-term purchase contract be accumulated to December 31 2018 was US$ 615,982 thousands. The Company and Hemlock renegotiated in June 2019 to amend the important terms of the long-term procurement contract, pending agreement between the parties.

2. In response to the long-term purchase contract referred above, the Company has silicon wafer long-term sales contracts signed with the customers since the year 2005. These companies agree to pay the non-refundable funds to the Company. The two parties agreed to have silicon wafers sold in accordance with the agreed quantity and price from January 1, 2006 to December 31, 2019. If the delivery has not been made in compliance with the contract signed, a sales discount or an amount equivalent to 1.5-4 times of the advance sales receipts from customers as remuneration should be granted. If the delay of shipment has not been resolved for more than three months, the outstanding pre-payment should be refunded. In addition, in response to the price decline arising from the falling demand, solar energy battery customers and the Company will negotiate the selling price and adjusting the average selling price in accordance with market conditions.

   The amount of delivery according to the existing contracts and current market conditions is as follows:

(Expressed in thousands of foreign currency)

	2019.12.31	2018.12.31
USD	$ 29,852	91,640
EUR	$ 25,695	68,815
NTD	$ 54,845	54,845

3. As of December 31, 2019 and 2018, the significant outstanding commitments for construction and purchase of property, plant and equipment amounted to NT$ 6,669,493 thousand and NT$9,738,372 thousand, respectively.

4. On December 31, 2019 and 2018, the total amount of promissory notes deposited by the Group at the bank for acquiring bank financing were NT$ 12,869,060 thousand and NT$ 11,549,325 thousand respectively.

5. As of December 31, 2019 and 2018, a guarantee letter for the Customs Administration and Research and Development which was the Group requested a bank to issue amounted NT$ 23,230 thousand and NT$ 50,400 thousand respectively.

6. On December 31, 2019 and 2018, the Group’s outstanding standby letters of credit were as follows:

(Expressed in thousands of foreign currency)

	2019.12.31	2018.12.31
USD	$ 10,269	3,191
DKK	$ -	3,750

7. The Group had a long term sales contract with some customers and received the advance payment. The customer is required to order minimum quantity according to the contract. As of December 31, 2019 and 2018, a guarantee letter for the customer which was the Group requested a bank to issue amounted NT$111,871 thousand and NT$117,233 thousand, respectively.

8. The Group has made an application of the Management, Utilization, and Taxation of Repatriated Offshore Funds Act to the tax authorities on November 28, 2019 and February 21, 2020. The application was approved and the fund was repatriated. Up to 5% of the funds could be withdrawn and freely utilized. The remaining 95% can only be withdrawn for the investments approved by the Ministry of Economic Affairs, R.O.C. upon the elapse of five full years after the date of depositing the fund into a segregated foreign exchange deposit account The Group has made an application to utilize the fund for capital investment. The fund is planned to utilize for factory extension, purchase of factory's facilities and other related capital expenditure.

(2) Contingent liabilities

Hemlock filed summons and complaints against the Company and were delivered to the Company on May 12, 2015. Both parties reached an agreement in May 2016 then signed STIPULATION OF DISCONTINUANCE and SETTLEMENT AGREEMENT, where the Company needs to purchase certain amount of polysilicon from Hemlock and its related companies based on SETTLEMENT AGREEMENT. Also, two parties signed an additional agreement of Accommodation Letter to amend SETTLEMENT AGREEMENT and extend the date of litigation termination under STIPULATION OF DISCONTINUANCE against the Company until April 30, 2019, which Hemlock agreed in December 2019 to further extend the extension to December 31, 2019. In June 2019, both parties agreed to amend the important terms such as price and quantity of the original contract. The Company, in accordance with the terms of the proposed revised contract, recognized provision for loss-making contract liabilities. As of December 31, 2019, the above-mentioned provision for loss-making contract liabilities amounted to $4,069,986 thousand.

10. Losses due to major disaster: None.

11. Subsequent Events

(1) In order to streamline the corporate structure, it was resolved by the Board of Directors on December 12, 2019 to merge the 100% held subsidiary, Sunrise PV World Co. After the merger, the Company was the survival company while Sunrise PV World Co. was the eliminated company. The consolidated base date for this merger was January 31, 2020.

(2) Globalwafer's board of directors approved on December 27, 2019 a plan of reorganization so that Globalwafer would merge with Taisil, a 99.99% equity held subsidiary. Globalwafer would be the existing company and Taisil was dissolved after merging, on February 1, 2020.

(3) By resolution of the Board of Directors on December 12, 2019, in order to meet the operating needs, the Group intended to purchase plant and equipment from Crystalwise Technology Inc. for $860,000 thousand. The deposit of $250,000 thousand was paid at the time of signing the sale contract in January 2020, and the remaining price will be paid after completing the ownership transfer registration.

12. Others

A summary of the employee benefits, depreciation, and amortization expenses, by function is as follows:

By Function / By Item	2019			2018		
	Cost of goods sold	**Operating expenses**	**Total**	**Cost of goods sold**	**Operating expenses**	**Total**
Employee benefits						
Salary	7,483,089	2,654,512	10,137,601	7,693,736	2,404,588	10,098,324
Labor and health insurance	1,275,343	291,481	1,566,824	1,215,231	272,420	1,487,651
Pension	419,537	91,579	511,116	393,155	105,465	498,620
Others	626,980	133,916	760,896	620,301	141,123	761,424
Depreciation	4,827,331	203,095	5,030,426	5,396,123	232,110	5,628,233
Amortization	358,628	6,202	364,830	361,354	3,425	364,779

13. Other disclosures

(1) Information on significant transactions

The following is the information on significant transactions required by the “Regulations Governing the Preparation of Financial Reports by Securities Issuers” for the Group:

1. Loans to other parties: Please refer to Table 1.

2. Guarantees and endorsements for other parties: Please refer to Table 2.

3. Securities held as of December 31, 2019 (excluding investment in subsidiaries, associates and joint ventures): Please refer to Table 3.

4. Individual securities acquired or disposed of with accumulated amounts exceeding the lower of NT$300 million or 20% of the capital stock: Please refer to Table 4.

5. Acquisition of individual real estate with amount exceeding the lower of NT$300 million

or 20% of the capital stock: Please refer to Table 5.

6. Disposal of individual real estate with amount exceeding the lower of NT$300 million or 20% of the capital stock: None

7. Related-party transactions for purchases and sales with amounts exceeding the lower of NT$100 million or 20% of the capital stock: Please refer to Table 6.

8. Receivables from related parties with amounts exceeding the lower of NT$100 million or 20% of the capital stock: Please refer to Table 7.

9. Trading in derivative instruments: Please refer to notes 6(2).

10. Business relationships and significant intercompany transactions: Please refer to Table 8.

(2) Information on investees: Please refer to Table 9.

(3) Information on investment in Mainland China:

1. The names of investees in Mainland China, the main businesses and products and other information: Please refer to Table 10(1).

2. Limitation on investment in Mainland China: Please refer to Table 10(2).

3. Significant transactions:
   The significant inter company transactions with the subsidiary in Mainland China, which were eliminated in the preparation of consolidated financial statements, are disclosed in the “Information on significant transactions”

14. Segment information

(1) Segment information

Reconciliation for segment Revenue (loss):

	2019			
	Semiconductor Department	**Solar energy Department**	**Reconciliation and elimination**	**Total**
Revenues				
Revenue from external customers	$ 58,089,953	7,420,272	-	65,510,225
Intersegment revenues	4,378	877,825	(882,203)	-
Total revenue	$ 58,094,331	8,298,097	(882,203)	65,510,225
Interest expenses	$ 71,714	78,693	-	150,407
Depreciation and amortization	$ 4,734,770	660,486	-	5,395,256
Reportable segment profit or loss	$ 13,635,656	(4,395,881)	-	9,239,775

Share of profit (loss) of associates and joint ventures accounted for using equity method				(344,430)
				$ 8,895,345
Reportable segment Assets	**$ 96,013,824**	**10,368,378**	**(247,243)**	106,134,959
Investments accounted for using equity method				3,248,537
				$ 109,383,496
Reportable segment liabilities	**$ 51,512,503**	**9,502,195**	**(247,243)**	**60,767,455**

	2018			
	Semiconductor Department	**Solar energy Department**	**Adjustment and elimination**	**Total**
Revenues				
Revenue from external customers	$ 59,044,094	10,194,851	-	69,238,945
Intersegment revenues	19,416	677,097	(696,513)	-
Total revenue	**$ 59,063,510**	**10,871,948**	**(696,513)**	**69,238,945**
Interest expenses	**$ 108,013**	**103,990**	**-**	**212,003**
Depreciation and amortization	**$ 4,812,838**	**1,170,174**	**-**	**5,983,012**
Reportable segment profit or loss	**$ 13,616,234**	**(4,744,345)**	**-**	8,871,889
Share of profit (loss) of associates and joint ventures accounted for using equity method				(236,409)
				$ 8,635,480
Reportable segment Assets	**$ 89,664,721**	**12,455,852**	**(177,154)**	101,943,419
Investments accounted for using equity method				2,041,896
				$ 103,985,315
Reportable segment liabilities	**$ 46,494,941**	**9,753,663**	**(177,154)**	**56,071,450**

(2) Information by product:

The Group's revenue from external customers and the relevant customer contract revenue, please refer to note 6(25).

(3) Geographical information:

Segment revenue is presented by the geographical location of customers and non-current assets are presented by the geographical location of the assets as follows:

A. The Group's revenue from external customers and the relevant customer contract revenue, please refer to note 6(25).

1. Non current assets:

Area	2019.12.31	2018.12.31
Korea	$ 12,564,394	8,398,373
Taiwan	9,403,083	10,331,375
United States	8,621,899	6,548,067
Japan	6,989,861	6,333,308
Italy	3,382,102	3,557,669
Philippines	2,124,841	2,307,955
Others	1,947,597	3,646,316
	$ 45,033,777	**41,123,063**

(4) Major customers information

Sales to individual customers representing greater than 10% of net sales of the Group :

	2019	2018
Customer C group	$ 10,253,312	9,494,244

Sino-American Silicon Products Inc.
Loans to other parties
For the year ended December 31, 2019

Attachment 1

Unit: NT$ Thousand

No.	Name of lender	Name of borrower	Account name	Related party	Highest balance of financing to other parties during the period	Ending balance	Actual usage amount during the period	Range of interest rates during the period	Purposes of fund financing for the borrower (Note 1)	Transaction amount for business between two parties	Reasons for short term financing	Loss allowance	Collateral		Individual funding loan limits (Note 2)	Maximum limit of fund financing (Note 3)
													Item	Value		
0	Sino-American Silicon Products Inc.	Sulu	Loan receivable – related party	Yes	948,000 (USD30,000)	899,400 (USD30,000)	298,901 (USD9,970)	2.00%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	Loan receivable – related party	Yes	500,000	500,000	-	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV Five	Loan receivable – related party	Yes	300,000	-	-	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV Electric	Loan receivable – related party	Yes	200,000	-	-	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV Three Energy	Loan receivable – related party	Yes	300,000	300,000	52,000	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Aleo Solar	Loan receivable – related party	Yes	283,040 (EUR8,000)	-	-	2.00%	2	-	Working capital	-		-	10,668,096	10,668,096
1	SSTI	Sulu	Loan receivable – related party	Yes	419,269 (USD13,268)	317,788 (USD10,600)	317,788 (USD10,600)	2.00%	2	-	Working capital	-		-	1,943,776	1,943,776
1	SSTI	AMLED	Loan receivable – related party	Yes	339,709 (USD11,138)	333,917 (USD11,138)	333,917 (USD11,138)	2.00%	2	-	Working capital	-		-	1,943,776	1,943,776

No.	Name of lender	Name of borrower	Account name	Related party	Highest balance of financing to other parties during the period	Ending balance	Actual usage amount during the period	Range of interest rates during the period	Purposes of fund financing for the borrower (Note 1)	Transaction amount for business between two parties	Reasons for short term financing	Loss allowance	Collateral		Individual funding loan limits (Note 2)	Maximum limit of fund financing (Note 3)
													Item	Value		
2	SAS Sunrise Inc.	Sulu	Loan receivable – related party	Yes	191,084 (USD6,200)	-	-	4.00%	2	-	Working capital	-		-	922,234	922,234
3	Aleo Solar	Aleo Sunrise	Loan receivable – related party	Yes	282,560 (EUR8,000)	-	-	2.00%	2	-	Working capital	-		-	385,238	385,238
4	Aleo Solar	Aleo Sunrise	Loan receivable – related party	Yes	219,936 (USD6,960)	-	-	2.00%~ 4.00%	2	-	Working capital	-		-	1,098,202	1,098,202
5	Sunrise PV World Co.	Sunrise PV Four	Loan receivable – related party	Yes	30,000	-	-	2.00%	2	-	Working capital	-		-	110,532	110,532
6	GWJ	GlobalWafers	Loan receivable – related party	Yes	4,420,500	4,140,000	4,140,000	0.47909%~ 0.53909%	1	5,998,428	Business transactions	-		-	5,998,428	15,279,926
6	GWJ	MEMC Japan	Loan receivable – related party	Yes	294,700	276,000	-	0.56909%	2	-	Working capital	-		-	15,279,926	15,279,926
7	MEMC SpA	GWS	Loan receivable – related party	Yes	2,759,640	2,620,020	2,047,302	3.559%	2	-	Working capital	-		-	11,849,317	11,849,317
8	Taisil	GlobalWafers	Loan receivable – related party	Yes	6,400,000	6,400,000	6,400,000	1.50%	2	-	Business transactions	-		-	7,091,890	7,091,890
9	GTI	MEMC LLC	Loan receivable – related party	Yes	632,000	599,600	-	3.51%	2	-	Working capital	-		-	9,486,787	9,486,787

No.	Name of lender	Name of borrower	Account name	Related party	Highest balance of financing to other parties during the period	Ending balance	Actual usage amount during the period	Range of interest rates during the period	Purposes of fund financing for the borrower (Note 1)	Transaction amount for business between two parties	Reasons for short term financing	Loss allowance	Collateral		Individual funding loan limits (Note 2)	Maximum limit of fund financing (Note 3)
													Item	Value		
10	GWS	GWBV	Loan receivable – related party	Yes	3,050,000	2,998,000	2,998,000	2.50%	2	-	Working capital	-		-	25,151,706	25,151,706
10	GWS	GlobalWafers	Loan receivable – related party	Yes	10,792,800	10,792,800	-	2.50%	2	-	Working capital	-		-	6,434,620	6,434,620
10	GWS	GWI	Loan receivable – related party	Yes	3,258,826	3,258,826	3,258,826	2.50%	2	-	Working capital	-		-	3,492,437	3,492,437

Note 1: The entry method for the loaning of funds is as follows:

(1) For business transactions, please fill in 1.

(2) Necessary for short-term financing, please fill in 2.

Note 2: (1) For the Company's loan of funds to those having business transactions, the individual loan is limited to the trade amount between the two parties in the most recent year; for the loan of funds to companies necessary for short-term financing, the individual loan is limited to 40% of the net worth of the company that lends loan; for loan of funds among foreign companies that the Company directly and indirectly holds 100% of the voting shares, the individual loan is limited to 40% of the net worth of the company that lends loan.

(2)For GlobalWafers and its subsidiaries' loan of funds to those having business transactions, the individual loan is limited to the trade amount between the two parties in the most recent year; for the loan of funds to companies necessary for short-term financing, the individual loan is limited to 40% of the net worth of GlobalWafers; the fund-lendings between the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company, or from the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company to the Company are not subject to the previous provision of net worth and not subject to the one-year limit of the term of funds in Article 4, Paragraph 1, but should still specify in its internal operating procedures for fund-lending limit and period.

Note 3: (1) For the Company's loan of funds to those having business transactions, the total loan is limited to 40% of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 40% of the net worth of the company that lends loan; the fund-lendings between the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company, or from the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company to the Company are not subject to the previous provision of net worth and not subject to the one-year limit of the term of funds in Article 4, Paragraph 1, but should still specify in its internal operating procedures for fund-lending limit and period.

(2) For GlobalWafers and its subsidiaries' loan of funds to those having business transactions, the total loan is limited to 40% of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 40% of the net worth of the company that lends loan; for loan of funds among foreign companies that GlobalWafers directly and indirectly holds 100% of the voting shares, or between the foreign companies and GlobalWafers, the total loan is limited to 2 times of the net worth of GlobalWafers.

(3) For loan of funds of Aleo Solar, the total loan is limited to 100% of the net worth of the company that lends loan.

(4) For loan of funds of Sulu and Sunrise PV World to those having business transactions, the total loan is limited to 40% of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 40% of the net worth of the company that lends loan; for loan of funds among foreign companies that the company that lends loan directly and indirectly holds 100% of the voting shares, the total loan is limited to 40% of the net worth of the company that lends loan.

(5) For loan of funds of SSTI、 SAS Sunrise Inc. and SAS Sunrise Pte Ltd. to those having business transactions, the total loan is limited to 2 times of the company that lends loan;

for the loan of funds to companies necessary for short-term financing, the total loan is limited to 2 times of the net worth of the company that lends loan; for loan of funds among foreign companies that the company that lends loan directly and indirectly holds 100% of the voting shares, the total loan is limited to 40% of the net worth of the company that lends loan.

Note 4: Transactions with standalone parties as mentioned above were eliminated when preparing the standalone reports.

Sino-American Silicon Products Inc.

Guarantees and endorsements for other parties

For the year ended December 31, 2019

Attachment 2 | Unit: NT$ Thousand

No.	Name of guarantor	Counter party of guarantee and endorsement		Limitation on amount of guarantees and endorsements for a specific enterprise	Highest balance for guarantees and endorsements during the period (Notes 3, 8 and 9)	Balance of guarantees and endorsements as of reporting date	Actual usage amount during the period	Property pledged for guarantees and endorsements (Amount)	Ratio of accumulated amounts of guarantees and endorsements to net worth of the latest financial statements	Maximum amount for guarantees and endorsements	Parent company endorsements/ guarantees to third parties on behalf of subsidiary (Notes 3, 8and 9)	Subsidiary endorsements/ guarantees to third parties on behalf of parent company	Endorsements/ guarantees to third parties on behalf of companies in Mainland China
		Name	Relationship with the Company (Note 2)										
0	Sino-American Silicon Products Inc.	SAS Sunrise Inc.	2	26,670,241	252,800 (USD8,000) (note4)	-	-	-	-	26,670,241	Y	N	N
0	Sino-American Silicon Products Inc.	Sulu	2	1,545,758 (note7)	1,453,600 (USD46,000) (note6)	1,379,080 (USD46,000)	1,379,080 (USD46,000) (note6)	-	5.17%	1,545,758 (note7)	Y (note5)	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	2	26,670,241	200,000	200,000	4,230	-	0.75%	26,670,241	Y	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World and its 100% owned subsidiaries	2	26,670,241	500,000	500,000	-	-	1.87%	26,670,241	Y	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World Co	2	26,670,241	100,000	-	-	-	-	26,670,241	Y	N	N
1	GlobalWafers	Topsil A/S	2	45,067,015	117,950	112,250	33,675	-	0.25%	135,201,045	N	N	N
1	GlobalWafers	GWS	2	45,067,015	1,896,000	1,798,800	384,827	-	3.99%	135,201,045	N	N	N
2	GTI	MEMC LLC	2	47,433,935	474,000	449,700	97,831	-	4.74%	47,433,935	N	N	N

No.	Name of guarantor	Counter party of guarantee and endorsement		Limitation on amount of guarantees and endorsements for a specific enterprise	Highest balance for guarantees and endorsements during the period (Notes 3, 8 and 9)	Balance of guarantees and endorsements as of reporting date	Actual usage amount during the period	Property pledged for guarantees and endorsements (Amount)	Ratio of accumulated amounts of guarantees and endorsements to net worth of the latest financial statements	Maximum amount for guarantees and endorsements	Parent company endorsements/ guarantees to third parties on behalf of subsidiary (Notes 3, 8and 9)	Subsidiary endorsements/ guarantees to third parties on behalf of parent company	Endorsements/ guarantees to third parties on behalf of companies in Mainland China
		Name	Relationship with the Company (Note 2)										
3	Sunrise PV World Co.	Sunrise PV Four	2	1,105,320	170	170	170	-	0.06%	1,105,320	N	N	N
3	Sunrise PV World Co.	Sunrise PV Three	2	1,105,320	421	421	421	-	0.15%	1,105,320	N	N	N

Note 1: The method of filling the nature of endorsement guarantee is as follows:
(1) The issuer fills in 0.
(2) The investee company is numbered sequentially by the company starting from the Arabic number 1.

Note 2: There are the following seven types of relationship between the endorsement guarantor and the endorsed object:
(1) A company with business transactions.
(2) Companies that the Company directly and indirectly holds more than 50% of the voting shares.
(3) Companies that directly and indirectly holds more than 50% of the voting shares of the Company.
(4) Among companies that the Company directly and indirectly holds more than 90% of the voting shares.
(5) Companies in the same industry or joint constructors that are mutually guaranteed under contractual requirements based on the needs of contracting project.
(6) A company that is endorsed by all the contributing shareholders in accordance with their shareholding ratio due to the joint investment relationship.
(7) The joint performance guarantee of the pre-sale house sales contract among companies in the same industry in accordance with Consumer protection law.

Note 3: (1)The amount of endorsements/guarantees provided by the endorsement guarantor company for a single enterprise is limited to 10% of the net worth of the company providing the endorsements/guarantees, but for the subsidiary company, limited to one time of the net worth of the company providing the endorsements/guarantees. The total amount of accumulated endorsements/guarantees shall not exceed the net worth of the Company. The total amount of the Company's endorsements/guarantees and that for a single enterprise shall not exceed five times the net worth of the company providing endorsements/guarantees. The aforesaid net worth is based on the financial statements recently audited or reviewed by an accountant. For endorsements/guarantees due to business transactions, except subject to the provisions of the preceding item, the endorsement guarantee amount should be equal to the higher of the purchase or sales amount.
(2) The Company’s performance bond for duty paid after customs release is NT$ 10,000 thousands

Note 4: This amount is USD 8,000 thousands individual quota for SAS Sunrise Inc..

Note 5: The Company controls the financial and operating strategies of Sulu through effective agreements with other investors of Sulu, so Sulu is considered as a subsidiary.

Note 6: Sulu shares with the company a quota of USD 10,000 thousands and Sulu's individual quota is USD 36,000 thousands. The Company resolved on October 14, 2016 by the board of directors to repay part of the loan, and reduce the endorsements/guarantees quota to USD 46,000 thousands and repay the bank loan on October 19, 2016. The actual disbursement amount was reduced to USD 46,000 thousands.

Note 7: The endorsements/guarantees quota for Sulu is calculated as US$ 46,211 thousands, the amount of sales at the time of endorsements/guarantees.

Note 8: The method of endorsements/guarantees of GlobalWafers and its subsidiaries s are as follows:
(1) The total amount of accumulated endorsements/guarantees of GlobalWafers shall not exceed three times the net worth of the most recent financial statements of GlobalWafers.
(2) The amount of endorsements/guarantees of GlobalWafers for a single enterprise shall not exceed 10% of the net worth of the most recent financial statements of GlobalWafers. For subsidiaries, 1 time of the net worth of GlobalWafers.
(3) GlobalWafers’s performance bond for duty paid after customs release is NT$ 9,000 thousands.

(3) Taisil's performance bond for duty paid after customs release is NT$ 5,000 thousands.

Note 9: The method of endorsements/guarantees of Sunrise PV World and its subsidiaries s are as follows:

(1) The total amount of accumulated endorsements/guarantees of Sunrise PV World shall not exceed four times the net worth of the most recent financial statements of Sunrise PV World.

(2) The amount of endorsements/guarantees of Sunrise PV World for a single enterprise shall not exceed 10% of the net worth of the most recent financial statements of Sunrise PV World. For subsidiaries, 4 times of the net worth of Sunrise PV World.

(3) The total amount of Sunrise PV World's endorsements/guarantees and that for a single enterprise shall not exceed five times the net worth of the most recent financial statements of Sunrise PV World.

(4) For endorsements/guarantees due to business transactions, except subject to the provisions of the preceding item, the endorsement guarantee amount of Sunrise PV World should be equal to the higher of the purchase or sales amount.

Sino-American Silicon Products Inc.

Securities held as of December 31, 2018 (excluding investment in subsidiaries, associates and joint ventures)

December 31, 2019

Attachment 3

Unit: NT$ thousand / thousand shares / thousand sheets; thousand units

Name of holder	Category and name of security	Relationship with the Company	Account title	Ending balance				Remarks
				Shares/Units (thousands)	Carrying value	Percentage of ownership (%)	Fair value	
Sino-American Silicon Products Inc.	Corporate bonds of Crystalwise Technology	Affiliated companies	Financial assets measured at amortized cost-current and non-current	530	507,680	-	507,680	
Sino-American Silicon Products Inc.	Stock of Powertec Energy Corporation	-	Financial assets at fair value through other comprehensive income	30,410	-	2.31%	-	
Sino-American Silicon Products Inc.	Stock of Giga Epitaxy Technology Corp.	-	Financial assets at fair value through other comprehensive income	531	6,095	1.61%	6,095	
Sino-American Silicon Products Inc.	Stock of Big Sun	-	Financial assets at fair value through other comprehensive income	7,500	-	4.12%	-	
SSTI	Stock of SILFAB SPA	-	Financial assets at fair value through other comprehensive income	300	326,090	15.00%	326,090	
Sino-American Silicon Products Inc.	Stock of SONGLONG ELECTRONICS CO., LTD.	Sino-American Silicon Products Inc.'s management is the director of the company	Financial assets at fair value through profit or loss-non current	221	-	13.81%	-	
Sino-American Silicon Products Inc.	Stock of 21-Century Silicon Inc.	-	Financial assets at fair value through profit or loss-non current	1,000	-	-	-	
SSTI	Stock of Clean Venture 21 Corporation	-	Financial assets at fair value through profit or loss-non current	10	-	7.20%	-	
GlobalWafers	CDIB Capital Growh Partners L.P	-	Financial assets at fair value through profit or loss-non current	-	95,163	3.85%	95,163	
GWBV	Overseas securities held	-	Financial assets at fair value through profit or loss-current	-	1,876,656	-	1,876,656	

Sino-American Silicon Products Inc.

Accumulatively buy or sell the same marketable securities amounting to NT$ 300 million or 20% of paid-in capital

For the year ended December 31, 2019

Attachment 4

Unit: thousand shares /NT$ thousand

Buying and selling companies	Types and names of securities	Account titles	Counter party	Relationship	Beginning of the period		Buy		Sell				End of the period	
					Number of shares	Amount	Number of shares	Amount	Number of shares	Selling price	Carrying cost	Disposition gain or loss	Number of shares	Amount
Sino-American Silicon Products Inc.	Stock of URE	Financial assets at fair value through other comprehensive income	-	-	34,492	270,073 (note)	-	-	34,492	313,662	348,370	(34,708)	-	-
Sino-American Silicon Products Inc.	Stock of Actron	Financial assets at fair value through other comprehensive income/investment in equity method	-	-	3,210	319,427 (note)	10,975	1,009,500	-	-	-	-	14,185	1,031,956 (note)
GWBV	Overseas securities held	Financial assets at fair value through profit or loss	-	-	-	-	-	1,876,656	-	-	-	-		1,876,656

Note: including the unrealized valuation gain or loss measured by Fair value and investment gain or loss under equity method.

Sino-American Silicon Products Inc.

Acquisition of individual real estate with amount exceeding the lower than NT$300 million or 20% of the capital stock

For the year ended December 31, 2019

Attachment 5

Unit: NT$ Thousand

Name of company	Name of property	Transaction date	Transaction amount	Status of payment	Counter-party	Relationship with the Company	If the counter party is a related party, disclose the previous transfer information				References for determining price	acquisition and current condition	Other
							Owner	Relationship with the Company	Date of transfer	Amount			
MEMC Korea	Property, plant and equipment	October 5, 2018	1,788,848	To the progress of the project	Sungdo Eng. Company	Non-parties Company	-	-	-	-	Fair value	For operating purpose	None
MEMC Korea	Property, plant and equipment	September 2018	323,297	To the progress of the project	L.Keeley Construction	Non-parties Company	-	-	-	-	Fair value	For operating purpose	None
Sino-American Silicon Products Inc.	Stock of Actron	December 12,2019	860,000	-	Crystalwise	Parent company	-	-	-	-	Accounted for at fair value	For operational use	The deposit of $250,000 thousand was paid at the time of signing the sale contract, and the remaining price will be paid after completing the ownership transfer registration.

Sino-American Silicon Products Inc.

Related party transactions for purchases and sales with amounts exceeding the lower than NT$ 300 million or 20% of the capital stock

For the year ended December 31, 2019

Attachment 6

Unit: NT$ Thousand

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
Sino-American Silicon Products Inc.	Aleo Solar	Subsidiaries directly held by the parent company.	Sales	(142,736)	(2)%	Net 90 days	-		-	-%	
Aleo Solar	Aleo Solar Distribuzion Italia S.r.l	Subsidiaries indirectly held by the parent company.	Sales	(268,427)	(19)%	Net 60 days	-		88,870	66%	Note
Sunrise PV World Co.	Sunrise PV One	Chairman of the parent company is also the Chairman of Sino-American Silicon Products Inc.	Sales	(713,625)	(88)%	15 days after the contract is agreed	-		13,191	99%	Note
GlobalWafers	Sino-American Silicon Products Inc.	Subsidiaries directly held by the parent company.	Purchase	877,825	6%	O/A 30 days EOM	-		(220,875)	(9)%	Note
GlobalWafers	GTI	Subsidiary and affiliated enterprise of Sino-American Silicon Products Inc.	Purchase	2,074,272	14%	O/A 60 days	-		(310,922)	(12)%	
GlobalWafers	Kunshan Sino	Subsidiaries directly held by the parent company.	Purchase	1,969,639	13%	O/A 60 days	-		(265,059)	(10)%	Note
GlobalWafers	GWJ	Subsidiaries indirectly held by the parent company.	Purchase	5,998,428	40%	O/A 60-90 days	-		(1,365,605)	(53)%	Note

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
GlobalWafers	Topsil A/S	Subsidiaries indirectly held by the parent company.	Purchase	620,593	4%	O/A 30-60 days	-		(42,126)	(2)%	Note
GlobalWafers	GWS	Subsidiaries indirectly held by the parent company.	Purchase	585,759	4%	O/A 60 days	-		(58,237)	(2)%	Note
Taisil	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,324,609	11%	O/A 60 days	-		(249,946)	(8)%	Note
GWS	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	549,011	4%	O/A 60 days	-		(177,954)	(6)%	Note
Actron Technology Corporation	GlobalWafers	Chairman of the parent company is also the Chairman of Sino-American Silicon Products Inc.	Purchase	229,325	2%	O/A 60 days EOM	-		(48,111)	(2)%	Note
MEMC Korea	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	778,020	6%	O/A 60 days	-		(109,525)	(4)%	Note
MEMC SpA	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	847,708	7%	O/A 60 days	-		(139,596)	(5)%	Note
GTI	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	3,294,333	26%	O/A 45 days	-		(256,098)	(9)%	Note
Kunshan Sino	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	886,190	7%	O/A 30 days	-		(72,513)	(2)%	Note
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,681,018	13%	O/A 60-90 days	-		(426,609)	(14)%	Note

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
Topsil A/S	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	442,842	3%	O/A 30-60 days	-		(62,464)	(2)%	Note
GWS	MEMC LLC	Subsidiaries indirectly held by the parent company.	Purchase	1,113,615	6%	O/A 60 days	-		(210,402)	(7)%	Note
GWS	MEMC LLC		Sales	(556,291)	(2)%	O/A 60 days	-		75,379	2%	
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	Purchase	1,686,518	8%	O/A 60 days	-		(221,284)	(7)%	Note
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	Sales	(661,023)	(3)%	O/A 60 days	-		75,452	2%	Note
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	Purchase	3,831,532	19%	O/A 60 days	-		(509,008)	(17)%	Note
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	Sales	(3,436,429)	(15)%	O/A 60 days	-		593,826	19%	Note
GWS	MEMC Korea	Subsidiaries indirectly held by the parent company.	Purrchase	1,486,461	7%	O/A 60 days	-		(201,533)	(7)%	Note
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	Purchase	4,382,815	22%	O/A 60 days	-		(707,117)	(23)%	Note
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	Sales	(1,572,917)	(7)%	O/A 60 days	-		210,912	7%	Note
GWS	Taisil	Subsidiaries indirectly held by the parent company.	Purchase	6,982,787	35	O/A 60 days	-		(1,041,120)	(34)%	Note

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
GWS	Taisil	Subsidiaries indirectly held by the parent company.	Sales	(524,118)	(2)%	O/A 60 days	-		173,631	5%	Note

Note: Transactions with standalone parties as mentioned above were eliminated when preparing the standalone reports.

Sino-American Silicon Products Inc.

Receivables from related parties with amounts exceeding the lower than NT$ 100 million or 20% of the capital stock

December 31, 2019

Attachment 7 Unit: NT$ Thousand

Name of company	Counter party	Nature of relationship	Ending balance	Turnover rate	Overdue		Amounts received in subsequent period (Note 1)	Allowance for bad debts
					Amount	Action taken		
Sino-American Silicon Products Inc.	Sulu	Subsidiaries indirectly held by the parent company.	299,621	note2	-		-	-
SSTI	AMLED	Subsidiaries indirectly held by the parent company.	334,686	note2	-		-	-
SSTI	Sulu	Subsidiaries indirectly held by the parent company.	317,927	note2	-		-	-
GlobalWafers	GTI	Subsidiaries indirectly held by the parent company.	256,098	11.33	-		256,098	-
GlobalWafers	GWJ	Subsidiaries indirectly held by the parent company.	426,609	3.80	-		181,827	-
GlobalWafers	GWS	Subsidiaries indirectly held by the parent company.	177,954	5.72	-		177,954	-
GlobalWafers	MEMC Korea	Subsidiaries indirectly held by the parent company.	109,525	3.66	-		79,480	-
GlobalWafers	MEMC SpA	Subsidiaries indirectly held by the parent company.	139,596	5.24	-		139,596	-
GlobalWafers	Taisil	Subsidiaries indirectly held by the parent company.	249,946	8.21	-		249,946	-
Taisil	GlobalWafers	Subsidiaries indirectly held by the parent company.	6,400,000	note2	-		-	-
Sino-American Silicon Products Inc.Aleo Solar	GlobalWafers	Subsidiaries indirectly held by the parent company.	220,875	4.59	-		220,875	-
GTI	GlobalWafers	Subsidiaries indirectly held by the parent company.	310,922	6.65	-		310,922	-
Kunshan Sino	GlobalWafers	Subsidiaries indirectly held by the parent company.	265,059	4.85	-		236,851	-

Name of company	Counter party	Nature of relationship	Ending balance	Turnover rate	Overdue		Amounts received in subsequent period (Note 1)	Allowance for bad debts
					Amount	Action taken		
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	1,365,605	3.89	-		857,018	-
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	4,140,000	note2	-		-	-
GWS	GWBV	Subsidiaries indirectly held by the parent company.	2,998,000	note2	-		-	-
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	210,912	8.89	-		210,912	-
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	593,826	7.67	-		593,826	-
GWS	GWI	Subsidiaries indirectly held by the parent company.	3,258,826	note2	-		-	-
GWS	MEMC LLC	Subsidiaries indirectly held by the parent company.	173,631	3.42	-		173,631	-
MEMC Sdn Bhd	GWS	Subsidiaries indirectly held by the parent company.	221,284	8.33	-		221,284	-
MEMC SpA	GWS	Subsidiaries indirectly held by the parent company.	509,008	8.16	-		509,008	-
MEMC SpA	GWS	Subsidiaries indirectly held by the parent company.	2,047,302	note2	-		-	-
MEMC Korea	GWS	Subsidiaries indirectly held by the parent company.	201,533	7.63	-		201,533	-
MEMC Japan	GWS	Subsidiaries indirectly held by the parent company.	707,117	4.94	-		-	-
Taisil	GWS	Subsidiaries indirectly held by the parent company.	1,041,120	7.34	-		-	-
MEMC LLC	GWS	Subsidiaries indirectly held by the parent company.	210,402	6.74	-		210,402	-

Note 1: The amount recovered after February 26, 2019.
Note 2: Receivables from related parties generated by financing.
Note 3: The above transactions related to the standalone standalone have been written off when preparing the standalone financial statements.

Sino-American Silicon Products Inc.
Information on investees (excluding information on investees in Mainland China)
For the year ended December 31, 2019

Attachment 8

Unit: NT$ Thousand

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
Sino-American Silicon Products Inc.	SSTI	British Virgin Islands	Investment and triangular trade center with subsidiaries in China	1,425,603 (USD 45,255)	1,425,603 (USD 45,255)	48,526	100.00%	971,888	11,694	11,694	Subsidiary Note 5
Sino-American Silicon Products Inc.	GlobalWafers	Taiwan	Semiconductor silicon wafer materials and components manufacturing and trade	8,955,952	8,955,952	222,727	51.17%	23,060,434	13,644,095	6,981,683	Subsidiary
Sino-American Silicon Products Inc.	Aleo Solar	Prenzlau	Solar module manufacturing and sale and wholesale of electronic materials	558,139 (EUR 13,500)	558,139 (EUR 13,500)	Note 1	100.00%	385,238	161,178	161,178	Subsidiary Note 2
Sino-American Silicon Products Inc.	Aleo Sunrise	Germany	Manufacturing of solar cell as well as sale and wholesale of electronic materials	-		Note 1	100.00%	-	(251,617)	(194,488)	Subsidiary Note 4
Sino-American Silicon Products Inc.	SAS Sunrise Inc.	Cayman	Reinvestments in various businesses	794,373 (USD 24,500)	794,373 (USD 24,500)	24,500	100.00%	461,117	(52,533)	(52,533)	Subsidiary
Sino-American Silicon Products Inc.	Sunrise PV World Co.	Taiwan	Power generating business	300,000	300,000	30,000	100.00%	276,330	29,842	29,597	Subsidiary
Sino-American Silicon Products Inc.	Sunrise PV Five Electric	Taiwan	Power generating business	1,000	-	100	100.00%	989	(11)	(11)	Subsidiary
Sino-American Silicon Products Inc.	Crystalwise Technology Inc.	Taiwan	Optical wafer and substrate manufacturing and trade	2,215,803	2,010,843	86,923	41.93%	280,554	(751,496)	(307,020)	Affiliated companies Note 2

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
Sino-American Silicon Products Inc.	Accu Solar Corporation	Taiwan	Solar energy system provider	112,193	112,193	7,452	24.70%		(5,488)	(713)	Affiliated companies
Sino-American Silicon Products Inc.	Cathy Sunrise	Taiwan	Power generating business	450,000	450,000	45,000	30.00%	459,333	25,615	8,847	Affiliated companies
Sino-American Silicon Products Inc.	TSCS	Taiwan	Semiconductor special gas and chemical material manufacturer	990,000	900,000	90,000	30.93%	839,830	(150,029)	(78,333)	Affiliated companies Note 2
Sino-American Silicon Products Inc.	Actron Technology Corporation	Taiwan	Semiconductor electric wafer materials and components manufacturing and trade	1,147,715	-	14,185	15.50%	1,031,956	323,478	12,458	Affiliated companies Note 2
Sunrise PV World Co.	Sunrise PV Electric	Taiwan	Power generating business	-	42,000	-	-	-	415	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Two	Taiwan	Power generating business	-	15,000	-	-	-	(123)	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Three	Taiwan	Power generating business	15,000	100,000	1,500	100.00%	16,623	1,488	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Four	Taiwan	Power generating business	100,000	100,000	10,000	100.00%	15,490	449	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Five	Taiwan	Power generating business	-	65,000	-	-	-	266	-	Subsidiary Note 7
SAS Sunrise Inc.	SAS Sunrise Pte.Ltd.	Singapore	Reinvestments in various businesses	719,292 (USD 22,000)	719,292 (USD 22,000)	30,934	100.00%	549,101	(25,460)	-	Subsidiary Note 7
SAS Sunrise Pte.Ltd.	AMLED	Philippines	Reinvestments in various businesses	-	-	-	-	-	-	-	Subsidiary Note 6 and 7
SAS Sunrise Pte.Ltd.	Sulu	Philippines	Power generating business	440,667 (USD 13,435)	440,667 (USD 13,435)	420,000	40.00%	306,658	(46,753)	-	Subsidiary Note 7
AMLED	Sulu	Philippines	Power generating business	297,229 (USD 9,065)	297,229 (USD 9,065)	472,500	45.00%	173,902	(46,753)	-	Subsidiary Note 7
Aleo Solar	Aleo Solar Distribuzione Italia S.r.l	Italy	Solar module sale and wholesale of electronic materials	4,078 (EUR 100)	4,078 (EUR 100)	Note 1	100.00%	2,994	4,652	-	Subsidiary Note 7

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
GlobalWafers	GWI	Cayman	Reinvestments in various businesses	2,241,668 (USD 73,423)	2,241,668 (USD 73,423)	90,000	100.00%	4,360,907	2,074,206	-	Subsidiary Note 7
GlobalWafers	GSI	Cayman	Business investment and triangular trade center with subsidiaries in China	756,809 (USD 26,555)	756,809 (USD 26,555)	25,000	100.00%	1,521,431	202,929	-	Subsidiary Note 7
GlobalWafers	GWJ	Japan	Semiconductor silicon wafer manufacturing and trading	5,448,015	5,448,015	128	100.00%	15,262,418	1,904,017	-	Subsidiary Note 3 and 7
GlobalWafers	GWafers Singapore	Singapore	Reinvestments in various businesses	11,966,930	11,966,930	364,000	67.20%	23,271,556	5,553,670	-	Subsidiary Note 7
GlobalWafers	Topsil A/S	Denmark	Semiconductor silicon wafer manufacturing and trading	1,964,069 (DKK407,600)	1,964,069 (DKK407,600)	1,000	100.00%	1,660,861	64,061	-	Subsidiary Note 7
GlobalWafers	Whole Global Investment Corporation	Taiwan	Reinvestments in various businesses	309,760	200,000	30,976	30.98%	571,929	65,636	20,331	Affiliated companies
GlobalWafers	Taisil	Taiwan	Semiconductor silicon wafer manufacturing and sales	14,504,663	14,504,663	9,999	99.99%	17,705,613	3,546,184	-	Subsidiary
GWI	GWafers Singapore	Singapore	Reinvestments in various businesses	5,411,947	5,411,947	177,674	32.80%	4,360,907	5,553,670	-	Subsidiary Note 3 and 7
GWJ	MEMC Japan	Japan	Semiconductor silicon wafer manufacturing and sales	373,413 (JPY 100,000)	373,413 (JPY 100,000)	750	100.00%	3,066,944	227,673	-	Subsidiary Note 3 and 7
Topsil A/S	Topsil PL	Poland	Semiconductor silicon wafer manufacturing and trading	-	-	0.1	100.00%	-	13,719	-	Subsidiary Note 3 and 7
GWafers Singapore	GWS	Singapore	Investment, marketing and trading business	14,671,320 (USD 436,398)	14,671,320 (USD 436,398)	299,445	100.00%	25,151,706	6,223,239	-	Subsidiary Note 3 and 7
GWS	GWBV	Netherlands	Reinvestments in various businesses	6,413,892 (USD 162,723)	6,413,892 (USD 162,723)	0.1	100.00%	40,918,549	3,547,609	-	Subsidiary Note 3 and 7
GWBV	MEMC SpA	Italy	Semiconductor silicon wafer manufacturing and sales	6,732,641 (USD 204,788)	6,732,641 (USD 204,788)	65,000	100.00%	11,849,317	1,425,916	-	Subsidiary Note 3 and 7

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
GWBV	MEMC BV	Singapore	Reinvestments in various businesses	-	-	-	-	-	414,476	-	Subsidiary Note 3 and 7
MEMC SpA	MEMC SarL	France	Trading business	1,316 (USD 40)	1,316 (USD 40)	0.5	100.00%	807	753	-	Subsidiary Note 3 and 7
MEMC SpA	MEMC GmbH	Germany	Trading business	4,622 (USD 141)	4,622 (USD 141)	0.002	100.00%	4,817	(617)	-	Subsidiary Note 3 and 7
MEMC SpA	MEMC BV	Netherlands	Reinvestments in various businesses	-	2,430,141 (USD 73,918)	-	-	-	414,476	-	Subsidiary Note 3 and 7
MEMC BV	MEMC Korea	Korea	Semiconductor silicon wafer manufacturing and sales	-	2,427,650 (USD 73,842)	-	-	-	1,270,737	-	Subsidiary Note 3 and 7
GWBV	MEMC Korea	Korea	Semiconductor silicon wafer manufacturing and sales	3,641,474 (USD 110,763)	3,641,474 (USD 110,763)	25,200	100%	15,373,703	1,270,737	-	Subsidiary Note 3 and 7
GWBV	GTI	U.S.A.	Epitaxial silicon wafer production and trade of epitaxy foundry business	2,779,849 (USD 91,262)	2,779,849 (USD 91,262)	1	100.00%	9,486,787	947,639	-	Subsidiary Note 3 and 7
GWBV	MEMC Sdn Bhd	Malaysia	Semiconductor silicon wafer R&D, manufacturing and sales	898,016 (USD 27,315)	898,016 (USD 27,315)	1,036	100.00%	740,576	75,835	-	Subsidiary Note3 and 7
GWBV	MEMC Ipoh	Malaysia	Semiconductor silicon wafer manufacturing and sales	93,907 (USD 1,323)	146,624 (USD 3,020)	612,300	100.00%	3,807	236	-	Subsidiary Note 3 and 7
GTI	MEMC LLC	U.S.A.	Semiconductor silicon wafer R&D, manufacturing and sales	543,384 (USD 17,839)	543,384 (USD 17,839)	-	100.00%	4,263,233	178,816	-	Subsidiary Note 3 and 7

Note:1 Corporation limited

Note 2: The investment gain or loss recognition includes the investment cost and the amortization of the net equity acquired.

Note 3: The investees are indirect subsidiaries of the Company. GWafer Singapore had been restructured so the Company and GWI held 67.2 %and 32.8 p%, respectively, of its shares on July 1, 2018. In addition, GTI was transferred to GWBV; and MEMC LLC was transferred to GTI. In June 18, 2019, MEMC BV was transferred to GWBV and was liquidated in September 2019. MEMC Korea was transferred from GWBV and MEMC BV to GWBV.

Note 4: Aleo sunrise was100% owned by Sino-American Silicon Products Inc from March, 2019.

Note 5: Not including earnings transferred to capital increase.

Note 6: The Company does not hold the ownership interests of AMLED, but the Company can control the financial and operating strategies of AMLED and obtain all the benefits of its operations and net assets in accordance with the terms of the agreements with such standalone, so AMLED is considered as a subsidiary.

Note 7: The profit and loss of the investee company is included in its investment company. To avoid confusion, it will not be expressed here.

Note 8: The above transactions relating to the standalone standalone have been written off when preparing the standalone financial statements.

Sino-American Silicon Products Inc.
Information on investment in mainland China
For the year ended December 31, 2019

Attachment 9 Unit: NT$ Thousand

(I) The names of investees in Mainland China, the main businesses and products, and other information

Name of investee	Main businesses and products	Total amount of paid in capital	Method Of investment	Accumulated outflow of investment from Taiwan as of January 1, 2017	Investment flows		Accumulated outflow of investment from Taiwan as of December 31, 2018	Net income (losses) of the investee	Shareholding ratio of direct or indirect investment of GlobalWafers	Investment income (losses) (Note 4)	Book value	Accumulated remittance of earnings in current period
					Outflow	Inflow						
Kunshan Sino	Silicon rods and silicon wafer processing and trade	769,177 (Note 7)	(Note 1)	713,300 (USD 21,729)	-	-	713,300 (USD21,729)	195,307	100.00%	195,307	1,425,100	-
SunEdison Shanghai	Trading business	7,527 (RMB 1,500)	(Note 2)	(Note 2)	-	-	(Note 2)	(557)	100.00%	(557)	8,914	-
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	Sales and marketing business	9,756 (RMB 2,000)	(Note 3)	-	-	-	-	(21,528)	60.00%	(12,917)	7,627	-

(II) Limitation on investment in Mainland China

Company Name	Accumulated Investment in Mainland China as of December 31, 2018	Investment Amounts Authorized by Investment Commission, MOEA	Upper Limit on Investment
GlobalWafers	713,300 (USD 21,729)	818,233 (USD 25,000)(Note 5)	27,043,950 (Note 6)

Note 1: Investments through GSI registered in mainland China.
Note 2: Investments through GWBV registered in mainland China which is acquired from the acquisition of GWS (SSL).
Note 3: Kunshan Sino was invested by Shanghai GROWFAST in mainland China, without limit on investment, due to not having any investment from Taiwan.
Note 4: The basis for investment income (loss) recognition is from the financial statements audited.
Note 5: Initial investment amounts denominated in foreign currencies are translated into New Taiwan Dollars using the Historical Foreign Exchange Rate.
Note 6: Calculated by 60% of the quota of the "Review Principles of Investment or Technical Cooperation in Mainland China" August 29, 2008, multiplied by the net worth of GlobalWafers on December 31, 2018.
Note 7: Retained earnings Transferred to Capital was included.

Attachment 2

Stock code: 5483

Sino-American Silicon Products Inc.

Standalone Financial Statements

With Independent Auditors’ Report

For the Years Ended December 31, 2019 and 2018

Address: No.8, Industrial East Road 2, Science Based Industrial Park, Hsinchu, Taiwan, R.O.C.

Tel.: (03) 577-2233

(English translation of standalone financial statements originally issued in Chinese is unaudited and for information purpose only; The Chinese version shall prevail.)

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Independent Auditor’s Report

To the Board of Directors of Sino-American Silicon Products Inc.

Opinion

We have audited the financial statements of Sino-American Silicon Products Inc., which comprise the balance sheets as of December 31, 2019 and 2018, the statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes to the standalone financial statements, including a summary of significant accounting policies.

In our opinion, based on the audit results of the accountant and the audit report of other accountants the accompanying standalone financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and with the International Financial Reporting Standards (“IFRSs”), International Accounting Standards (“IASs”), Interpretations developed by the International Financial Reporting Interpretations Committee (“IFRIC”), and the former Standing Interpretations Committee (“SIC”) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and 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 Auditors’ Responsibilities for the Audit of the Standalone Financial Statements section of our report. We are independent of Sino-American Silicon Products Inc. 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. Based on the audit results of the accountant and the audit report of other accountants, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis of our opinion.

Other matters

Among the investments included in Sino-American Silicon Products Inc. under equity method, the financial statements of Crystalwise Technology Inc. have not been checked by the accountant and have been checked by other accountants. Therefore, among the opinions expressed by the accountant on the standalone financial statements, the amount booked in the financial statements of is based on the audit report of other accountants. The amount of investment in Crystalwise Technology Inc. under equity method 1% of the total assets respectively On December 31, 2018. The share of gain or loss of related companies under equity method for 2018 accounted for (20)% of the net profit before tax.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of Sino-American Silicon Products Inc.'s financial statements of the current period. These matters were addressed in the context of our audits of the standalone financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Based on our judgment, the key audit matters that should be disclosed in this audit report are as follows:

1. Assessment of impairment loss on property, plant and equipment(included right of use assets)

   For the accounting policy of asset impairment, please refer to Note 4 (13) of the standalone financial statements for impairment of non-financial assets; for accounting hypothesis and estimated uncertainty of assessment of impairment loss on property, plant and equipment((included right of use assets), please refer to Note 5 of the standalone financial statements. For notes to the assessment of impairment loss on property, plant and equipment(included right of use assets), please refer to Note 6 (9) and(10) of the standalone financial statements.

Description of key audit matters:

The industry of Sino-American Silicon Products Inc. is subjected to fluctuations due to the market environment and the energy policies of various governments, with fierce market competition and continuous price drop of products. Therefore, the assessment of impairment loss on property, plant and equipment is important; the asset impairment assessment includes Identifying the cash-generating unit, determining the evaluation method, selecting important assumptions, and calculating the recoverable amount that must rely on the subjective judgment of the management. The evaluation process is complicated and contains the subjective judgment of the management. Therefore, the accountant booked it as one of the important audit matters.

Audit procedure implemented:

The principal audit procedures for the above key audit matters by the accountant include: assessing the reasonableness whether the cash-generating unit and its related tested assets that Sino-American Silicon Products Inc. management has identified to impair show possible signs of impairment, and further understanding and testing the evaluation models and key assumptions such as future cash flow projections, use period and weighted average cost of capital that the management use in the impairment test, including expected product Revenue, costs and expenses, and assessing the accuracy of previous management forecasts; and carrying out sensitivity analysis of results. Furthermore, the management authority is also consulted on relevant procedures in order to identify whether there will be matters capable of affecting the impairment test result in the future after the financial statements. And assess whether Sino-American Silicon Products Inc. has properly disclosed the policy of long-term non-financial asset impairment and other related information

2. Evaluation of investments under equity method

For the accounting policies of the assessment of the investment under equity method, please refer to Note 4 (8) Investment-related enterprises and Note 4 (9) Investment in Subsidiaries in the standalone Financial statements; for the assessment of the investment under equity method, please refer to the standalone Financial statements of Note6(7)Investment under equity method and Note 6 (8) Changes in the equity of ownership of the subsidiary.

Description of key audit matters:

Sino-American Silicon Products Inc. Co., holds a 51.17% stake in the equity-investment subsidiary (GlobalWafers Co., Ltd.). Given that the subsidiary GlobalWafers Co., Ltd. is mainly derived from corporate mergers and acquisitions, plus GlobalWafers’ industry is subjected to fluctuations in the market environment and other factors. The recognition of the Revenue of subsidiaries and the assessment of goodwill impairment arising from corporate mergers and acquisitions are important. It is booked as one of the important audit matters by our accountants.

Audit procedure implemented:

The principal audit procedures performed by the accountant for the recognition of Revenue related to investment under equity method include understanding the accounting policies adopted for the Revenue used; assessing the design of the internal control system of sales revenue; and sampling and testing individual transactions to support the appropriateness of the recognition of

Revenue. The principal audit procedures for the goodwill impairment assessment include: assessing the cash-generating unit that the management has identified to impair and signs of impairment; assessing the reasonableness of the management's method of measuring the recoverable amount; assessing the accuracy of management's past forecasts; reviewing management's calculation of the recoverable amount of cash-generating units; evaluating various assumptions that future cash flow projections and calculating recoverable amount use, and the sensitivity analysis of the key assumptions.

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

Management is responsible for the preparation and fair presentation of the standalone financial statements and for such internal control as management determines is necessary to enable the preparation of standalone financial statements that are free from material misstatement, whether due to fraud or error.

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

Those charged with governance (including the Audit Committee) are responsible for overseeing Sino-American Silicon Products Inc. Co. financial reporting process.

Auditors' Responsibilities for the Audit of the Standalone Financial Statement

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

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

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

2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Sino-American Silicon Products Inc. Co. internal control.

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

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on Sino-American Silicon Products Inc.

Co. ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the standalone financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause Sino-American Silicon Products Inc. Co. to cease to continue as a going concern.

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

6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the standalone financial statements. We are responsible for the direction, supervision and performance of Sino-American Silicon Products Inc. Co. audit. We remain solely responsible for our audit opinion.

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

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

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the 2019 standalone financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Cheng-Chien, Chen and An-Chih, Cheng.

KPMG

Taipei, Taiwan (Republic of China)
March 19, 2020

Sino-American Silicon Products Inc.
Standalone Balance Sheets
December 31, 2019 and 2018

Expressed in thousands of New Taiwan Dollars

		2019.12.31		2017.12.31	
	Assets	**Amount**	**%**	**Amount**	**%**
	Current Assets:				
1100	Cash and cash equivalents (Note 6(1))	$ 1,256,788	4	851,304	3
1110	Financial assets at fair value through profit or loss –current (Note 6(2))	-	-	87,053	-
1136	Current financial assets at amortized cost (note 6(4)and7)	240,068	1	-	-
1170	Notes and accounts receivable ,net (Note 6 (5))	199,042	-	471,498	1
1180	Accounts receivable due from related parties, net (Note 6(7)	632,572	2	1,166,545	3
130X	Inventories (Note 6(6))	335,641	1	590,170	2
1421	Prepayments for purchase of materials (Notes 7 and 9)	42,242	-	536,783	2
1479	Other current assets	38,391	-	83,492	-
		2,744,744	8	3,786,845	11
	Non-current Assets:				
1517	Financial assets at fair value through other comprehensive income - non-current (Note 6 (3))	6,095	-	801,006	2
1535	Financial assets measured at amortized cost - non-current (Notes 6 (4) and 7)	267,612	1	281,366	1
1550	Investments accounted for using equity method (Note 6 (7)	27,794,246	81	25,883,438	75
1600	Property, plant and equipment (Note 6 (9)and 8)	3,226,668	10	3,589,549	11
1755	Right-of –use assets (Note 6 (10)	154,567	-		
1990	Other non-current assets (Note 6(16) and6(17))	74,308	-	117,213	-
1980	Other finance assets-non current (Note 8)	20,134	-	33,482	-
		31,543,630	92	30,706,054	89
	Total assets	**$ 34,288,374**	**100**	**34,492,899**	**100**

		2019.12.31		2017.12.31	
	Liabilities and Equity	**Amount**	**%**	**Amount**	**%**
	Current Liabilities:				
2100	Short-term borrowings (Note 6 (11) and 8)	$ 200,000	-	2,717,125	8
2120	Financial liabilities at fair value through profit or loss –current	68	-		-
2130	Contract liabilities-current (Note 6 (21),7 and 9)	88,538	-	148,713	-
2170	Notes and accounts payable	500,893	1	431,425	1
2180	Accounts payable to related parties (Notes 7)	2,516	-	6,464	-
2201	Payroll and bonus payable	340,216	1	284,009	1
2250	Provision - current (Notes 6(14) and 9)	221,949	1	-	-
2399	Other current liabilities(notes6(13))	363,603	1	349,260	-
		1,717,781	5	3,936,996	11
	Non-current Liabilities:				
2527	Contract liabilities-non-current (Note 6 (21) ,7 and 9)	1,115,657	3	1,103,030	3
2540	Long-term borrowings (Note 6 (12)and 8)	-	1	1,610,200	5
2550	Provision non-current (Note 6 (14, and9)	4,622,950	13	960,957	3
2600	Other non-current-liabilities(Note 6(13) and 6(17))	161,745	-	665	-
		5,900,352	17	3,674,187	11
	Total liabilities	7,618,133	22	7,611,183	22
	Equity (Note 6 (18) and 6(19))				
3110	Ordinary shares	5,862,367	17	5,863,207	17
3170	Pending share capital	(150)	-	(330)	-
		5,862,217	17	5,862,877	17
3200	Capital surplus	21,072,595	61	21,757,292	63
	Retained earnings:				
3310	Legal reserve	462,354	1	311,579	1
3320	Special reserve	513,302	2	513,302	1
3350	Unappropriated retained earnings	2,591,235	8	1,507,753	5
		3,566,891	11	2,332,634	7
3400	Other equity interest	(3,831,462)	(11)	(3,071,087)	(9)
	Total equity	26,670,241	78	26,881,716	78
	Total liabilities and equity	**$ 34,492,899**	**100**	$ 34,492,899	**100**

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

Sino-American Silicon Products Inc.
Standalone Statement of Comprehensive Income
For the years ended December 31, 2019 and 2018
Expressed in thousands of New Taiwan dollars

		2019		2018	
		Amount	**%**	**Amount**	**%**
4000	**Operating revenue** (Note 6 (21) and 7)	$ 6,002,885	100	8,430,747	100
5000	**Operating cost**(Note 6(6), (12),(16),(22) and 7)	9,895,050	165	12,218,087	145
	Gross profit from operations	(3,892,165)	(65)	(3,787,340)	(45)
	Operating expenses (Note 6 (13), (16), (22) and 7):				
6100	Selling expenses	50,701	1	65,558	1
6200	Administrative expenses	314,914	5	186,847	2
6300	Research and development expenses	111,769	2	182,406	2
6450	Expected credit losses (Note 6 (5) and 7)	(6,671)	-	48,770	1
	Total operating expenses	470,713	8	483,581	6
	Net operating income	(4,362,878)	(73)	(4,270,921)	(51)
	Non-operating income and expenses:				
7010	Other Revenue (Note 6 (23) and 7)	43,725	-	53,020	1
7020	Other gains and losses, net (Note 6 (24))	98,206	(2)	(147,429)	(2)
7050	Financial costs (Note 6 (25))	(25,064)		(39,688)	
7060	Share of profit of associates accounted for using equity method (Note 6 (7))	6,572,359	109	6,430,774	76
		6,689,226	111	6,296,677	75
	Income before income tax	2,326,348	38	2,025,756	24
7950	**Income tax expenses** (Note 6 (17))	77,962	1	75,253	1
	Net income for the year	2,248,386	37	1,950,503	23
8300	**Other comprehensive income (loss):**				
8310	**Items that may not be reclassified subsequently to profit or loss**				
8311	Losses on remeasurements of defined benefit plans (Note 6 (16))	(169)	-	(13,994)	-
8316	Unrealized losses from investments in equity instruments measured at fair value through other comprehensive income (Note 6 (18))	(7,997)	-	(529,832)	(6)
8330	Share of other comprehensive income of associates and joint ventures accounted for using equity method	29,988	-	(93,347)	(1)
		21,822	-	(637,173)	(7)
8360	**Items that may be reclassified subsequently to profit or loss**				
8361	Exchange differences on translation of foreign operations (Note 6 (18))	(635,972)	(10)	385,988	4
8380	Share of other comprehensive income of associates and joint ventures accounted for using equity method, components of other comprehensive income that will be reclassified to profit or loss (Note 6 (26))	134,905	2	(100,360)	(1)
8399	Income tax related to components of other comprehensive income that will be reclassified to profit or loss (Note 6 (17))	(4,866)	-	5,267	-
		(496,201)	(8)	290,895	3
8300	**Other comprehensive income (after tax)**	(474,379)	(8)	(346,278)	(4)
	Total comprehensive income	$ 1,774,007	29	$ 1,604,225	19
	Earnings per share (NT dollars) (Note 6 (20))				
9750	Basic earnings per share	$	3.86		3.36
9850	Diluted earnings per share	$	3.83		3.34

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

Sino-American Silicon Products Inc.
Standalone Statement of Changes in Equity
For the years ended December 31, 2019 and 2018

Expressed in thousands of New Taiwan Dollars

				Retained earnings				Other equity interest							
	Ordinary shares	**Pending share capital**	**Capital surplus**	**Legal reserve**	**Special reserve**	**Undistributed retained earnings (Accumulated loss)**	**Total**	**Exchange differences on translation of foreign financial statements**	**Financial assets at fair value through other comprehensive income**	**Unrealized gains (losses) on available for sale financial assets**	**Employees' unearned remuneration**	**Other**	**Total**	**Treasury shares**	**Total Equity**
Balance at January 1, 2018	$ 5,920,587	-	24,205,831	311,579	513,302	(317,629)	507,252	(1,973,334)	-	(1,109,281)	(236,020)	(4,302)	(3,322,937)	(169,861)	27,140,872
Effects of retrospective application	-	-	-	-	-	1,222,787	1,222,787	-	(2,338,298)	1,109,281	-	-	(1,229,017)	-	(6,230)
Balance at January 1, 2018 after adjustments	5,920,587	-	24,205,831	311,579	513,302	905,158	1,730,039	(1,973,334)	(2,338,298)	-	(236,020)	(4,302)	(4,551,954)	(169,861)	27,134,642
Profit for the year ended December 31, 2018	-	-	-	-	-	1,950,503	1,950,503	-	-	-	-	-	-	-	1,950,503
Other comprehensive income for the year ended December 31, 2018	-	-	-	-	-	(107,341)	(107,341)	387,093	(626,030)	-	-	-	(238,937)	-	(346,278)
Comprehensive income for the year ended December 31, 2018	-	-	-	-	-	1,843,162	1,843,162	387,093	(626,030)	-	-	-	(238,937)	-	1,604,225
Loss made up by capital surplus	-	-	(317,629)	-	-	317,629	317,629	-	-	-	-	-	-	-	-
Cash dividends distribution from capital surplus	-	-	(1,759,511)	-	-	-	-	-	-	-	-	-	-	-	(1,759,511)
Share of net worth changes of subsidiaries, associates and joint ventures accounted for using equity method	-	-	(245,680)	-	-	-	-	-	-	-	-	922	922	-	(244,758)
Retirement of treasury stock	(55,550)	-	(114,311)	-	-	-	-	-	-	-	-	-	-	169,861	-
Donated surplus	-	-	239	-	-	-	-	-	-	-	-	-	-	-	239
Expiration of restricted employee stock	-	-	(9,487)	-	-	-	-	-	-	-	160,686	-	160,686	-	151,199
Restrictions on employee rights invalid, pending for cancellation	(1,830)	(330)	(2,160)	-	-	-	-	-	-	-	-	-	-	-	(4,320)
Disposal of investments in equity instruments designated at fair value through other comprehensive income	-	-	-	-	-	(1,558,196)	(1,558,196)	-	1,558,196	-	-	-	1,558,196	-	-
Balance on December 31, 2018	$ 5,863,207	(330)	21,757,292	311,579	513,302	1,507,753	2,332,634	(1,586,241)	(1,406,132)	-	(75,334)	(3,380)	(3,071,087)	-	26,881,716
Profit for the year ended December 31, 2019	-	-	-	-	-	2,248,386	2,248,386	-	-	-	-	-	-	-	2,248,386
Other comprehensive income for the year ended December 31, 2019	-	-	-	-	-	29,819	29,819	(638,103)	133,905	-	-	-	(504,198)	-	(474,379)
Comprehensive income for the year ended December 31, 2019	-	-	-	-	-	2,278,205	2,278,205	(638,103)	133,905	-	-	-	(504,198)	-	1,774,007
Appropriation and distribution of retained earnings:															
Legal reserve	-	-	-	150,775	-	(150,775)	-	-	-	-	-	-	-	-	-
Cash dividends on ordinary shares	-	-	-	-	-	(1,356,963)	(1,356,963)	-	-	-	-	-	-	-	(1,356,963)
Cash dividends distribution from capital surplus	-	-	(401,900)	-	-	-	-	-	-	-	-	-	-	-	(401,900)
Share of net worth changes of joint ventures accounted for using equity method	-	-	(279,229)	-	-	-	-	-	-	-	-	112	- 112	-	(279,117)
Share of net worth changes of subsidiaries, associates accounted for using equity method	-	-	(21)	-	-	-	-	-	-	-	-	-	-	-	(21)
Donated surplus	-	-	228	-	-	-	-	-	-	-	-	-	-	-	228
Expiration of restricted employee stock	-	-	(3,115)	-	-	-	-	-	-	-	56,726	-	56,726	-	53,611
Restrictions on employee rights invalid, pending for cancellation	(840)	180	(660)	-	-	-	-	-	-	-	-	-	-	-	(1,320)
Disposal of investments in equity instruments designated at fair value through other comprehensive income	-	-	-	-	-	313,015	313,015	-	(313,015)	-	-	-	(313,015)	-	-
Balance at December 31, 2019	**$ 5,863,207**	**(150)**	**21,072,595**	**462,354**	**513,302**	**2,591,235**	**3,566,891**	**(2,224,344)**	**(1,585,242)**	**-**	**(18,608)**	**(3,268)**	**(3,831,462)**	**-**	**26,670,241**

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

Sino-American Silicon Products Inc.
Standalone Statement of Cash Flow
For the years ended December 31, 2019 and 2018
Expressed in thousands of New Taiwan dollars

	2019	2018
Cash flows from operating activities:		
Income before income tax	$ 2,326,348	2,025,756
Adjustments:		
Adjustments to reconcile profit (loss)		
Depreciation expense	491,332	981,913
Expected credit losses(reversed income)	(6,671)	48,770
Net gains on financial assets or liabilities at fair value through profit or loss	68	11,291
Interest expenses	25,064	39,688
Interest income	(38,385)	(38,034)
Dividend income	(5,340)	(14,986)
Share-based payment transactions	53,611	151,199
Share of profit of subsidiaries and associates accounted for using equity method	(6,572,359)	(6,430,774)
(Gains) losses on disposal of property, plant and equipment	(30,812)	41,421
Impairment loss of finance assets	25,973	-
Provision for (reversal of) inventory valuation	(239,254)	66,125
Impairment loss for (reversal of) non-finance assets	(8,779)	1,466,008
Provision for liability	3,884,607	-
Total adjustments	(3,677,379)	(3,677,379)
Changes in operating assets and liabilities:		
Notes and accounts receivable (including related parties)	322,629	282,083
Inventories	493,783	1,584,411
Prepayments for purchase of materials	503,320	512,843
Defined benefit assets	(40)	(31,699)
Other assets	50,933	37,716
Notes and accounts payable (including related parties)	65,520	(609,964)
Contract liabilities	(47,548)	(453,415)
Other liabilities	(130,928)	(207,964)
Other operating liabilities	1,257,669	1,647,303
Total changes in operating assets and liabilities	(1,163,276)	(2,030,076)
Total adjustments	1,163,072	(4,320)
Interest received	35,049	37,951
Dividends received	5,340	14,986
Interest paid	(26,482)	(39,788)
Income taxes paid	(2,757)	(4,660)
Net cash flows from operating activities	1,174,222	4,169

(Continued)

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

Sino-American Silicon Products Inc.
Standalone Statement of Cash Flow (continued from previous page)
For the years ended December 31, 2019 and 2018
Expressed in thousands of New Taiwan dollars

	2019	2018
Cash flows from investing activities:		
Acquisition of financial assets at fair value through other comprehensive income	(197,610)	(205,059)
Proceeds from disposal of financial assets at fair value through other comprehensive income	474,207	-
Acquisition of financial assets at amortized cost	(250,000)	-
Acquisition of financial assets at fair value through profit or loss	-	(98,344)
Proceeds from, disposal of financial assets at fair value through profit or loss	98,344	-
Decrease in intercompany loan	477,076	283,527
Acquisition of investments accounted for using equity method	(1,019,487)	(1,081,006)
Cash dividends from investments accounted for using equity method	5,606,733	2,226,116
Acquisition of property, plant and equipment	(113,682)	(414,734)
Proceeds from disposal of property, plant and equipment	57,258	638,064
Increase(Decrease) in other financial assets	13,348	(13,677)
Net cash inflow used in investment activities	5,146,187	1,334,887
Cash flows from financing activities:		
Increase(Decrease) in short term borrowings	(2,517,125)	352,212
Increase in long term borrowings	-	596,000
Repayments of long term borrowings	(1,610,200)	(345,800)
Increased in guarantee deposits received	762	-
Payment of lease liabilities	(28,407)	-
Cash dividends and distribution from capital surplus	(1,758,863)	(1,759,511)
Restrictions on employee rights invalid of write-off	(1,320)	(4,320)
Donated surplus	228	239
Net cash flows used in financing activities	(5,914,925)	(1,161,180)
Net increase (decrease) in cash and cash equivalents	405,484	177,876
Cash and cash equivalents at beginning of period	851,304	673,428
Cash and cash equivalents at end of period	**$ 1,256,788**	**$ 851,304**

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

Sino-American Silicon Products Inc.
Notes to standalone financial statements
For the years ended December 31, 2019 and 2018
(Expressed in NT$ Thousand unless otherwise stated)

1. Company history

Sino-American Silicon Products Inc. (hereinafter referred to as "the Company") was incorporated in accordance with the Company Act of the Republic of China in January 1981; also, the Chunan Branch was established in June 2005 at No. 8, Industrial East Road 2, Science Based Industrial Park, Hsinchu, Taiwan (R.O.C.). for the R&D, design, production and sale of semi-conductor silicon materials and components, rheostats, optical and communications wafer materials; and also the related technology, management consulting business, and technical services of the photo-voltaic power system generation and installation.

The Company's stocks have been traded publicly at the Taipei Exchange (TPEx) since March 2001.

For the purpose of reorganization and professional division of work and enhancing competitiveness and business performance, a resolution was reached at the shareholders' meeting on June 17, 2011 to have the semiconductor business and sapphire business (including the related assets, liabilities and business operations), by the way of incorporation and partition, transferred to the Company's 100% owned subsidiaries, GlobalWafers Co., Ltd. (hereinafter referred to as "GlobalWafers") and Sino Sapphire CO., LTD (hereinafter referred to as "Sino Sapphire") with the base date of partition scheduled on October 1, 2011. The Company based on the net book value of the semi-conductor business shall pay a price of NT$ 38.5 per share for acquiring 180,000 thousand shares at NT$ 10 par value of GlobalWafers; also, based on the sapphire business net assets shall pay a price of NT$ 40 per share for acquiring 40,000 thousand shares at NT$ 10 par value of Sino Sapphire.

A resolution merging with Sunrise Global Solar Energy Co., Ltd. (hereinafter referred to as "Sunrise Global") was reached by the Board of Directors on August 12, 2013 with the base date of merger scheduled on August 1, 2014. The Company is the surviving corporation and Sunrise Global will be discontinued after the merger.

The shares of GlobalWafers were approved for trading over the counters through the Taiwan Stock Exchange. They were booked on the counters on September 25, 2015 and were closed for trading over emerging counters the same day.

2. Approval date and procedures of the standalone financial statements

These standalone financial statements were authorized for issuance by the board of directors on March 19, 2020.

3. New standards, amendments and interpretations adopted

(1) 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, 2019:

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

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

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 Lease.

The Company applied IFRS 16 using the modified retrospective approach, under which the cumulative effect of initial application is recognized in retained earnings on January 1, 2019. The details of the changes in accounting policies are disclosed below.

(i) Definition of a lease

Previously, the company determined at contract inception whether an arrangement is or contains a lease under IFRIC 4. Under IFRS 16, the company assesses whether a contract is or contains a lease based on the definition of a lease, as explained in Note 4(11).

On transition to IFRS 16, the company elected to apply the practical expedient to grandfather the assessment of which transactions are leases. The company applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed for whether there is a lease. Therefore, the definition of a lease under IFRS 16 was applied only to contracts entered into or changed on or after January 1, 2019.

(ii) As a lessee

As a lessee, the company previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and

Notes to the standalone Financial Statement rewards incidental to ownership of the underlying asset to the company. Under IFRS 16, the company recognizes right-of-use assets and lease liabilities for most leases – i.e. these leases are on-balance sheet.

The company decided to apply recognition exemptions to short-term leases and leases of low-value assets, including other equipment.

A. Leases classified as operating leases under IAS 17

At transition, lease liabilities were measured at the present value of the remaining lease payments, discounted at the company's incremental borrowing rate as at January 1, 2019. Right-of-use assets are measured at either:

a. their carrying amount as if IFRS 16 had been applied since the commencement date, discounted using the lessee's incremental borrowing rate at the date of initial application; or
b. an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments – the company applied this approach to all other lease.

In addition, the company used the following practical expedients when applying IFRS 16 to leases.

a. Applied a single discount rate to a portfolio of leases with similar characteristics.
b. Adjusted the right-of-use assets by the amount of IAS 37 onerous contract provision immediately before the date of initial application, as an alternative to an impairment review.
c. Applied the exemption not to recognize right-of-use assets and liabilities for leases with less than 12 months of lease term.
d. Excluded initial direct costs from measuring the right-of-use asset at the date of initial application.
e. Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

B. Leases previously classified as finance leases

For leases that were classified as finance leases under IAS 17, the carrying amount of the right-of-use asset and the lease liability at January 1, 2019 are determined at the carrying amount of the lease asset and lease liability under IAS 17 immediately before that date.

(iii) As a lesser

The company is not required to make any adjustments on transition to IFRS 16 for leases in which it acts as a lessor, except for a sub-lease. The company accounted for its leases in accordance with IFRS 16 from the date of initial application.

(iv) Impacts on financial statements

On transition to IFRS 16, the company recognized additional right-of-use assets and lease liabilities both of $180,137 thousands. When measuring lease liabilities, the company discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted- average rate applied is 1.11%.

The explanation of differences between operating lease commitments disclosed at the end of the annual reporting period immediately preceding the date of initial application, and lease liabilities recognized in the statement of balance sheets at the date of initial application disclosed as follows:

		January 1, 2019
Operating lease commitment at December 31, 2018 as disclosed in the standalone financial statements	$	196,521
Discounted using the incremental borrowing rate at January 1, 2019	$	180,137
Finance lease liabilities recognized as at December 31, 2018		-
Lease liabilities recognized at January 1, 2019	$	180,137

(2) The impact of IFRS endorsed by 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, 2020 in accordance with Rule No. 1080323028 issued by the FSC on July 29, 2019:

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 9, IAS39 and IFRS7 "Interest Rate Benchmark Reform"	January 1, 2020
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020

The company assesses that the adoption of the abovementioned standards would not have any material impact on its standalone financial statements.

(3) The impact of IFRS issued by International Accounting Standards Board but not yet endorsed by the FSC

As of the date, the following IFRSs that have been issued by the International Accounting Standards Board (IASB), but have yet to be endorsed by the FSC:

New, Revised or Amended Standards and Interpretations	Effective date per IASB
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 "Classification of Liabilities as Current or Non-current"	January 1, 2022

The company is evaluating the impact of its initial adoption of the abovementioned standards or interpretations on its standalone financial position and standalone financial performance. 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 standalone financial statements are summarized below. Except for those specifically indicated, the following accounting policies were applied consistently throughout the periods presented in the standalone financial statements.

(1) Statement of compliance

The standalone financial statements is prepared in accordance with the “Regulations Governing the Preparation of Financial Reports by Securities Issuers.”

(2) Basis of preparation

A. Basis of measurement

Expect for the following significant accounts, the standalone financial statements have been prepared on a historical cost basis:

(a) Financial instruments measured at fair value through profit or loss are measured at fair value;

(b) Financial assets at fair value (available for sale) through other comprehensive gains and losses as measured at fair value;

(c) Ensure the defined benefit liability recognized is the net of pension assets less the present value of defined benefit obligation and limit on a defined benefit in Note 4 (16).

B. Functional and presentation currency

The Company's functional currency in the currency of the main economic environment in which it operates. This standalone financial statements is expressed in the Company's functional currency, New Taiwan Dollar. All financial information presented in NT dollars is expressed in NT$ thousand.

(3) Foreign currencies

A. Foreign currency transactions

Transactions in foreign currencies are translated into the respective functional currencies of Company entities at the exchange rates at the dates of the transactions. At the end of each subsequent reporting period, monetary items denominated in foreign currencies are translated into the functional currencies using the exchange rate at that date.

Non- monetary items denominated in foreign currencies that are measured at fair value are translated into the functional currencies using the exchange rate at the date that the fair value was determined. Non- monetary items denominated in foreign currencies that are measured based on historical cost are translated using the exchange rate at the date of the transaction.

Exchange differences are generally recognized in profit or loss, except for an equity investment in equity securities designated as at fair value through other comprehensive income, which are recognized in other comprehensive income.

B. Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated into New Taiwan Dollars at the exchange rates at the reporting date. The income and expenses of foreign operations are translated into New Taiwan Dollars at the average rate. Exchange differences are recognized in other comprehensive income.

When a foreign operation is disposed of such that control, significant influence, or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal. When the company disposes of only part of its interest in a subsidiary that includes a foreign operation while retaining control, the relevant proportion of the cumulative amount is reattributed to non- controlling interests. When the Company disposes of only part of its investment in an associate or joint venture that includes a foreign operation while retaining significant influence or joint control, the relevant proportion of the cumulative amount 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, exchange differences arising from such a monetary item that are considered to form part of the net investment in the foreign operation are recognized in other comprehensive income.

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

An asset is classified as current under one of the following criteria, and all other assets are classified as non-current.

A. Expected to be realized during its normal business cycle, or intended to be sold or consumed;
B. It is held primarily for the purpose of trading;
C. It is expected to be realized within twelve months after the reporting period; or
D. Cash or cash equivalents, except for those who are subject to other restrictions on the exchange of assets or liquidation of debts within less than twelve months after the reporting period.

A liability is classified as current under one of the following criteria, and all other liabilities are classified as non-current:

A. It is expected to be settled in the normal operating cycle;
B. It is held primarily for the purpose of trading;
C. It is due to be settled within twelve months after the reporting period; or
D. Liabilities that do not have the right to unconditionally defer the settlement period for at least 12 months. No impact will be on classification of liabilities with terms determined by the counterparties that lead to settlement of the liabilities by issuing of equity instruments.

(5) Cash and cash equivalents

Cash comprises cash and cash in bank. Cash equivalents are short term and highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. Time deposits which meet the above definition and held for the purpose of meeting short term cash commitments rather than for investment or other purposes are classified as cash equivalents.

(6) Financial instruments

Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Company becomes a party to the contractual provisions of the instrument. A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

A. Financial assets

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

On initial recognition, a financial asset is classified as measured at amortized cost, fair value through other comprehensive income – equity investment, or FVTPL. Financial assets are not reclassified subsequent to their initial recognition unless the company changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

(a) 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.

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. The purchase or sales of financial assets in ordinary course of business is handled in accordance with the accounting treatment of the trading date.

(b) Fair value through other comprehensive income (FVTOCI)

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

Equity investments at FVTOCI are subsequently measured at fair value. Dividends 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 are recognized in other comprehensive income and are never reclassified to profit or loss.

Dividend income is recognized in profit or loss on the date on which the company right to receive payment is established.

(c) Fair value through profit or loss (FVTPL)

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

When the initial recognition is measured at fair value, the transaction costs are recognized as gain or loss when incurred; subsequently, measured at fair value, the gain or loss (including related Dividend income and Interest income) generated by remeasurement is recognized as gain or loss. The purchase or sales of financial assets in ordinary course of business is handled in accordance with the accounting treatment of the trading date.

(d) Assess whether the contractual cash flow is entirely for the payment of the principal and interest on the outstanding principal amount

For the purpose of assessment, the principal is the fair value of the financial assets at the time of initial recognition. The interest consists of the following considerations: the time value of money, the credit risk associated with the amount of the outstanding principal in a specified period, and other basic loan risks and costs, and margin of profit.

To assess whether the contractual cash flow is entirely for the payment of the principal and interest on the outstanding principal amount, the Company considers the terms of the financial instrument contract, including assessing whether the financial asset contains a contractual term that changes the time point or amount of the contractual cash flow, resulting not meeting this condition. At the time of evaluation, the Company consider:

- Any contingency that would change the point or amount of the contractual cash flow;
- The terms that adjust the contractual coupon rate, including the characteristics of the variable interest rate;
- Early repayment and extension features; and
- The Company's claim is limited to terms derived from the cash flow of a particular asset (e.g. non-recourse characteristics).

(e) Impairment of financial assets

The Company recognizes the allowance for the expected credit losses of financial assets measured at amortized cost (including cash and cash equivalents, financial assets measured at amortized cost, notes receivable and accounts receivable, refundable deposits and other financial assets, etc.) and contractual 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:

- Debt securities that are determined to have low credit risk at the reporting date；and
- The credit risk of other debt securities and bank deposits (i.e., The risk of default on the expected duration of the financial instruments) has not increased significantly since the initial recognition.

The allowance for receivables and contractual assets is measured at the amount of expected credit losses during the lifetime.

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument.

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 historical experience and informed credit assessment as well as forward-looking information.

The company considers a debt security to have low credit risk when its credit risk rating is equivalent to the globally understood definition of ‘investment grade which is considered to be BBB- or higher per Standard & Poor’s, Baa3 or higher per Moody’s or twA or higher per Taiwan Ratings.

The company assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The company considers a financial asset to be in default when the financial asset is more than 180days past due or the debtor is unlikely to pay its credit obligations to the company in full.

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.

ECLs are a 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.

At each reporting date, the company assesses whether financial assets carried at amortized cost and debt securities at FVOCI are credit-impaired. A financial asset is ‘credit-impaired’ when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred. Evidence that a financial assets is credit-impaired includes the following observable data:

- significant financial difficulty of the borrower or issuer；
- a breach of contract such as a default or being more than 90 days past due；
- the lender of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession that the lender would not otherwise consider；
- it is probable that the borrower will enter bankruptcy or other financial reorganization；or
- the disappearance of an active market for a security because of financial difficulties.

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 when the company has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof. For corporate customers, the company individually makes an assessment with respect to the timing and amount of write-off based on whether there is a reasonable expectation of recovery. The company expects no significant recovery from the amount written off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the company procedures for recovery of amounts due.

(f) 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.

B. Financial liabilities and equity instruments

(a) Classification of debt or equity

Debt or equity instruments issued by the Company are classified as financial liabilities or equity in accordance with the substance of the contractual agreement.

(b) Equity instrument

An equity instrument is any contract that evidences residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued are recognized as the amount of consideration received, less the direct cost of issuing.

(c) Treasury shares

When shares recognized as equity are repurchased, the amount of the consideration paid, which includes directly attributable costs, is recognized as a deduction from equity. Repurchased shares are classified as treasury shares. When treasury shares are sold or reissued subsequently, the amount received is recognized as an increase in equity, and the resulting surplus or deficit on the transaction is recognized in capital surplus or retained earnings (if the capital surplus is not sufficient to be written down).

(d) Financial liabilities

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held- for- trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognized in profit or loss.

Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

(e) Derecognition of financial liabilities

The company derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expire. The company also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

On derecognition of a financial liability, the difference between the carrying amount of a financial liability extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

(f) Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount presented in the statement of balance sheet when, and only when, the company currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

C. Derivative financial instruments and hedge accounting

The company holds derivative financial instruments to hedge its foreign currency and interest rate exposures. Derivatives are initially measured at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are generally recognized in profit or loss.

(7) Inventories

Inventories are measured at the lower of cost or net realizable value. The cost of inventories is based on the weighted average cost method and includes expenditure incurred in acquiring the inventories, production or conversion cost, and other costs incurred in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on operating capacity.

Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses necessary to make the sale.

(8) Investment in associates

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

Investments in associates are accounted for using the equity method and are recognized initially at cost. The cost of the investment includes transaction costs. The carrying amount of the investment in associates includes goodwill arising from the acquisition, less any accumulated impairment losses.

The standalone financial statements include the Company’s share of the profit or loss and other comprehensive income of equity accounted investees, after adjustments to align their accounting policies with those of the Company, from the date that significant influence commences until the date that significant influence ceases. The Company recognizes any changes, proportionately with the shareholding ratio under additional paid in capital, when an associate’s equity changes due to reasons other than profit and loss or comprehensive income, which did not result in changes in actual controlling power.

Gains and losses resulting from transactions between the company and an associate are recognized only to the extent of unrelated Company’s interests in the associate.

When the Company’s share of losses or exceeds its interests in an associate, the carrying amount of the investment, including any long term interests that form part thereof, is reduced to zero, and the recognition of further losses is discontinued except to the extent the Company has an obligation or has made payments on behalf of the investee.

When the Company subscribes to additional shares in an associate at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment will differ from the amount of the Company’s proportionate interest in the net assets of the associate. The Company records such a difference as an adjustment to investments, with the corresponding amount charged or credited to capital surplus. The aforesaid adjustment should first be adjusted under additional paid in capital. If the additional paid in capital resulting from changes in ownership interest is not sufficient, the remaining difference is debited to retained earnings. If the Company’s ownership interest is reduced due to the additional subscription to the shares of the 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.

(9) Investment in subsidiaries

The Company has the wholly-owned investee company valued under equity method when preparing the standalone financial statements. Under the equity method, the amortization amount attributable to the shareholders of the parent company from the gains or losses and other comprehensive Revenue of the standalone financial statements and the standalone financial statements is the same. Moreover, the equity attributable to the shareholders of the parent company from the shareholder’s equity of the standalone financial statements and the standalone financial statements is the same.

If the change in the Company’s ownership of the subsidiary does not lead to loss of control over the subsidiary, it is treated as an equity transaction conducted within the shareholders.

(10) Property, plant and equipment

A. Recognition and measurement

Items of property, plant and equipment are measured at cost, which includes capitalized borrowing costs, less accumulated depreciation and any accumulated impairment losses.

If significant parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Any gain or loss on disposal of an item of property, plant and equipment is recognized in profit or loss.

B. Subsequent cost

Subsequent expenditure is capitalized only if it is probable that the future economic benefits associated with the expenditure will flow to the company.

C. Depreciation

Depreciation is calculated on the cost of an asset less its residual value and is recognized in profit or loss on a straight line basis over the estimated useful lives of each component of an item of property, plant and equipment.

Land is not depreciated.

The estimated useful lives of property, plant and equipment for current and comparative periods are as follows:

(a) Buildings: 2 to 50 years
(b) Machinery and equipment: 2 to 8 years
(c) Other equipment and leased assets: 2 to 25 years.

Buildings constitute mainly buildings, mechanical and electrical power equipment, and related engineering, wastewater treatment and sewage system, etc. Each such part is depreciated based on its useful life of 25 to 50 years, 25 years, and 4 to 15 years, respectively.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(11) Lessee

Applicable from January 1, 2019

A. Identifying a lease

At inception of a contract, the company assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether:

(a) the contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified; and
(b) the customer has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
(c) the customer has the right to direct the use of the asset throughout the period of use only if either:
  - the customer has the right to direct how and for what purpose the asset is used throughout the period of use; or
  - the relevant decisions about how and for what purpose the asset is used are predetermined and:
    – the customer has the right to operate the asset throughout the period of use,

without the supplier having the right to change those operating instructions; or

– the customer designed the asset in a way that predetermines how and for what purpose it will be used throughout the period of use.

At inception or on reassessment of a contract that contains a lease component, the company allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices. However, for the leases of land and buildings in which it is a lessee, the company has elected not to separate non- lease components and account for the lease and non-lease components as a single lease component.

B. As a leasee

The company recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be reliably determined, the company's incremental borrowing rate. Generally, the company uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement of the lease liability comprise the following:

(a) fixed payments, including in- substance fixed payments;
(b) variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
(c) amounts expected to be payable under a residual value guarantee; and
(d) payments for purchase or termination options that are reasonably certain to be exercised.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when:

(a) there is a change in future lease payments arising from the change in an index or rate; or
(b) there is a change in the company's estimate of the amount expected to be payable under a residual value guarantee; or
(c) there is a change in the lease term resulting from a change of its assessment on whether it will exercise an option to purchase the underlying asset, or
(d) there is a change of its assessment on whether it will exercise a extension or termination option; or
(e) there are any lease modifications.

When the lease liability is remeasured, other than lease , modifications acorresponding adjustment is made to the carrying amount of the right-of-use asset, or in profit and loss if the carrying amount of the right-of-use asset has been reduced to zero.

When the lease liability is remeasured to reflect the partial or full termination of the lease for lease modifications that decrease the scope of the lease, the company accounts for the remeasurement of the lease liability by decreasing the carrying amount of the right-of-use asset to reflect the partial or full termination of the lease, and recognize in profit or loss any gain or loss relating to the partial or full termination of the lease.

The company has elected not to recognize right-of-use assets and lease liabilities for short-term leases with 12 months or less and leases of low-value assets, including other equipment. The company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

C. As a lessor

When the company acts as a lessor, it determines at lease commencement whether each lease is a finance lease or an operating lease. To classify each lease, the company makes an overall assessment of whether the lease transfers to the lessee substantially all of the risks and rewards of ownership incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then the lease is an operating lease. As part of this assessment, the company considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

If an arrangement contains lease and non-lease components, the Company applies IFRS15 to allocate the consideration in the contract.

Applicable before January 1, 2019.

Leases in which the company assumes substantially all of the risks and rewards of ownership are classified as finance leases. On initial recognition, the lease asset is measured at an amount equal to the lower of its fair value or the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to the asset.

Minimum lease payments made under finance leases are apportioned between the finance cost and the reduction of the outstanding liability. The finance cost is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Other leases are operating leases and are not recognized in the company's statements of balance sheets.

Payments made under an operating lease (excluding insurance and maintenance expenses) are recognized in profit or loss on a straight-line basis over the term of the lease.

(12) Intangible assets

A. Recognition and measurement

Expenditure on research activities is recognized in profit or loss as incurred.

Development expenditure is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the company intends to, and has sufficient resources to, complete development and to use or sell the asset. Otherwise, it is recognized in profit or loss as incurred. Subsequent to initial recognition, development expenditure is measured at cost, less accumulated amortization and any accumulated impairment losses.

B. Other intangible assets

Other intangible assets that are acquired by the company and have finite useful lives are measured at cost less accumulated amortization and any accumulated impairment losses.

C. Subsequent expenditure

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in profit or loss as incurred.

D. Amortization

Amortization is calculated over the cost of the asset, less its residual value, and is recognized in profit or loss on a straight-line basis over the estimated useful lives of intangible assets, from the date that they are available for use.

Amortization methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(13) Impairment of non-financial assets

At each reporting date, the Company reviews the carrying amounts of its non-financial assets (other than inventories and deferred tax assets) to determine whether there is any indication of impairment. If any such indication exists, then the asset’s recoverable amount is estimated. Goodwill is tested annually for impairment.

For impairment testing, assets are grouped together into the smallest company of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or cash- generating units ("CGUs"). Goodwill arising from a business combination is allocated to CGUs or group of CGUs that are expected to benefit from the synergies of the combination.

The recoverable amount of an asset or a cash- generating unit ("CGU") is the greater of its value in use and its fair value less costs to sell. Value in use is based on the estimated future cash flows, discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or a CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss. And then to reduce the carrying amounts of the other assets in the CGU on a pro rata basis.

For other assets, an impairment loss is reversed only to the extent that the asset’s carrying amount does not exceed the carrying amount that would have been determined, net of or depreciation amortization, if no impairment loss had been recognized.

(14) Provisions

A provision is recognized if, as a result of a past event, the company has a present obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as interest expense

Onerous contracts : A provision for onerous contracts is recognized when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract or the expected net cost of continuing with the contract. Before a provision is established, the Group recognizes any impairment loss on the assets associated with that contract.

(15) Recognition of revenue

A. Revenue from contracts with customers

Revenue is measured based on the consideration to which the company expects to be entitled in exchange for transferring goods or services to a customer. The company recognizes revenue when it satisfies a performance obligation by transferring control of a good or a service to a customer. The accounting policies for the company’s main types of revenue are explained below

(i) Sale of goods

The company researches, develops, designs, manufactures and markets semiconductor silicon wafers and their components, varistors, optoelectronics and communication wafer materials. The Company recognizes revenue when it transfers control of the product. Control transfer of the product means that the product has been delivered to the customer, and the customer can completely determine the sales channel and price of the product, and has no impact on the customer's unfulfilled obligation to accept the product. The delivery occurs when the product is shipped to a specific location, its obsolescence and loss risk has been transferred to the customer, and the customer has accepted the product under the sales contract, the acceptance terms have lapsed, or the company has objective evidence that all acceptance conditions have been met.

(ii) Product processing services

The Company provides processing of enterprise products and recognizes relevant Revenue during the financial reporting of the provision of labor services. Fixed price contracts are based on the proportion of services actually provided as a percentage of total services as of the reporting date. If the circumstances change, the estimates of Revenue, cost and degree of completion will be revised and the changes will be reflected in gain or loss when the management is informed of the change in circumstances and the amendment is made.

Under the fixed price contract, the customer pays a fixed amount in accordance with the agreed time schedule. When the services provided exceed the payment, the contract assets are recognized; if the payment exceeds the services provided, the contract liabilities are recognized.

If the contract is valued based on the number of hours of service provision, the Revenue is recognized by the amount for which the Company has the right to open an invoice. The Company asks customers for payment monthly, and can receive the consideration after opening the invoice.

The Company recognizes the accounts receivable when the goods are delivered, because the Company has the right to charge the consideration unconditionally at that time.

(iii) Power electric revenue

The company recognized the Power electric revenue is base on the actual electric units and electric rate.

B. Financing components

The company does not expect to have any contracts where the period between the transfer of the promised goods or services 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.

(16) Employee Benefits

A. Defined contribution plans

Obligations for contributions to defined contribution pension plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

B. Defined benefit plans

The company’s net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for the company, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income, and accumulated in retained earnings within equity. The company determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability (asset). Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

C. Short-term employee benefits

Short-term employee benefit are expensed as the related service is provided. A liability is recognized for the amount expected to be paid if the company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

(17) Share based payment

The grant date fair value of share based payment awards granted to employees is recognized as employee expenses, with a corresponding increase in equity, over the period that the employees become unconditionally entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards whose related services are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related services at the vesting date.

The non-vested conditions relating to the share-based payment incentives are reflected in the measurement of the fair value of the share-based payment and the difference between the expected and actual results is not subject to verification adjustment.

Grant date of a share-based payment award is the date which the board of directors authorized the price and number of a new award.

(18) Income tax

Income taxes comprise current taxes and deferred taxes. Except for items related to business combinations, or items recognized directly in equity or other comprehensive income, all current and deferred taxes are recognized in profit or loss.

The company has determined that interest and penalties related to income taxes, including uncertain tax treatment, do not meet the definition of income taxes, and therefore accounted for them under IAS37.

Current taxes comprise the expected tax payables or receivables on the taxable profits (losses) for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current tax payables or receivables are the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date.

Deferred taxes arise due to temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their respective tax bases. Deferred taxes are not recognized except for the following:

A. temporary differences on the initial recognition of assets and liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profits (losses) at the time of the transaction;
B. temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that the Group is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future; and
C. taxable temporary differences arising on the initial recognition of goodwill.

Deferred taxes are measured at tax rates that are expected to be applied to temporary differences when they reserve, using tax rates enacted or substantively enacted at the reporting date, and reflect uncertainty related to income taxes, if any.

Deferred tax assets and liabilities are offset if the following criteria are met:

A. the company has a legally enforceable right to set off current tax assets against current tax liabilities; and
B. the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either:
   (a) the same taxable entity; or
   (b) different taxable entities which intend to settle current tax assets and liabilities on a net basis, or to realize the assets and liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Deferred tax assets are recognized for the carry forward of unused tax losses, unused taxcredits, 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 are reduced to the extent that it is no longer probable that the related tax benefits will be realized; such reductions are reversed when the probability of future taxable profits improves.

(19) Earnings per share

The Company illustrated the basic and diluted earnings per share attributable to the common stock shareholders. Basic earnings per share is calculated by having the gain or loss attributable to the Company’s common stock shareholders divided by the weighted average number of the outstanding common stock shares during the period. Diluted earnings per share is calculated by having the gain or loss attributable to the Company’s common stock shareholders and the weighted average number of common stock shares outstanding adjusted for the effects of all potential diluted common stock shares, respectively. The Company's potential diluted ordinary share includes non-vested shares of restricted employee right and employee remuneration that has not been resolved by the board of directors and has been issued in the form of shares.

(20) Operating segment

The Company has the segment information disclosed in the standalone financial statements; therefore, it will not be disclosed in the standalone financial statements.

5. Significant accounting assumptions and judgments, and major sources of estimation uncertainty

The management, when preparing the standalone financial statements in accordance with the “Regulations Governing the Preparation of Financial Reports by Securities Issuers”, must make judgments, estimates and assumptions which will affect the adopted accounting policies and the assets, liabilities, revenues and expense amounts. The actual results could differ from those estimates.

The management continues to review the estimates and underlying assumptions, and changes in accounting estimates are recognized in the period in the period of change and affected future period

The accounting policy involves significant judgement and the information that has a significant impact on the amount recognized in the standalone financial statements is as follows:
Impairment assessment of property, plant and equipment(included the right-of –use)

The Company needs to rely on subjective judgment and base them on assets usage patterns and industrial characteristics throughout the asset impairment evaluation process to determine the independent cash flow of a specific Company of assets, service life of assets and potential profit and loss; also, the changes in estimates arising from any changes in the economic situation or the Company’s strategies that are likely to cause significant impairments or have the recognized impairment loss reversed. Please refer to Note 6 (9) for the key assumptions used in the recoverable amount.

The Company’s accounting policies and disclosure has adopted the fair value to measure its financial, non-financial assets and liabilities. The Company’s financial and accounting departments are responsible for the independent verification of fair value with independent information source on the valuation result to match the market status, as well as to ensure that the sources are independent, reliable, and consistent with other resources and represent executable prices. The Company also regularly calibrates the valuation model and conducts retroactive test updating input values desired by the valuation model and making necessary adjustments to fair value to ensure the results of the valuation are reasonable.

While measuring its assets and liabilities, the Company uses the observable market input values as much as possible. The definition of each fair value category is pursuant to the input values used by valuation techniques summarized as follows:

(1) Level I: Quoted prices (unadjusted) in active markets for identified assets or liabilities.

(2) Level II: Inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

(3) Level III: Inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).

For any transfer within the fair value hierarchy, the Company recognizes the transfer on the reporting date. For the assumption used in fair value measurement, please refer to note 6(27) of the financial instruments.

6. Explanation of significant accounts

(1) Cash and cash equivalents

	2019.12.31	2018.12.31
Cash on hand	$ 146	146
Demand deposits	1,256,642	759,013
Time deposits	-	92,145
Cash and cash equivalents in the standalone statement of cash flows	**$ 1,256,788**	**851,304**

Please refer to Note 6 (27) for the interest rate risk and sensitivity analysis of the Company's financial assets and liabilities.

(2) Financial assets and liabilities at fair value through gain or loss

	2019.12.31	2018.12.31
Mandatorily measured at fair value through profit or loss:		
Stocks listed on domestic markets	$ -	87,053
Financial liabilities designated as at fair value through profit or loss:		
Swap exchange contract	**$ 68**	-

The company uses derivative instruments to hedge certain currency risk arising from the company's operating activities. The company held the following derivative instruments not used for hedging and accounted them as Financial liabilities designated as at fair value through profit or loss as of December 31, 2019 :

	2019.12.31			
	Amount (in thousands)		**Currency**	**Maturity dates**
Swap exchange contract:				
Currency exchange	USD	3,000	USD to NTD	2020.03.17

Please refer to note 6(24) of financial assets at fair value through other comprehensive income.

For market risk, please refer to note 6(28).

The financial assets mentioned above were not pledged as collateral.

(3) Financial assets at fair value through other comprehensive income

	2019.12.31	2018.12.31
Equity instruments measured at fair value through other comprehensive gain or loss:		
Domestic booked (OTC) company stock - Actron Technology Corporation	$ -	$ 319,427

Domestic booked (OTC) company stock – United Renewable Energy Co., Ltd.	-	270,073
Domestic booked (OTC) company stock – Phoenix Silicon International Corporation	-	76,284
Domestic non-booked (OTC) company stock – Powertech Energy Corp.(rename as Powtec ElectroChemical Co.)	-	130,764
Domestic non-booked (OTC) company stock - GIGA Electronic Technology Corporation	6,095	4,458
Total	**$ 6,095**	**$ 801,006**

The Company's investments in these equity instruments are long-term strategic investments and are not held for trading purposes and have been designated to be measured at fair value through other comprehensive gain or loss.

Solartech Energy Corp. (hereinafter referred to as Solartech Energy) and Gintech Energy Corporation (hereinafter referred to as Gintech Energy Corporation) and Neo Solar Power Corporation (hereinafter referred to as Neo Solar Power) jointly signed the merger contract on January 29, 2018. The Neo Solar Power was the existing company (the name of the company after the merger was changed to United Renewable Energy Co., Ltd., hereinafter referred to as URE), and Gintech Energy and Solartech Energy were cancelled. The base date for the merger is October 1, 2018. Solartech Energy's shareholders, in accordance with the issued ordinary shares (including private placement of shares and restrictions on employee rights shares, if issued) they hold, renewed 1.17 shares of Neo Solar Power's shares per share.

On October 1, 2018, the Company was deemed to have sold Solartech Energy stocks at fair value through other comprehensive gain or loss. The fair value at the time of disposition was NT$ 348,370 thousands, and the accumulated disposition losses were NT$ 1,558,196 thousands. The aforementioned cumulative disposition losses have been transferred from other equity to retained earnings.

On October 1, 2019, the Company was deemed to have sold the Phoenix Silicon International Corporation stocks and Phoenix Silicon International Corporation stocks at fair value through other comprehensive gain or loss. The fair value at the time of disposition were NT$ 313,662 thousands and NT$ 160,545 thousands respectively, and the accumulated disposition losses(gains)were NT$ 34,708 thousands and NT$ 94,372 thousands respectively. The aforementioned cumulative disposition losses have been transferred from other equity to retained earnings.

As of December 31, 2019 and 2018, the dividend income recognized by the Company were NT$$ 3,130 thousands and NT$ 12,776 thousands respectively.

The Company's investments in Actron Technology Corporation has transfer as investment in using the equity method, please refer to Note6(7).

Powtec ElectroChemical Corp. (hereinafter referred to as Powtec ElectroChemical) have applied the Detroit files for bankruptcy on February 26, 2020,the company's assess the financial difficulties and recognized all the amounts into unrealized loss on financial assets at fair value through other comprehensive income.

For market risk information, please refer to Note 6 (28).

The above financial assets are not pledged as collateral.

(4) Financial assets measured at amortized cost

	2019.12.31	2018.12.31
Current:		
Corporate bond - Crystalwise Technology	$ 240,068	-
Non Current:		
Corporate bond - Crystalwise Technology	$ 267,612	281,366

The Company's assessment is the holding of these assets to the maturity date to collect contractual cash flows, and the cash flows of these financial assets are solely for the payment of the principal and interest on the outstanding principal amount. Therefore, since January 1, 2018 it was presented as financial assets measured at amortized cost.

In January 2019, the Company purchased the private equity corporate bonds of Crystalwise Technology Corporation for a one-year period at a nominal amount of NT$ 250,000 thousands. The coupon rate and effective interest rate were 2.00%. For investment classified as held to maturity date on January, 2020.

As of December 31 2019, the company's recognized the impairment was NT$$ 25,973 thousands

Please refer to Note 6 (28) for credit risk information.

The above financial assets are not pledged as collateral.

(5) Net accounts receivable

	2019.12.31	2018.12.31
Accounts receivable	$ 232,830	506,161
Less: Allowance for doubtful accounts	(33,788)	(34,663)
	$ 199,042	471,498

As of January1 2018, the company's accounts receivable balance was NT$$ 728,986 thousands

The company's has assessed a portion of its accounts receivables that was held within a business model whose objective is achieved by selling financial assets; therefore, such accounts receivables were measured at fair value through other comprehensive income.

The loss allowance provision of account receivable(included related party) was determined as follows:

	2019.12.31		
	Gross carrying amount	Weighted average loss rate	Loss allowance provision
Current	$ 401,323	0%	-
1 to 30 days past due	28,324	0%-0.2%	-
More than 91 days past due	33,788	100%	33,788
Total	$ 463,435		33,788

	2018.12.31		
	Gross carrying amount	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 737,292	0%	-
1 to 30 days past due	3,019	0%-0.2%	-
More than 91 days past due	48,770	100%	48,770
Total	$ 789,081		48,770

The changes in allowances for notes receivable and accounts receivable of the Company are as follows:

	2019	2018
Balance on January 1	$ 48,770	48,679
Impairment losses recognized	(875)	48,770
Amounts written off	(14,107)	(48,679)
Balance on December 31	$ 33,788	48,770

The Company's accounts receivables have not been provided as collateral guarantees.

(6) Inventories

	2019.12.31	2018.12.31
Finished goods and products	$ 208,769	272,690
Work in progress	37,794	49,846
Raw materials	89,078	267,634
	$ 335,641	590,170

Component of operating cost were as follows:

	2019	2018
Cost of sales	$ 6,079,226	9,613,968
Impairment loss of property, plant and equipment (Note 6 (9))	-	1,497,261
Provision of (reversal of) inventory valuation	(239,254)	66,125
Unallocated fixed manufacturing expense	170,471	507,441
Liabilities provision (Note 6 (17))	3,884,607	533,292
	$ 9,895,050	12,218,087

The company’s did not provide any inventories as collateral .

(7) Investments accounted for using equity method

The company’s financial information for investments accounted for using the equity method at the reporting date is as follows:

		2019.12.31	2018.12.31
Subsidiary	$	25,155,996	24,019,984
Associates		2,676,608	1,863,454
Unrealized gain of associates		(38,358)	(12,690)
	$	27,794,246	25,883,438

1. Subsidiaries

   Please refer to the 2019 standalone financial statements.

2. Affiliated companies

Names of affiliated companies	Relationship with the Company	Main location/ country registered in	Percentage of equity ownership interests and voting rights 2019.12.31	2018.12.31
Actron Technology Corporation.	Mainly engages in the manufacturing of electronic component .	Taiwan	15.50%	-
Taiwan Special Chemicals Corporation (hereinafter referred to as Taiwan Special Chemicals)	The main business is manufacturing of semiconductor special gas and chemical materials.	Taiwan	30.93%	30.93%
Cathy Sunrise Corporation (hereinafter referred to as Cathy Sunrise)	The main business is manufacturing of power generation, transmission and distribution machinery.	Taiwan	30.00%	30.00%
Crystalwise Technology Inc.	Mainly engages in the manufacturing and trading of optoelectronic wafers and substrate material.	Taiwan	41.93%	40.11%
Accu Solar Corporation (Hereinafter referred to as TSCS)	The main business is providing solar modules.	Taiwan	24.70%	24.70%

1. The fair value of affiliates listed on the Stock Exchange which is material to the Company's is as follows:

		2019.12.31	2018.12.31
Crystalwise Technology Inc.	$	1,030,041	791,079

The following standalone financial information of significant affiliates has been adjusted according to individually prepared IFRS financial statements of these affiliates.

Notes to the standalone financial statements of
Sino-American Silicon Products Inc. (Continued)

Financial Summary of Crystalwise Technology:

	2019.12.31	2018.12.31
Current Assets	$ 1,069,050	1,055,915
Non-Current Assets	1,513,959	2,134,030
Current Liabilities	(1,027,371)	(1,225,269)
Non-Current Liabilities	(843,098)	(872,017)
Net assets attributed to owner of the investee parent company	$ 712,540	1,092,659

	2019	2018
Operating Revenues	$ 617,436	1,317,193
Loss) from continuing operations	$ (751,496)	(449,780)
Other comprehensive loss	(49,885)	(59,599)
Comprehensive loss attributed to owner of the investee company	$ (801,381)	(509,379)
Share of net assets of affiliates as of January 1	$ 415,391	849,211
The change of new investment stock of net worth	204,960	-
Recognized change in equity net worth of affiliated companies under equity method this period	(12,106)	124
Total operating profit and loss and the impairment loss accrued attributable to the standalone company	(307,020)	(410,495)
Other comprehensive profit and loss and other attributable to the standalone company	(20,671)	(23,449)
Share of net assets of affiliates as of December 31	$ 280,554	415,391

2. The company's financial information for investments accounted for using the equity method that are individually insignificant was as follows:

	2019.12.31	2018.12.31
Carrying amount of individually insignificant associates' equity	$ 2,396,054	1,448,063

	2019	2018
Attributable to the company:		
Profit (loss) from continuing operations	$ (57,741)	(67,745)
Other comprehensive income (loss)	15,673	(4)
Comprehensive loss	$ (42,068)	(67,749)

3. The difference in the investment cost of the newly added investment and the fair value of the identifiable net assets of the investee is mainly attributable to the intangible assets.
4. Based on the group's operating performance considerations, the Company increased its capital to Crystalwise Technology Inc. by NT$204,960 thousand in May 2019. The difference between the investment cost and the net equity value of NT$12,101 thousand was recognized in capital surplus, and the shares held increased from 40.13% to 41.93%.
5. The Company obtained significant influence since it was elected as corporate director of Actron Technology Corporation in May 2019. Therefore, the original account under fair value through other comprehensive income financial assets was removed and reclassified as investment accounted for using the equity method at fair value. The amount of profit related to the investment that was previously recognized in other comprehensive income that will not be reclassified to profit or loss was reclassified to retained earnings of NT$237,118 thousand. In addition, between October and December 2019, the Company increased capital to Actron Technology Corporation and continued to purchase its shares, and the difference between the investment cost and the net equity value was recognized as NT$376,638 thousand in capital surplus. and the shares held increased from 6.62% to 15.5%.
6. Guarantee

As of December 31, the company did not provide any investments accounted for using the equity method as collateral .

(8) Changes in ownership equity of subsidiaries

1. Aleo sunrise Gmbh (hereinafter referred to as Aleo Sunrise) has been adjusted by the Company to 100% investment since March 2019 and its liquidation was completed in June 2019.
2. Additional shares obtained of the subsidiary

In October 2018, the Company increased its shareholding in GlobalWafers by cash of NT$ 91,006 thousands, increasing its equity from 50.84% to 50.94%.

The impact of the Company's changes in the ownership interest of the above subsidiaries on the equity attributable to the owners of the parent company is as follows:

	2018
Carrying amount of non-controlling interests purchased	$ 41,341
Consideration paid to non-controlling interests and the adjustment of other equity	(92,445)
The capital reserve - the difference between the equity price of the company actually acquired or disposed of and the carrying amount	**$ (51,104)**

3. The subsidiary bought back the treasury shares without causing loss of control

GlobalWafers implemented the treasury stock system in 2018 and bought back the company's shares at Taiwan Stock Exchange, which increased the company's interest in GlobalWafers by 0.23%.

The impact of the changes of the Company's equity of GlobalWafers on the equity attributable to the parent company is as follows:

	2018
Reduction in equity after a subsidiary buys back treasury shares	**$ 194,600**
Capital reserve - long-term equity investment recognized by equity method	**$ (194,600)**

(9) Property, property, plant and equipment

1.The cost, depreciation, and impairment of the property, plant and equipment of the company were as follows:

		Land	Building	Machinery equipment	Other equipment	Construction in progress and quarantined equipment	Total
Cost:							
Balance of January 1, 2019	$	405,890	1,868,575	7,581,241	1,570,361	139,858	11,565,925
Additions		-	6,896	48,576	18,446	40,311	114,229
Disposition		-	(34,605)	(3,537,316)	(46,029)	(1,705)	(3,6919,655)
Reclassification		-	4,045	143,860	14,778	(162,121)	562
Balance of December 31, 2019	$	405,890	1,844,911	4,236,361	1,557,556	16,343	8,061,061
Balance of January 1, 2018	$	405,890	3,026,866	8,396,815	1,508,241	366,730	13,705,542
Additions		-	9,909	172,298	64,556	183,523	430,286
Disposition		-	(1,184,500)	(1,178,587)	(222,594)	-	(2,585,681)
Reclassification		-	16,300	190,715	220,158	(410,395)	16,778
Balance of December 31, 2018	$	405,890	1,868,575	7,581,241	1,570,361	139,858	11,565,925
Depreciation and impairment loss:							
Balance of January 1, 2019	$	-	1,061,938	6,242,010	670,723	1,705	7,976,376
Depreciation for the year		-	62,313	267,394	132,367	-	462,074
Disposition		-	(34,605)	(3,522,917)	(44,485)	(1,705)	(3,603,712)
Reclassification		-	-	(1,624)	1,279	-	345
Balance of December 31, 2019	$	-	1,089,646	2,984,863	759,884	-	4,834,393
Balance of January 1, 2018	$	-	1,316,005	5,488,946	566,176	-	7,371,127
Depreciation for the year		-	84,061	774,171	123,681	-	981,913
Impairment loss			328,088	1,128,814	38,654	1,705	1,497,261
Disposition		-	(668,024)	(1,116,129)	(146,534)	-	(1,930,687)
Reclassification		-	1,808	(33,792)	88,746	-	56,762
Balance of December 31, 2018	$	-	1,061,938	6,242,010	670,723	1,705	7,976,376
Carrying amount:							
December 31, 2019	$	405,890	755,265	1,251,498	797,672	16,343	3,226,668
January 1, 2018	$	405,890	1,710,861	2,907,869	942,065	366,730	6,333,415
December 31, 2018	$	405,890	806,637	1,339,231	899,638	138,153	3,589,549

2. Impairment loss

In the fourth quarter of 2018, the Company assessed that the production line of the Solar Energy Division was affected by the global economy, resulting in a decline in production. Therefore, it is necessary to assess the recoverable amount of the production line.

The Company's solar product production line is a cash-generating unit whose recoverable amount is based on its value in use. In accordance with the assessment on December 31, 2018, the carrying amount of the property, plant and equipment is higher than its recoverable amount, so the impairment loss is recognized as NT$ 1,497,261 thousands, which is included in the operating cost of the standalone Revenue statement.

In accordance with the assessment on December 31, 2019, the carrying amount of the property, plant and equipment is less than its recoverable amount, and have no the impairment loss.

The estimated value of use is calculated at a pre-tax discount rate of 7.39% and8.94% in 2019 and 2018, respectively.

3. Disposition of property, property, plant and equipment

   The Company sold its plants and equipment to GlobalWafers in January and May, 2018. Please refer to Note 7 for details.

4. Guarantee

   For details of long-term and short-term borrowings and financing quota guarantees , please refer to Note 8.

(10) Right-of-use assets

	Land	Buildings	Other equipment	Total
Cost:				
Balance at January 1, 2019	$ -	-	-	-
Effects of retrospective application	35,616	143,687	834	180,137
Additions	-	-	3,728	3,728
Disposal	-	-	(389)	(389)
Balance at December 31, 2019	**$ 35,616**	**143,687**	**4,173**	**183,476**
Accumulated depreciation :				
Balance at January 1, 2019	$ -	-	-	-
Effects of retrospective application	-	-	-	-
Depreciation	3,957	23,404	1,897	29,258
Disposal	-	-	(349)	(349)
Balance at December 31, 2019	**$ 3,957**	**23,404**	**1,548**	**28,909**
Carrying amount:				
Balance at December 31, 2019	**$ 31,659**	**120,283**	**2,625**	**154,567**

The company leases Science Park land, buildings and equipment as of December 31, 2018, please refer to note 6(15).

In accordance with the assessment of impairment loss on December 31, 2019, please refer to Note 6(9).

(11) Short-term borrowings

	2019.12.31	2018.12.31
Unsecured bank loans	$ 200,000	2,600,000
Purchase of materials loan	-	117,125
	$ 200,000	2,717,125
Unused loan amount	$ 10,229,867	4,612,625
Loan interest rate collars at end of period	0.73%	0.9%-0.98%

Please refer to Note 8 for the Company’s assets pledged as collateral for bank loans

(12) Long term borrowings

Details, terms and conditions of the Company’s long-term loan are as follows:

	2019.12.31
Unused loan amount	$ 400,000

	2018.12.31			
	Currency	**Interest rate collars**	**Expiry date**	**Amount**
Unsecured bank loans	NTD	1.04%-1.18%	2020.06-2020.11	$ 1,159,000
Secured bank Loan	NTD	1.28%	2022.01-2032.01	451,200
Total				$ 1,610,200
Unused loan amount				$ 301,000

Please refer to Note 8 for the Company’s assets pledged as collateral for bank loans.

(13) Lease liabilities

The carrying amounts of lease liabilities of the Company was as follows:

	2019.12.31
Current	$ 26,511
Non-current	$ 128,906

For the maturity analysis, please refer to note 6(27) “Financial instruments”.

The amounts recognized in profit or loss were as follows:

	2019
Interest on lease liabilities	$ 1,891
Variable lease payments not included in the measurement of lease liabilities	$ 256
Expenses relating to leases of low-value assets, excluding short-term leases of low-value assets	$ 1,760

The amounts recognized in the statement of cash flows for the Company was as follows:

	2019
Total cash outflow for leases	$ 32,314

1. Real estate leases

   The company leases land and buildings for its office space and retail stores. The leases of land typically run for a period of 20 years. Some leases include an option to renew the lease for an additional period of the same duration after the end of the contract term. Land leases' additional rent payments that are based on changes in local price indices and the public facilities construction costs re-invested annually in each park will be adjusted after being assessed.

2. Other leases

   The company leases vehicles and equipment, with lease terms of two to three years. In some cases, the company has options to purchase the assets at the end of the contract term; in other cases, it guarantees the residual value of the leased assets at the end of the contract term.

(14) Provision

The Company's liability reserve is as follows:

	Onerous contracts
Balance of January 1, 2019	$ 960,292
Provisions made during the year	4,193,975
Reverse of provision	(309,368)
Balance of December 31, 2019	$ 4,844,899
Current	$ 221,949
Non current	4,622,950
Total amount	$ 4,844,899
Balance of January 1, 2018	$ 427,000
Provisions made during the year	533,292
Balance of December 31, 2018	$ 960,292
Non current	$ 960,292

The Company's provision for loss-making contract liabilities was due to the signing of a long-term purchase contract with the silicon raw material supplier. The parties agreed that the delivery quantity and price agreed upon in the contract are delivered. The Company is to pre-pay the supplier for the materials purchased with payment by installments that are non-refundable; also, the transaction is irrevocable. The materials supplier guarantees to have the agreed quantities of silicon materials supplied to the Company. In response to fluctuations in the spot market price, the Company has prepared the relevant liabilities reserve and recognized them under operating costs. Please refer to Note 9 for a description of the agreement with the raw material supplier.

(15) Operating lease

Lease of lessee

The rent payment of the irrevocable operating leases is as follows:

	2018.12.31
Within 1 year	$ 37,326
1-5 years	108,533
Over 5 years	50,662
	$ 196,521

The operating expenses in 2017 is stated in the profit and loss of NT$ 40,018 thousands.

The Company leases the factory to the subsidiary. After the lease expires, it can be automatically extended for half a year with the agreement of both parties. The annual rent is about NT$ 9,499 thousands.

The base of the Company's plant located in Chunan Science Park is the rental from the Administration of the Science Park for a period from March 17, 2005 to December 31, 2027. The rent for the contract should be adjusted according to the adjustment of the land price set by the government. The annual rent is about NT$ 4,161 thousands.

The Company leased land and building materials for use in the expansion of production capacity to Mingsheng Corporation f. The lease period was from July 2015 to July 2025 for a total of ten years. Pursuant to the lease term, the rent is reviewed every two years. The rent payment is around NT$ 1,890 thousands per month.

Please refer to Note 7 for the disclosure of the Company's related parties.

(16) Employee Benefits

1. Defined benefit plan

The present value of the defined benefit obligation of the Company and the fair value of the plan assets are adjusted as follows:

	2019.12.31	2018.12.31
Total present value of obligations	$ (23,017)	(27,141)
Fair value of plan assets	26,121	30,374
Net defined benefit (liabilities) assets	$ 3,104	3,233

The Company's defined benefit plans are appropriated to the labor pension reserve account at the Bank of Taiwan. The pension payment to each employee under the Labor Standards Act is calculated in accordance with the service points received for the years of service and the average salary six months prior to retirement.

(1) Plan assets composition

The pension fund accrued in accordance with Labor Standards Act is managed by the Labor Fund Application Bureau of the Ministry of Labor (hereinafter referred to as the Labor Fund Bureau). In accordance with the Labor retirement fund Revenue and expenditure custody and application methods, the use of the fund, the minimum Revenue of its annual final settlement, shall not be lower than the Revenue calculated based on the local bank's two-year time deposit rate.

The balance of the Company's labor retirement reserve account at Bank of

Taiwan on the reporting day was NT$ 26,121 thousands. The Labor Pension Fund asset implementation information includes fund returns rate and fund asset allocation. Please refer to the information published on the website of the Ministry of the Bureau of Labor Funds, Ministry of Labor.

(2) Movements in present value of the defined benefit obligations

The movements in present value of the defined benefit obligations of the Company were as follows:

		2019	2018
Defined benefit obligations at January 1	$	27,141	47,043
Current service costs and interest cost		535	1,086
Re measurements for defined benefit obligations			
- Actuarial gains and losses arising from experience adjustments		(710)	(14,299)
- Actuarial gains and losses resulting from changes in demographic assumptions		25	873
- Actuarial gains and losses resulting from changes in financial assumptions		613	315
Benefits paid		(6,007)	(7,877)
Defined benefit obligations at December 31	$	23,017	27,141

(3) Movements in fair value of defined benefit plan assets

The movements in fair value of the defined benefit plan assets of the company were as follows:

		2019	2018
Fair value of plan assets at January 1	$	30,374	32,571
Interest income		305	394
Re measurements for defined benefit obligations			
- Return on plan asset (excluding interest revenue)		1,179	883
Contributions made		270	4,403
Benefits paid		(6,007)	(7,877)
Fair value of plan assets at December 31	$	26,121	30,374

(4) Change of limit on a defined benefit assets

In 2019 and 2018, the Company did not have any effect on the changes of limit on a defined benefit plan assets

(5) Expenses recognized in profit or loss

The expenses recognized in the gain or loss of the Company in 2019 and 2018 are as follows:

		2019	2018
Current service costs	$	263	557
Net interest of net liabilities for defined benefit obligation		(33)	135
	$	230	692
Operating Costs	$	90	356
Selling expenses		72	129

Administrative expenses		20	109
Research and development expenses		48	98
	$	**230**	**692**

(6) Actuarial assumptions

The significant actuarial assumptions used for the present value of the defined benefit obligation by the Company at the end of the financial reporting day are as follows:

	2019.12.31	**2018.12.31**
Discount rate	0.750%	1.000%
Future salary increase rate	2.000%	2.000%

The Company expects to pay NT$ 232 thousands for the accrual of the defined benefit plan within one year after the reporting of the day in 2019.

The weighted average duration of the defined benefit plan is 10.8 years.

(7) Sensitivity analysis

The impact of the changes in the main actuarial assumptions adopted in 2019 and on December 31, 2018 on the present value of the defined benefit obligation is as follows:

		The impact to the defined benefit obligations	
		Increased by 0.25%	**Decreased by 0.25%**
December 31, 2019			
Discount rate	$	(613)	635
Future salary increase rate		616	(598)
December 31, 2018			
Discount rate	$	(668)	691
Future salary increase rate		671	(652)

The above sensitivity analysis is to analyze the impact of one single assumption with other assumptions remaining unchanged. In practice the changes of many assumptions may be correlated. The approach used for sensitivity analysis is consistent with the calculation of net pension liabilities recorded in the balance sheet.

The approach and assumptions used to compile the sensitivity analysis is the same with that of the previous period.

2. Defined Contribution Plan

The Company's defined contribution plan complies with the Labor Pension Act. An amount equivalent to 6% of the employee's monthly wage is appropriated to the respective labor pension account with the Bureau of Labor Insurance, Ministry of Labor. According to the defined contribution plan, the Company, after appropriating a fixed amount to the Bureau of Labor Insurance, Ministry of Labor, is free from any legal or constructive obligations to make extra payments.

The pension expenses under the pension scheme of the Company in 2019 and 2018 were NT$ 24,241 thousands and NT$ 39,710 thousands respectively, which were allocated to the Bureau of Labor Insurance, Ministry of Labor.

(17) Income tax

1. Income tax expenses

The details of Income tax expenses (interests) of the Company in 2019 and 2018 are as follows:

		2019	2018
Current tax expense (profit)			
Current tax expense	$	1,269	3,935
Adjustment of the Income tax-current of prior period		(2,576)	1,646
		(1,307)	5,581
Deferred tax expense (profit)			
Temporary difference		79,269	93,445
Income tax rate change		-	(23,773)
		79,269	69,672
Income tax expense (profit)	$	77,962	75,253

The Income tax benefits recognized by the Company in 2019 and 2018 in other comprehensive profit and loss are as follows:

		2019	2018
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign financial statements	$	(5,267)	(13,012)

The relationship between the Income tax expenses (interests) and the pre-tax net profit of the Company in 2019 and 2018 is adjusted as follows:

		2019	2018
Income before income tax	$	2,326,348	2,025,756
Income tax using the Company's domestic tax rate		465,270	405,151
Permanent differences adjustment		(1,087,634)	(922,909)
Adjustment in tax rate		-	(23,773)
Early high and low estimate		(2,576)	1,646
Deferred Income tax assets and other		702,902	615,138
	$	77,962	75,253

2. Deferred Income tax assets and liabilities

(1) The items that have not been recognized as deferred Income tax assets by the Company are as follows:

		2019.12.31	2018.12.31
Tax effect of deductible temporary differences	$	1,351,127	727,644
Tax loss		679,200	611,432
	$	2,030,327	1,349,076

According to the Income tax Act, tax losses of the last ten years audited and authorized by the tax authorities can be deducted from the net Revenue of the year before levying the Income tax. Such items are not recognized as deferred tax assets since the Company is not likely to have sufficient taxable Revenue in the future for the use of temporary differences.

As on December 31, 2019, the Company has not recognized the taxable losses of deferred Income tax assets. The deductions of loss and deduction period are as follows:

Annual losses	Loss to be deducted	Deadline for deduction
2012 (verified)	$ 1,403,648	2022
2013 (verified)	9,728	2023
2017 (verified)	1,021,784	2027
2018 (estimated)	960,839	2028
	$ 3,395,999	

(2) Recognized deferred Income tax assets and liabilities

The breakdown of deferred Income tax assets is as follows:

	2018.1.1	Recognized in profit or loss	Recognized in other comprehensive income	2018.12.31	Recognized in profit or loss	Recognized in other comprehensive income	2019.12.31
Allowance for inventory valuation	$ 41,723	20,589	-	62,312	(47,851)	-	14,461
Tax loss	87,325	(87,325)	-	-	-	-	-
Other	48,556	(3,586)	5,267	50,237	771	4,866	55,874
	$ 177,604	(70,322)	5,267	112,549	(47,080)	4,866	70,335

The breakdown of deferred Income tax liabilities is as follows:

	2018.1.1	Recognized in profit or loss	Recognized in other comprehensive income	2018.12.31	Recognized in profit or loss	Recognized in other comprehensive income	2019.12.31
Other	$ -	(650)	-	(650)	(32,189)	-	(32,839)

3. Assessment of tax filings

The Income tax settlement report of the Company's profit-making business has been approved by the tax authorities to 2017.

(18) Capital and other interests

On December 31, 2019 and 2018, the total share capital of the Company were both NT$ 8,000,000 thousand, and the denomination per share was NT$ 10, both with a total of 800,000 thousand shares (all including employee stock option, special stocks with stock option or corporate with stock option, and the amount of shares that can be subscribed is NT$ 200,000 thousands). The legal registration procedure for the authorized capital stock is completed. The paid-up share capital were NT$ 5,862,367 thousands and NT$ 5,863,207 thousands respectively.

The number of shares outstanding of the Company in 2019 and 2018 is as follows (expressed in thousands of shares):

	Common stock	
	2019	2018
Balance on January 1	582,845	574,476

Exercise of restricted employee shares	1,646	2,341
Balance on December 31	**584,491**	**582,845**

1. Issuance of common stock

The Company participated in the global depositary receipts for NT$ 610,000 thousand with cash capital increase and with 61,000 thousand shares issued, which was booked at the Luxembourg Stock Exchange on September 9, 2010 with a total of 61,000 thousand units of GDR issued at an issuance price of US$ 2.9048; also, the GDR amounted to US$ 177,193 thousand and each GDR underlying 1 common stock share of the Company. Such cash capital increase had already been approved by the Financial Supervisory Commission on August 13, 2010 with the FSC. Certificate Far. Tzi No. 0990041383 Letter issued. For such a cash capital increase, the Company had sufficient stock shares issued and proceeds collected on September 9, 2010 for a grand total of US$ 177,193 thousand and a net total of US$ 174,931 thousand after deducting the underwriting fees of US$ 2,262 thousand, which was equivalent to NT$ 5,580,288 thousand after being translated in accordance with the closing exchange rate of the day. In addition, after deducting the related issuance cost of NT$ 11,531 thousand, the premium amount of NT$ 4,958,757 thousand was booked in the “additional paid-in capital” account.

As of December 31, 2019 and 2018, due to the resignation of employees, the recovered and written off restricted employee shares were 317 thousand shares and 251thousand shares respectively. As of December 31, 2019, there were still 15 thousand shares whose legal registration procedures are unfinished.

2. Capital surplus

The Capital surplus balance of the Company is as follows:

	2019.12.31	2018.12.31
Additional paid in capital	$ 11,641,320	11,862,668
Difference between the disposition price and carrying value of the subsidiary’s equity	2,065,254	2,441,893
Capital reserve of long-term equity investment is recognized under the equity method	6,665,682	6,568,293
Treasury stock transactions	33,314	33,314
New restricted employee shares	60,522	144,849
Employee stock options, etc.	606,503	606,275
	$ 21,072,595	**21,757,292**

According to the Company Act, capital reserve is for making up losses first before using the capital reserve realized to distribute cash or new shares to shareholders in proportion to their original shareholding ratio. The capital reserve realized referred above includes the stock premium and bestowed Revenue. According to the Regulations Governing the Offering and Issuance of Securities by Securities Issuers, the total amount of capital reserve for capitalization every year may not exceed 10% of the paid-in capital.

The Company on June 27, 2019 and June 26, 2018, through resolution of the shareholders' meeting, made the capital accumulation of NT$ 401,900 thousands (NT$ 0.6855 per share) and NT$ 1,759,511 thousands (NT$ 3 per share) in 2019 and

2018respectively. Relevant information can be found in the public information observatory and other pipelines.

3. Legal reserve

When a company incurs no loss, it may, pursuant to a resolution by a shareholders' meeting, distribute its legal reserve by issuing new shares or by distributing cash, and only the portion of legal reserve which exceeds 25% of capital may be distributed.

4. Special reserve

When the Company adopted the international financial reporting standards (IFRSs) approved by the FSC for the first time, the Company had chosen to apply IFRS 1 "First-time Adoption of the IFRSs" exemptions, retained earnings was increased by NT$ 161,317 thousand due to the accumulated conversion adjustment (profit) under the shareholders' equity, which exceeding the net increase of NT$ 102,349 thousand in retained earnings on the conversion date for the first-time adoption of IFRSs approved by the FSC. According to the FSC. Certificate Far.Tzi No. 1010012865 Order of the Financial Supervisory Commission dated April 6, 2012, special reserve is appropriated for the net increase in retained earnings due to the conversion to the IFRSs approved by the FSC; also, it could be reversed for earnings distribution proportionately to the originally appropriated special reserve while using, disposing or reclassifying the related assets. On December 31, 2019 and 2018, the special NT$ reserve was 102,349 thousand.

According to the Order referred to above, while distributing the distributable earnings, the Company had additional special reserve appropriated from the current gain or loss and unappropriated earnings of the prior period for the difference between the net amount debited to other shareholder's equity and the balance of the special reserve appropriated in the preceding paragraph. For the amount debited to other shareholders' equity attributable to prior period accumulation, the special reserve was appropriated from the unappropriated earnings of the prior period and it could not be distributed. The amount debited to the shareholders' equity reversed subsequently can be distributed as earnings.

5. Distribution of surplus earnings and dividend policy

In accordance with the revised articles of association of the Company, if there is a earnings in the annual final accounts, after tax paid according to the law and making up for the accumulated losses, 10% will be the legal reserve, but if the legal reserve has reached the paid-in capital, it shall not be accrued and the rest will be accrued according to law and regulations or reversed as the special reserve. If there is a balance, for the balance and the accumulated undistributed earnings, the board of directors proposes an earnings distribution proposal and submits it to the shareholders meeting for resolution of distributing shareholder dividend.

To maintain the sustainable business development and the stable growth of earnings per share of the Company, the shareholders' dividends shall be the earnings after tax of the current fiscal year with the deduction of more than 50% of the special reserve according to the law in principle, and the cash dividend in the distribution shall not be less than 50%.

The Company's shareholder meeting decided to make a loss provision on June 26, 2018, the loss provision situation did not differ from the proposed content of the board of directors.. Relevant information can be obtained from the public information observatory and other pipelines.

Earnings distribution for 2018 was decided by the resolution adopted, at the general meeting of shareholders held on June 27, 2019.
The relevant dividend distributions to shareholders were as follows:

	2018
Dividends distributed to ordinary shareholders	
Cash (dividends per share was $2.3145)	$ 1,356,963

After the resolution of the relevant meeting of the Company, the information can be accessed from the Market Observation Post System website.

The board of directors proposed the 2019 annual earnings distribution on March 17, 2020,and the above earrings distribution will be resolved by shareholders' meeting.

6. Treasury share

The balance of the treasury shares that have been reconciliation at the year end of 2019.

Unit: Thousand shares

	2018			
Reasons for buy back	**Beginning shareholding s**	**Increase of the year**	**Decrease of the year**	**Ending shareholding s**
Transferred to employee	5,555	-	5,555	-

(note) The treasury shares was write –off 5,555 thousand stocks at the third quarter,2019.

7. Other interests (net after tax)

	Exchange differences on translation of foreign financial statements	Unrealized gain or loss on financial assets measured at fair value through other comprehensive gain or loss	Unrealized gains (losses) on available for sale financial assets	Remuneration unearned by employees	Other	Total
January 1, 2019	$ (1,586,241)	(1,406,132)	-	(75,334)	(3,380)	(3,071,087)
Foreign exchange differences	(631,106)	-	-	-	-	(631,106)
Exchange differences on subsidiaries accounted for using equity method	(6,997)	-	-	-	112	(6,885)
Unrealized gains (losses) from financial assets measured at fair value through other comprehensive income	-	(24,230)	-	-	-	(24,230)
Unrealized losses from financial assets measured at fair value through other comprehensive income of associates accounted for using equity method	-	158,135	-	-	-	158,135
Share of conversion differences by affiliates under equity method	-	-	-	56,726	-	56,726
Disposal of investments in equity instruments designated at fair value through other comprehensive income	-	(313,015)	-	-	-	(313,015)
December 31, 2019	$ (2,224,344)	(1,585,242)	-	(18,608)	(3,268)	(3,831,462)
Balance of January 1, 2018	$(1,973,334)	-	(1,109,281)	(236,020)	(4,302)	(3,322,937)
Effects of retrospective application of new accounting standards	-	(2,338,298)	1,109,281	-	-	(1,229,017)
Re-edited balance at January 1, 2018	(1,973,334)	(2,338,298)	-	(236,020)	(4,302)	(4,551,954)
Exchange difference arising from conversion of a foreign institution’s net assets	391,255	-	-	-	-	391,255
Share of conversion differences by affiliates under equity method	(4,162)	-	-	-	922	(3,240)

Unrealized gain or loss on financial assets measured at fair value through other comprehensive gain or loss	-	(529,832)	-	-	-	(529,832)
Unrealized gain or loss on financial assets measured at fair value through other comprehensive gain or loss under equity method	-	(96,198)	-	-	-	(96,198)
Dispose of equity instruments measured at fair value through other comprehensive gains and losses	-	1,558,196	-	-	-	1,558,196
Remuneration coast of shares with restrictions on employee rights	-	-	-	160,686	-	160,686
Balance of December 31, 2018	$(1,586,241)	(1,406,132)	-	(75,334)	(3,380)	(3,071,087)

(19) Share-based payment

1. New Restricted employee shares

On June 27, 2017, the Company resolved through the shareholders' meeting to issue 6,000 thousand new restricted employee shares. The object is limited to manager-level (including) above supervisors and full-time employees with special contributions who have served for more than one year at the company since the granting day. The company has filed a declaration with the Securities and Futures Commission of FSC and all the shares were issued by the board of directors resolution on October 5, 2017. The fair value of the grant was NT$ 67.2.

The employees who have been allocated the above-mentioned new restricted employee shares will be able to subscribe for the shares allocated for NT$ 20 each. The vested condition is that after receiving the new restricted employee shares, they are still in service according to the following schedule, and their performance reaches A (including) above, then they can obtain the share percentage of the vested condition respectively:

(1) 1 year of service: 40%
(2) 2 year of service: 70%
(3) 3 year of service: 100%

After the employees subscribe for the new shares, they may not sell, pledge, transfer, donate, set or do other disposition of their shares until the vested conditions are fulfilled; new restricted employee shares are subject to the right to participate in the distribution of dividends, and the dividends they receive are not subject to the vested period; the proposal, speech, voting rights and other relevant shareholders' equity of the shareholders meeting of the Company before the vested conditions are the same as the other ordinary shares of Sino-American Silicon Products. Inc.; after the issuance, the new restricted employee shares should be immediately delivered to the trust or custody and must not be returned to the trustee for any reason or manner until the vested conditions are fulfilled. If the employee is not eligible for the vested condition after the new share is subscribed, the shares will be bought back by the Company at the issue price.

Relevant information of the new restricted employee shares of the Company is as follows:

Unit: Thousand shares

	2019	2018
Quantity on January 1	3,408	5,965
Quantity vested in this period	(1,646)	(2,341)
Quantity written off due to resignation in this period	(66)	(216)
Quantity on December 31	**1,696**	**3,408**

The remuneration costs recognized by the Company in 2019 and 2018 were NT$ 53,611 thousands and NT$ 151,199 thousands respectively, and the operating costs and operating expenses were accounted for. The balance of the unpaid employee remuneration of the Company on December 31, 2019 and 2018 were NT$ 18,608 thousands and NT$ 75,334 thousands, accounted for in reductions of other equity.

(20) Earnings per share

1. Basic earnings per share

	2019	2018
Net Revenue attributable to the owner of the parent company	**$ 2,248,386**	**1,950,503**
Weighted-average number of ordinary shares outstanding during the year (in thousands of shares)	**583,210**	**581,058**
Basic earnings per share (dollars)	**$ 3.86**	**3.36**

2. Diluted earnings per share

	2019	2018
Net Revenue attributable to the owner of the parent company	**$ 2,248,386**	**1,950,503**
Weighted average number of ordinary shares outstanding during the year (in thousands of shares) (base)	583,210	581,058
Impact of dilution of potential ordinary shares (shares in thousands)	3,899	3,672
Weighted average number of ordinary shares outstanding during the year (in thousands of shares) (diluted)	**587,109**	**584,730**
Diluted earnings per share (NT$)	**$ 3.83**	**3.34**

(22) Revenue from contracts with customers

1. Details of revenues

		2019		2018
Primary geographical markets:				
Taiwan	$	1,836,042		2,753,913
Asia-other		1,105,912		1,907,086
Northeast Asia(Japan and Korea)		1,104,253		1,420,473
America		1,511,115		1,421,750
Europe		443,389		927,024
Other areas		2,174		501
	$	6,002,885		8,430,747
Major product categories				
Solar cell	$	3,020,157		3,635,804
Solar Brick		792,922	$	1,608,721
Solar module		178,923		350,710
Solar wafer		144,716		581,924
Other		1,866,167		2,253,588
	$	6,002,885		8,430,747

2. Contract balance

		2019.12.31	2018.12.31	2018.1.1
Contract liabilities	$	1,204,195	1,251,743	1,705,158

The major change in the balance of contract liabilities is the advance consideration received from customers for the contracts, in which revenue is recognized when products are delivered to customers. The amount of revenue recognized for the years ended December 31, 2019 and 2018, which was included in the contract liability balance at the beginning of the period, was $108,065 thousand and $312,266 thousand, respectively.

The contract liabilities primarily relate to the advance consideration received from customers for the solar products of sales contracts, in which revenue is recognized when products are delivered to customers

(22) Remuneration of employees and directors

In accordance with the articles of association of the Company if there is profit in the year, the company shall accrue 3% - 15% of the profit as employee's remuneration. The board of directors decides to distribute it by stock or cash, and the object of distribution includes employees meeting certain conditions; and the board of directors decides to accrue up to 3% of the above profit as directors' remuneration. The distribution of remuneration of employees and directors should be submitted and reported to the shareholders' meeting. In case the parent company has cumulative losses, it should reserve amount to make up losses before distributing remuneration to the employees and directors in pursuant to the percentage mentioned in the preceding paragraph.

For the years ended December 31, 2019 and 2018, the Company accrued and recognized its employee remuneration amounting to $196,400 thousand and $131,990 thousand and directors' amounting to $41,790 thousand and $44,010 thousand respectively.

These amounts were calculated by using the Company's pre-tax net profit for the period before deducting the amounts of the remuneration to employees and directors, multiplied by the distribution of ratio of the remuneration to employees and directors based on the Company's articles of incorporation, and expensed under operating costs or expenses. If, however, the shareholders determine that the employee remuneration is to be distributed through stock dividends, the calculation, based on the shares, shall be calculated using the stock price on the day before the board of directors. If there would be any changes in accounting estimates the changes shall be accounted for as profit or lost in the following year.

The amounts as stated in the standalone financial statements are identical to those of the actual distributions for 2019 and 2018. After the resolution of the relevant meeting of the Company, the information can be accessed from the Market Observation Post System website.

(23) Other Revenue

		2019	2018
Interest income	$	38,385	38,034
Dividend income		5,340	14,986
	$	**43,725**	**53,020**

(24) Other gains and losses

		2019	2018
Foreign currency exchange loss	$	(42,922)	(42,922)
Impairment loss under equity method		-	(227,392)
Impairment loss under amortized cost		(25,973)	-
Realized gains on financial assets (liabilities) measured at fair value through profit or loss		5,705	11,900
Gains (losses) on disposal of property, plant and equipment		30,812	(41,421)
Other		128,268	152,406
	$	**(147,429)**	**(147,429)**

(25) Financial costs

		2019	2018
Bank loan interest expense	$	23,173	39,688
Lease liability interest expense		1,891	-
	$	**25,064**	**39,688**

(26) Recognition of other comprehensive profit and loss shares of affiliated enterprises by equity method

		2019	2018
Exchange differences resulting from translating the financial statements of a foreign operation	$	(6,997)	(4,162)
Financial assets at fair value through other comprehensive income		141,902	(96,198)
	$	**134,905**	**(100,360)**

(27) Financial Instrument

1. Credit Risk

(1) Credit risk exposure

The carrying amount of financial assets represents the maximum credit risk exposure amount.

(2) Concentration of credit risk

The Company's material clients are in the silicon wafer industry. The Company assigns a credit line to each customer in accordance with the credit procedures; therefore, the Company's credit risk is mainly affected by the silicon wafer industry. On December 31, 2019 and 2018, 0%, 99% and 91% of the balance of notes and accounts receivable (including related parties) of the standalone company were composed of ten customers. In the case of credit risk concentration, the standalone company has regularly assessed the possibility of receivables recovery and accrued appropriate allowance for losses.

(3) Credit risk of receivables and debt securities

For credit risk exposure information on notes and accounts receivables, please refer to Note 6 (5). Other financial assets measured at amortized cost include other receivables and investments and ordinary corporate bonds. The impairment loss of debt security measured at amortized cost ,please refer to Note 6 (4) .

The above are all financial assets with low credit risk. Therefore, the allowance loss for the period is measured by the 12-month expected credit loss amount (for details of how the Company determines the low credit risk, please refer to Note 4 (6)).

2. Liquidity Risk

The contract maturities of financial liabilities are illustrated in the following table, including estimated interest but excluding the impact of the agreed net amount.

	Carrying Amount	Contractual cash flows	6 months or less	6-12 months	1-2 years	2-5 years or more
December 31, 2018						
Non-derivative financial liabilities						
Short term borrowings	$ 200,000	(200,648)	(200,648)	-	-	-
Notes and accounts payable (including related parties)	503,409	(503,409)	(503,409)	-	-	-
Lease liabilities	155,417	(160,695)	(14,052)	(14,052)	(28,247)	(104,344)
Derivative financial liabilities						
Outflows	68	(90,465)	(90,465)	-	-	-
Infolws	-	90,075	90,075	-	-	-
	$ 858,894	**(865,142**	**(718,499**	**(14,052)**	**(28,247**	**(104,344)**
December 31, 2018						
Non-derivative financial liabilities						
Short term borrowings	$ 2,717,125	(2,724,434)	(2,422,995)	(301,439)	-	-
Notes and accounts payable (including related parties)	437,889	(437,889)	(437,889)	-	-	-
Long term borrowings	1,610,200	(1,710,260)	(18,304)	(18,304)	(1,172,975)	(500,677)
	$ 4,765,214	**(4,872,583)**	**(2,879,188)**	**(319,743)**	**(1,172,975)**	**(500,677)**

Except for the unsecured bank borrowings and secured bank borrowings repaid in advance in 2018, the Company does not expect the cash flow analysis on the maturity date to occur significantly ahead of the schedule or the actual amount will be significantly different.

3. Currency risk

(1) Risk of Currency exposure

The Company's is financial assets and liabilities exposed to significant foreign Currency risk are as follows:

	201912.31		
	Foreign currency	**Exchange rate**	**NTD**
Financial assets			
Monetary items			
USD	$ 62,104	29.98	1,861,878
JPY	1,858	0.276	513
EUR	19	33.59	638
Investment accounted for under equity method			
USD	45.563	29.98	1,433,005
EUR	14,573	33.59	385,238
Financial liabilities			
Monetary items			
USD	15,001	29.98	449,730
JPY	4,587	0.276	1,266
EUR	409	33.59	13,738
Derivative items			
USD	3,000	29.98	note

	2018.12.31		
	Foreign currency	**Exchange rate**	**NTD**
Financial assets			
Monetary items			
USD	$ 51,287	30.715	1,575,280
JPY	2,810	0.2782	782
EUR	6,943	35.200	244,394
Investment accounted for under equity method			
USD	46,628	30.715	1,471,643
EUR	6,817	35.200	239,786
Financial liabilities			
Monetary items			
USD	10,856	30.715	333,442
JPY	9,260	0.2782	2,576

EUR	3,344	35.20	117,709

Note: The fair value of forward exchange contracts was measured at the reporting date. For related information, please refer to note 6(2).

(2) Sensitivity analysis

The Company’s exchange rate risk primarily comes from the cash and cash equivalents, accounts receivable, loan and accounts payable, etc. denominated in foreign currency with the resulting foreign currency exchange gains and losses. In the case On December 31, 2019 and 2018, when the NTD depreciated or appreciated by 1% against USD, JPY and EUR, and all other factors remained unchanged, the pre-tax net profit for 2019 and 2018 will increase or decrease by NT$ 13,983 thousands and NT$ 13,667 thousands respectively. The analysis of the two periods was performed with the same basis.

(3) Exchange gains or losses for monetary items

The exchange rate information of the exchange gain or loss (including realized and unrealized) of the Company's monetary items converted into functional currency (i.e. the Company's expression currency) is as follows:

	2019		2018	
	Exchange profit and loss	**The average exchange rate**	**Exchange profit and loss**	**The average exchange rate**
USD	$ (35,166)	30.912	6,903	30.149
EUR	(4,889)	34.610	(48,566)	35.60
JPY	20	0.2837	(503)	0.2730
Franc	(2)	31.09	4	30.81
RMB	(569)	4.472	(760)	4.562
	$ (40,606)		(42,922)	

4. Interest Analysis

The Company’s interest rate exposure of financial assets and financial liabilities is described in the liquidity risk management of this note.

The following sensitivity analysis is based on the interest rate risk exposure. The analysis of the floating interest rate liabilities is with the assumption that the amount of liability outstanding on the reporting date was outstanding for the whole year.

If the interest rate increases or decreases by 0.25%, and all other variables remain unchanged, the pre-tax net profit of the standalone company in 2019 and 2018 will decrease or increase by NT$ 2,642 thousands and NT$ 8,821 thousands respectively due to the Company's bank deposits and borrowings of the changing interest rate.

5. Other price risks

If there is a change in the price of the equity securities on the reporting day (the two phases of the analysis are based on the same basis and the other variables are assumed to be unchanged), the impact on the standalone profit and loss item is as follows:

	2019			2018	
Price of securities on the reporting day	**Amount after other comprehensive profit and loss**		**After-tax (loss) profit**	**Amount after other comprehensive profit and loss**	**After-tax (loss) profit**
Up by 5%	$	305	-	40,050	4,353
Down by 5%		(305)	-	(40,050)	(4,353)

6. Fair value of financial instruments

(1) Categories of financial instruments and fair value

Financial assets and liabilities measured at fair value through gain or loss and financial assets measured at fair value through other comprehensive gain or loss (available for sale financial assets) are measured at fair value on a repetitive basis. The carrying amount and fair value of various financial assets and financial liabilities (including fair value etc. information. However, if the carrying amount of financial instruments not measured at fair value is rationally similar to the fair value, and investment in equity instruments that are not quoted in the active market and whose fair value cannot be reliably measured, there is no need to disclose fair value information as required) booked as follows:

	2019.12.31					
			Fair value			
		Carrying Amount	Level I	Level II	Level III	Total
Financial assets at fair value through other comprehensive income						
Non-public offer equity instrument measured at fair value	$	6,095	-	-	6,095	6,095
Financial assets measured at amortized cost						
Cash and cash equivalents		1,256,788	-	-	-	-
Notes and accounts receivable (including related parties)		831,614	-	-	-	-
Other financial assets - current and non-current		22,651	-	-	-	-
Corporate bonds		507,680	-	507,680	-	507,680
Subtotal	$	2,618,733	-	507,680	-	566,832
Financial liabilities at fair value through profit or loss						
Forward exchange agreement	$	68	-	68	-	68
Financial liabilities measured with amortized costs						
Short term borrowings	$	200,000	-	-	-	-
Notes and accounts payable (including related parties)		503,409	-	-	-	-
Lease liabilities-current & non-current		155,417	-	-	-	-
Subtotal	$	858,826	-	-	-	-

	2018.12.31					
			Fair value			
		Carrying Amount	Level I	Level II	Level III	Total
Financial assets at fair value through profit or loss	$	87,053	87,053	-	-	87,053
Financial assets at fair value through other comprehensive income						
Stock listed on domestic market	$	665,784	665,784	-	-	665,784
Non-public offer equity instrument measured at fair value		135,222	-	-	135,222	135,222
	$	801,006	665,784	-	135,222	801,006
Financial assets measured at amortized cost						
Cash and cash equivalents		851,304	-	-	-	-
Notes and accounts receivable (including related parties)		1,638,043	-	-	-	-

Other financial assets - current and non-current	33,564	-	-	-	-
Corporate bonds	281,366	-	285,466	-	285,466
Subtotal	**$ 3,085,643**	**-**	**566,832**	**-**	**566,832**
Financial liabilities measured with amortized costs					
Short term borrowings	$ 2,717,125	-	-	-	-
Notes and accounts payable (including related parties)	437,889	-	-	-	-
Long term borrowings	1,610,200	-	-	-	-
Subtotal	**$ 4,765,214**	**-**	**-**	**-**	**-**

(2) Valuation technique of fair value of financial instruments that are not measured at fair value

The methods and assumptions the Company adopts to estimate fair value of instruments that are not measured at fair value are as follows:

Financial assets measured at amortized cost (held-to-maturity financial assets); if there is a public quotation in the active market, the market price is the fair value; if no market price is available for reference, the evaluation method is used to estimate or use the counterparty quotation.

(3) Valuation technique of fair value of financial instruments measured at fair value

i. Non-derivatives financial instruments

If the financial instrument has quoted prices available in the active market, the quote in the active market shall be used as fair value. Both the market prices announced by significant exchanges and those of Central Government bonds determined as popular securities announced by the TPEx are basis of fair value for equity instruments booked in the Exchange (Taipei Exchange)

If public quoted prices can be timely obtained from the exchanges, brokers, underwriters or the competent authority, and the prices can represent actual and frequent transactions in the market, the financial instruments are consider to have public quoted prices in the active market. If the above condition is not met, the market is consider inactive. Generally speaking, if there is great difference between the sales price and purchase price, or there is significant increase in such difference or the transaction are not frequent, there is indication that the market is not active.

If the financial instruments held by the Company belong to an active market, the fair value is booked as follows by category and attribute:

For financial assets and financial liabilities of the booked (TaiSDAQ) company's stocks, notes of exchange and corporate bonds, which are subject to standard terms and conditions and are traded in the active market, the fair value is determined by reference to market quotations.

In addition to the above-mentioned financial instruments with active markets, the fair value of the remaining financial instruments is obtained by means of evaluation technologies or reference to counterparty quotes. The fair value obtained through the evaluation technology can be based on the current fair value of other financial instruments with similar characteristics and characteristics, the discounted cash flow method or other evaluation technologies, including the market information utilization model available on the balance sheet date (such as the reference yield curve of Taiwan Stock Exchange, Reuters commercial promissory interest rate average offer).

If the financial instruments held by the Company are in the non-active market, the fair value is booked as follows by category and attribute:

Equity instruments without public quotation: Estimates of fair value using the market comparable company method, the main assumptions are based on the earnings multiplier derived from the investee's net worth per share and the EV/EBIT comparable booked (TaiSDAQ) companies' quotes. The estimate has adjusted the depreciation impact of the lack of market liquidity of the equity securities.

ii. Derivative financial instruments

Measurement of the fair value of derivative instruments are based on the valuation techniques generally accepted by market participants, such as the discounted cash flow or option pricing models. The fair value of forward currency is usually determined based by the forward currency exchange rate.

(4) Reconciliation of Level 3 fair value

Financial assets at fair value through other comprehensive income

	Financial assets measured at fair value through other comprehensive income
January 1, 2019	$ 135,222
Addition in investment	1,637
Recognized in profit or loss	(130,764)
December 31, 2019	**$ 135,222**
January 1, 2018	$ 298,640
Addition in investment	37,500
Recognized in profit or loss	(200,918)
December 31, 2018	**$ 135,222**

(5) Quantitative information on the fair value measurement of significant unobservable inputs (Level 3)

The fair value measurement of the Company classified as Level 3 are mainly equity investment, financial assets measured at fair value through other comprehensive gain or loss.

The significantity of the Company's fair value classified as Level 3 has only a single significant unobservable input value, and only an equity instrument investment without an active market has multiple significant unobservable inputs. The significant unobservable inputs of equity instrument investments in an inactive market are independent of each other and therefore are not interrelated.

The list of quantitative information for significant unobservable inputs is as follows:

Item	Evaluation technology	Significant unobservable input value	Relations between significant unobservable input value and fair value
Financial assets measured at fair value through other comprehensive gain or loss -I equity instrument investment without active market	Comparable TWSE/GTSM booked company method	• Equity value multiplier (2019.12.31 &2018.12.31 are 0.73-18.08 and.13-0.97) • Lack of market liquidity discount (2019.12.31 &2018.12.31 are 28% and 28%-50.57%)	• The higher the multiplier, the higher the fair value • The higher the lack of market liquidity discount, the lower the fair value

(6) The fair value of the Company's financial instruments that use Level 3 inputs to measure fair value was based on the price of the third party. The Company did not disclose quantified information and sensitivity analysis on significant unobservable inputs because the unobservable inputs used in fair value measurement were not established by the Company.

(7)As of December 31,2019and 218, there were no transfer at fair value level.

(28) Financial risk management

1. Overview

The financial instrument that the Company is using is exposed to the following risks:

(1) Credit Risk

(2) Liquidity Risk

(3) Market Risk

The Company's risk exposure information and the objectives, policies and procedures of the Company's risk measurement and management are disclosed in this note. Please refer to the notes to the standalone financial statements for the quantitative disclosure in detail.

2. Structure of risk management

The Board has sole responsibility for and oversight of the Company's risk management framework and risk management policies and procedures. Internal auditors assist the Board of Directors to monitor and to carry out the regular and extraordinary review of risk management controls and procedures, and to report the results of the review to the Board.

The Company's risk management policy is established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risk and the compliance with risk limits. Risk management policies and systems are reviewed regularly to reflect the changes in market conditions and the Company's operations. Also, develop a disciplined and constructive environmental control through training, management standards, and operating procedures in order to help all employees understand their roles and obligations.

Supervising and management personnel of the audit committee of the Company monitor the compliance of the Company's risk management policies and procedures, as well as review the adequacy of the parent company's related risk management framework for the risk faced. The internal auditor assists the audit committee the Company to play the role of auditors. Internal auditors carry out the regular and extraordinary review of risk management controls and procedures, and report the results of the review to the audit committee.

3. Credit Risk

The primary potential credit risk of the Company mainly comes from the financial instruments of cash and accounts receivable. The Company's cash is deposited in different financial institutions

(1) Accounts receivables and other receivables

The Company has established a credit policy. Before granting the standard payment and shipping terms as well as any other clauses, the Company shall analyze the credit rating of each new customer respectively. Purchase limit is set up for each customer. The limit is reviewed periodically. For customers not meeting the standard credit ratings as required, they can only make purchases from the Company on the basis of pre-payment.

(2) Investment

Credit risk on bank deposits, fixed-Revenue investments and other financial instruments are measure and monitored by the Company's finance department. As the Company's trading partners and its counterparties fulfill their obligations either as banks with good credit standing or financial institutions, corporations, and government agencies of investment-grade and above, there should be no significant credit risk of them defaulting on their payment obligations, and this shall not be a concern.

(3) Guarantee

Per the Company's policy, it can only provide financial guarantee to companies it has business dealing, the companies of which it holds directly or indirectly for more than 50% shares with voting right, or companies by which it is owned directly or indirectly for more than 50% shares. On December 31, 2019 and 2018, the Company did not provide any endorsement guarantees except to its subsidiaries.

4. Liquidity Risk

The Company's capital and working capital is sufficient enough to fulfill all contractual obligations; therefore, there is no liquidity risk arising from the inability of raising funds for fulfilling contractual obligations.

The bank loan is an importance source of liquidity. On December 31, 2019 and 2018, the long-term and short-term bank financing quotas unused of the Company were NT$ 10,629,867 thousands and NT$ 4,913,625 thousands respectively.

5. Market Risk

Market risk refers to the changes in market prices, such as exchange rates, interest rates and equity instrument price changes, causing risks to the Company's Revenue or the value of the financial instruments. The purpose of market risk management is to contain market risk exposure within the tolerable range and with the return on investment optimized.

(1) Currency risk

The Company is exposed to exchange rate risk that arises from sales, purchases and loans transactions denominated in non-functional currency. The Company's functional currency is NT Dollars. The main currencies of the transactions are NTD, US Dollar, JPY and Euro.

Loan interest is denominated in the currency of the loan principal. In general, a loan is in the same currency as the cash flow generated from an operating activity, which is mainly in NT Dollars.

For other monetary assets and liabilities denominated in foreign currencies, for any short-term imbalance occurring, the Company is to maintain the net risk exposure at an acceptable level by buying or selling foreign currency at the spot exchange rate.

(2) Interest rate risk

The Company holds assets and liabilities with floating interest rates, resulting in a cash flow interest rate risk exposure.

(3) Equity instrument price

The Company has equity price exposures due to investments in stocks booked on the Taipei Exchange (TPEx). Those equity investments are not held for trading but for strategic investment.

Please refer to Note 6 (27) for the risk of change.

(29) Capital Management

The policy of the Board of Director is to maintain sound capital base in order to uphold the confidence of investor, creditor, and market, and to support future operations and development. Capital includes the share capital, capital reserve, retained earnings and other equity items of the Company. The Board of Directors controls the return on capital and the common stock dividend level.

Debt capital ratio on the reporting date is as follows:

	2019.12.31	2018.12.31
Total Liabilities	$ 7,618,133	7,611,183
Less: Cash and cash equivalent	(1,256,788)	(851,304)
Net liabilities	$ 6,361,345	6,759,879
Total Equity	$ 26,670,241	26,881,716
Debt capital ratio	23.85%	25.15%

The net liabilities and total equity on December 31, 2019 decreased from the previous period, but the ratio of debt to capital decreased due to the large decline in net liabilities.

(30) Investing and financing activities not affecting current cash flow

The Investing and financing activities not affecting current cash flow in 2019 and 2018 were as follows.

1. For acquiring right –of –use assets by lease, please refer to note 6(10).
2. Reconciliations of liabilities arising from financing activities were as follows:

	2019.12.31	Cash flows	Non-cash changes	2019.12.31
Short-term borrowings	$ 2,717,125	(2,517,125)	-	200,000
Long-term borrowings	1,610,200	(1,610,200)	-	-
Lease liabilities	180,137	(28,407)	3,687	155,417
Guarantee deposit received	-	762	-	762
Total liabilities from financing activities	$ 4,507,462	(4,154,970)	3,687	356,179

	2018.12.31	Cash flows	Non-cash changes	2018.12.31
Short-term borrowings	$ 2,364,913	352,212	-	2,717,125
Long-term borrowings	1,360,000	250,200	-	1,610,200
Total liabilities from financing activities	$ 3,724,913	602,412		4,327,325

7. Related party transactions

(1) Names and relationships of related parties

The parties involved in the transaction of the standalone company during the period of the standalone financial statements are as follows:

Names of related parties	Relationship with the Company
Sino Silicon Technology Inc. (hereinafter referred to as "SSTI")	Subsidiaries directly held by the Company
GlobalWafers	Subsidiaries directly held by the Company
Aleo Solar GmbH(hereinafter referred to as Aleo Solar)	Subsidiaries directly held by the Company
Aleo Solar Distribuzione Italia S.r.l	Subsidiary indirectly owned by the Company
Aleo Sunrise GmbH	Subsidiary indirectly owned by the Company(note7)
SAS Sunrise Inc.	Subsidiaries directly held by the Company
SAS Sunrise Pte. Ltd.	Subsidiary indirectly owned by the Company
Sulu Electric Power and Light Inc.(hereinafter referred to as Sulu)	Subsidiary indirectly owned by the Company (Note 1)
AMLED International Systems Inc. (hereinafter referred to as AMLED)	Subsidiary indirectly owned by the Company (Note 2)
Sunrise PV World Co. (hereinafter referred to as "Sunrise PV World")	Subsidiaries directly held by the Company
Sunrise PV Electric Power Five (hereinafter referred to as Sunrise PV Electric Five)	Subsidiaries directly held by the Company(Note8)
Sunrise PV Two Co., Ltd. (hereinafter referred to as Sunrise PV Two)	Subsidiary indirectly owned by the Company(Note5)
Sunrise PV Electric Power Two (hereinafter referred to as Sunrise PV Electric Two)	Subsidiary indirectly owned by the Company(Note6)
Sunrise PV Three Co., Ltd. (hereinafter referred to as Sunrise PV Three)	Subsidiary indirectly owned by the Company
Sunrise PV Four Co., Ltd. (hereinafter referred to as Sunrise PV Four)	Subsidiary indirectly owned by the Company
Global Semiconductor Inc. (hereinafter referred to as GSI)	Subsidiary indirectly owned by the Company
GWafers Singapore Pte.Ltd.(hereinafter referred to as GWafers Singapore)	Subsidiary indirectly owned by the Company
Topsil GlobalWafers A/S (hereinafter referred to as Topsil A/S)	Subsidiary indirectly owned by the Company
Kunshan Sino Silicon Technology Co., Ltd. (hereinafter referred to as "Kunshan Sino")	Subsidiary indirectly owned by the Company
GlobiTech Incorporated.(hereinafter referred to as GTI)	Subsidiary indirectly owned by the Company
GlobalWafers Japan Co., Ltd. (hereinafter referred to as "GWJ")	Subsidiary indirectly owned by the Company

Shanghai Growfast Semiconductor Technology Co.,Ltd. (hereinafter referred to as Shanghai GrowFast)	Subsidiary indirectly owned by the Company
Topsil Semiconductor sp z o.o.(hereinafter referred to as Topsil PL)	Subsidiary indirectly owned by the Company
GlobalWafers Singapore Pte. Ltd. (hereinafter referred to as GWS)	Subsidiary indirectly owned by the Company
GlobalWafers B.V. (hereinafter referred to as GWBV)	Subsidiary indirectly owned by the Company
MEMC Japan Ltd.(hereinafter referred to as MEMC Japan)	Subsidiary indirectly owned by the Company
MEMC Electronic Materials SpA (hereinafter referred to as MEMC SpA)	Subsidiary indirectly owned by the Company
MEMC Electronic Materials France SarL(hereinafter referred to as MEMC SarL)	Subsidiary indirectly owned by the Company
MEMC Electronic Materials GmbH(hereinafter referred to as MEMC GmbH)	Subsidiary indirectly owned by the Company
MEMC Holding B.V.(hereinafter referred to as MEMC BV)	Subsidiary indirectly owned by the Company
MEMC Korea Company (hereinafter referred to as MEMC Korea)	Subsidiary indirectly owned by the Company
MEMC LLC (hereinafter referred to as MEMC LLC)	Subsidiary indirectly owned by the Company
MEMC Electronic Materials, Sdn Bhd (hereinafter referred to as MEMC Sdn Bhd)	Subsidiary indirectly owned by the Company
SunEdison Semiconductor Technology (Shanghai) Ltd. (hereinafter referred to as SunEdison Shanghai)	Subsidiary indirectly owned by the Company
Taisil Electronic Materials Corp. (hereinafter referred to as Taisil)	Subsidiary indirectly owned by the Company
MEMC Ipoh Sdn Bhd (hereinafter referred to as MEMC Ipoh)	Subsidiary indirectly owned by the Company
Actron Technology Corporation (hereinafter referred to as Actron Technology)	The chairman of the Company is the same.
Solartech Energy Corp.	The Company is the main management of Solartech Energy (Note 3)
URE	The Company is the main management of URE (Note 3)
Sunshine PV. Corporation (hereinafter referred to as Sunshine PV.)	Related enterprise to URE
Song Long Electronics Corporation (hereinafter referred to as Song Long Eletronics)	The Company’s management is the manager of the director of the company
Actron Technology Corporation (hereinafter referred to as Actron Technology)	The Company’s management is the chairman of the director of the company / Affiliated enterprises of the Company
Accu Solar Corporation	Affiliated enterprises of the Company
TSCS	Affiliated enterprises of the Company
Crystalwise Technology Inc.	Affiliated enterprises of the Company
Cathy Sunrise	Affiliated enterprises of the Company

Sunrise PV One Co., Ltd. (hereinafter referred to as Sunrise PV One)	Subsidiaries of affiliated enterprises of the Company
Cathy Sunrise One Co., Ltd. (hereinafter referred to as Cathy Sunrise One)	Subsidiaries of affiliated enterprises of the Company
Cathy Sunrise Two Co., Ltd. (hereinafter referred to as Cathy Sunrise Two)	Subsidiaries of affiliated enterprises of the Company
Cathy Sunrise Electric Power One (hereinafter referred to as CSEPO)	Subsidiaries of affiliated enterprises of the Company
Sunrise PV Five Co., Ltd. (hereinafter referred to as Sunrise PV Five)	Subsidiaries of affiliated enterprises of the Company

Note 1: The Company can control the financial and operating strategies of Sulu through valid agreements with other investors of Sulu, so Sulu is considered as a subsidiary.

Note 2: The Company does not hold the ownership interests of AMLED, but the Company can control the financial and operating strategies of AMLED and obtain all the benefits of its operations and net assets in accordance with the terms of the agreements with such standalone, so AMLED is considered as a subsidiary.

Note 3: The former Solartech Energy was merged and cancelled in October 2018, the existing company is renamed URE.

Note 4: Sunrise PV Five was sold to Cathy Sunrise in March 2019.

Note 5: Sunrise PV Two was liquidated in May 2019.

Note 6: Sunrise PV Electric Two was sold in July 2019.

Note 7: Aleo sunrise Gmbh (hereinafter referred to as Aleo Sunrise) has been adjusted by the Company to 100% investment since March 2019 and its liquidation was completed in June 2019

Note 8: For operating plan, the Company invest Sunrise PV Electric Five in December 2019.

(2) Significant transactions with related parties

1. Operating revenue

The Company’s material sales amount to the related party are as follows:

	2019	2018
Subsidiary	$ 1,089,748	1,123,826
Affiliated companies	-	20
Other related parties	10,246	194,922
	$ 1,099,994	1,318,768

In 2019 and 2018, the Company's processing Revenue to related parties was NT$ 40,505 thousands and NT$ 70,124 thousands, respectively, booked in operating cost reduction.

The Company offers selling price to the related party in accordance with the general market price and has the price adjusted with the considerations of sales area, sales volume, etc.

The Company's payment conditions to general customers in 2019 and 2018 are both from 0 days to O/A 120 days; to significant related parties, advance payment to O/A 90 days EOM.

2. Purchase and outsourced processing

The amount of purchase and outsourced processing from the related party by the Company is as follows:

		2019	2018
Subsidiary	$	1,740	30,367
Affiliated companies		-	304
Other related parties		11,248	25,324
	$	12,988	55,995

The Company has used the general market price to purchase goods and outsource processing from the related party.

The Company's payment conditions to general suppliers in 2019 and 2018 are from O/A 0 days to O/A 150 days EOM, and O/A 0 days to O/A 120 days EOM respectively; from significant related parties as suppliers, advance payment to O/A 30 days and O/A 90days EOM respectively .

3. Receivables from related parties

The Company's receivables from related parties are as follows:

Account	Classification of related party		2019.12.31	2018.12.31
Receivables from related parties	Subsidiary-GlobalWafers	$	214,321	157,482
Receivables from related parties	Subsidiary-Aleo Solar		-	110,062
Receivables from related parties	Subsidiary-Other		9,636	15,368
Receivables from related parties	Other related parties		6,648	8
		$	230,605	282,920

The Company's sales of raw materials of subsidiaries were assessed as not recoverable. In 2018, the allowance for loss accrued was NT$ 14,107 thousands, accounted for in expected credit impairment loss. Another, the receivables were collected of NT$5,796 thousands in 2018, and reverse the income for expected credit.

In addition, in order to maintain the stable supply of raw materials required for production, the related parties successively signed short-term and long-term supply contracts with the Company, then the details of the advance sales receipts from related parties (respectively booked in contract liabilities - current / non-current) are as follows:

		2019.12.31	2018.12.31
Other related party-URE	$	883,220	883,697

4. Accounts payable to related parties

The Company's payables to related parties are as follows:

Account	Classification of related party	2019.12.31	2018.12.31
Payable to related parties	Subsidiary	$ 707	712
Payable to related parties	Other related parties	-	319
		$ 707	1,031

5. Transactions of property, plant and equipment

(1) Disposition of property, plant and equipment

The details of the sales of property, plant and equipment by the Company to related parties are as follows:

	2019		2018	
	Sale price	Receivables from related parties	Sale price	Receivables from related parties
Subsidiary	$ 27,570	-	627,131	-

The benefits realized in 2019 and 2018 were NT$ 3,478 thousands and NT$ 964 thousands respectively. On December 31, 2019 and 2018, the interests of deferred disposition of fixed assets arising from the sale of fixed assets to related parties was NT$ 37,837 thousands and NT$ 27,334 thousands, respectively.

(2) Acquisition of property, plant and equipment

The price for the Company's acquisition of property, plant and equipment from related parties is as follows:

	2019		2018	
	Amount	Payable to related parties	Amount	Payable to related parties
Subsidiary	$ -	-	114,713	-

6. Revenue of management fee and technology service fee

Information regarding the Company's collecting the management fees and technology service fee. Revenue from related parties booked in other income or loss to as follows:

	2019	2018
Subsidiary	$ 41,633	50,508

As of December 31, 2019 and 2018, the unrecovered management fees receivable and technology service fee receivable were NT$ 13,730 thousands and NT$ 13,621 thousands respectively, booked in receivables from related parties.

7. Loan to related parties

The actual disbursement of loan to the related parties is as follows:

	2019.12.31	2018.12.31
Subsidiary－Sulu	$ 298,901	268,572
Subsidiary－Sunrise PV Five	-	162,000
Subsidiary－Sunrise PV World	-	150,000
Subsidiary－Aleo Solar	-	52,800
Subsidiary－Other	52,000	208,000
	$ 350,901	841,372

For the borrowings of the subsidiaries from the Company, the interest is based on the average interest rate of the related parties borrowing from financial institutions in the year when they receive the loan, and all of above borrowings are unsecured loans. The Interest income of 2019 and 2018 were NT$ 13,703 thousands and NT$ 24,096 thousands respectively. On December 31, 2019 and 2018, interest receivable at the end of the period were NT$ 892 thousands and NT$ 1,160 thousands respectively, booked in receivables from related parties.

On December 31, 2019 and 2018, as the subsidiaries involved in the aforementioned transaction capitalize the interest expenses, and their unrealized interests were NT$ 3,899thousands and NT$ 4,138 thousands respectively, booked in investment under equity method.

8. Endorsements/guarantees

The Company's endorsements and guarantees for the related party is summarized as follows:

	2019.12.31	2018.12.31
Subsidiary	$ 2,079,080	2,458,610

The company receive the handling fee of endorsements and guarantees from related parties, as of December 31, 2019 and 2018, the interest income were NT$ 10,296 thousands and NT$ 11,647 thousands respectively.

9. Corporate bonds

The Company purchased the five-year and One -year private placement corporate bonds issued by its affiliated company, Crystalwise Technology, a total of 280 and 250 bonds with each face value of NT$ 1,000 totaling $ 280,000 thousands and $ 250,000 thousands respectively. The interest rate and the coupon rate are 2%.

Interest income for 2019 and 2018 were NT$ 11,753 thousands and NT$ 1,366 thousands respectively . As December 31, 2019 and 2018, the accumulated investment cost and interest receivable were NT$ 507,680 thousands and NT$ 281,366 thousands respectively , booked in financial assets measured at amortized cost – current and non-current .

10. Lease
   (1) The Company and the related parties have a factory lease contract, and the breakdown of the rental expenses and payables to related parties are as follows:

	2019	2018
Subsidiary	$ -	8,775
Affiliated companies	-	2,142
	$ -	10,917

Account	Classification of related party	2019.12.31	2018.12.31
Payable to related parties		$ -	831

   (2) The Company and the related parties have a factory lease contract, and the breakdown of the rental revenue to related parties are as follows:

	2019	2018
Subsidiary	$ 9,181	7,308
Affiliated companies	310	225
	$ 9,491	7,533

Account	Classification of related party	2019.12.31	2018.12.31
Receivable from related parties		$ 2,766	1,093

11. Others
   (1) The Company's direct sales to the related parties is regarded as the transfer of inventories. Therefore, the sales revenue and related costs are written off when the standalone financial statements is expressed, not regarded as the sales and cost of the Company. On December 31, 2019 and 2018, the deferred Revenue arising from the above transactions were NT$ 30,951 thousands and NT$ 35,500 thousands respectively, booked in the investment under equity method.

   In addition, as of December 31 2019 and 2018, the sales of raw materials to the subsidiaries is regarded as the transfer of inventories, and the gross loss of the sale of NT$ 34,329 thousands and NT$ 54,282 thousands respectively are deferred and booked in the investment under equity method.
   (2) Our subsidiaries undertook projects and purchased modules from the Company in 2019 and 2018. Due to changes in the project plan, no actual sales were made. According to the sales contract, the compensation the Company needing to seek from the subsidiaries for the loss of stocking were NT$29,821 thousand and NT$12,445 thousand and were recognized as the deduction of cost of goods sold and miscellaneous income. As of December 31, 2019 and 2018, they were NT$29,821 thousand and NT$13,067 thousand, which were recognized as the amount due from related parties.
   (3) The revenue from providing legal consulting services for subsidiaries in 2019 and 2018 were both NT$1,500 thousand. As of December 31, 2019 and 2018, the Company has fully paid.

12. Payment on behalf of others

   On December 31, 2019 and 2018, the Company's unsettled accounts receivable (payable) to related parties due to payments paid on behalf of others among related parties for materials purchase, insurance, water and electricity fee etc. were booked in accounts receivable (payable) to related parties as follows:

		2019.12.31	2018.12.31
Subsidiary	$	3,803	13,304
Subsidiary		(1,789)	(4,530)
Affiliated companies		54	8
Affiliated companies		(20)	(62)
Other related parties		-	(10)
	$	2,048	8,710

(3) Key management

The remuneration to key management include:

		2019	2018
Short-term employee benefits	$	136,738	76,792
Post-employment benefits		647	819
Share-based payment		14,844	73,612
	$	152,229	151,223

In 2019 and 2018, the Company provided 1 vehicle with the cost of NT$ 1,500 thousands and 2 vehicles with the cost of NT$ 2,204 thousands respectively for key management personnel to use.

8. Pledged Assets

The book value of the assets mortgaged/pledged by the Company as collateral is as follows:

Asset name	Pledge or Mortgage underlying subject		2019.12.31	2018.12.31
Property, plant and equipment	Long term borrowings	$	-	552,000
Time deposits (recognized in other financial assets－non-current)	Providing a guarantee for the bank to open a lease for the Science Park Bureau		7,900	7,900
Time deposits (recognized in other financial assets－non-current)	Performance bonds for Government grant provided to technology projects		698	13,597
		$	8,598	573,497

9. Significant commitments and contingencies

Except as stated in Note 6 (15), other significant contingent liabilities of the Company and unrecognized contractual commitments are as follows:

(1) Significant unrecognized contractual commitments

1. The Company has negotiated the amount of future purchase in according to the current effective long-term purchase agreement and the market condition. The details are as follows:

(Expressed in thousands of foreign currency)

	2019.12.31	2018.12.31
USD	$ 907,081	1,205,750
EUR	$ -	3,189

Silicon supplier Hemlock Semiconductor Pte. Ltd. (hereinafter referred to as Hemlock) sent a notice requesting that Company's confiscated prepayment, payment for goods not received and the interest related to the late payment in accordance with to the long-term purchase contract be accumulated to December 31, 2018 as US$ 615,982 thousands .The Company and Hemlock renegotiated in June 2019 to amend the important terms of the long-term procurement contract, pending agreement between the parties.

2. In response to the long-term purchase contract referred above, the Company has signed silicon wafer long-term sales contracts successively with the customers since 2005. These companies agree to pay the non-refundable funds to the Company. The two parties agreed to have silicon wafers sold in accordance with the agreed quantity and price . If the delivery has not been made in compliance with the contract signed, a sales discount or an amount equivalent to 1.5-4 times of the advance sales receipts from customers as remuneration should be granted. If the delay of shipment has not been resolved for more than three months, the outstanding pre-payment should be refunded. In addition, in response to the price decline arising from the falling demand, solar energy battery customers and the Company will negotiate the selling price and adjusting the average selling price in accordance with market conditions.

The amount of delivery according to the existing contracts and current market conditions is as follows:

(Expressed in thousands of foreign currency)

	2019.12.31	2018.12.31
USD	$ 29,852	91,640
EUR	$ 25,695	68,815
NTD	$ 54,845	54,845

3. On December 31, 2019 and 2018, the Company has signed or ordered significant construction projects and plant equipment that have not yet been delivered for inspections of NT$ 894,902 thousands and NT$ 108,560 thousands respectively.
4. On December 31, 2019 and 2018, the total amount of promissory notes deposited by the standalone company at the bank for acquiring bank financing were NT$ 12,169,060 thousands and NT$ 10,630,605 thousands respectively.
5. On December 31, 2019 and 2018, the Company requested the bank to open a

performance bond for the General Administration of Customs and the R&D plan, which amounted to NT$ 10,000 thousands and NT$ 49,250 thousands respectively.

6. As of December 31 2019 and 2018, the company's outstanding standby letter of credits were as follows:

(Expressed in thousands of foreign currency)

	2019.12.31	2018.12.31
USD	$ 7,006	-

(2) Contingent liabilities

Hemlock filed summons and complaints against the Company and were delivered to the Company on May 12, 2015. Both parties reached an agreement in May 2016 then signed STIPULATION OF DISCONTINUANCE and SETTLEMENT AGREEMENT, where the Company needs to purchase certain amount of polysilicon from Hemlock and its related companies based on SETTLEMENT AGREEMENT. Also, two parties signed an additional agreement of Accommodation Letter to amend SETTLEMENT AGREEMENT and extend the date of litigation termination under STIPULATION OF DISCONTINUANCE against the Company until April 30, 2019, which Hemlock agreed in December 2019 to further extend the extension to December 31, 2019. In June 2019, both parties agreed to amend the important terms such as price and quantity of the original contract. The Company, in accordance with the terms of the proposed revised contract, recognized provision for Onerous contract. As of December 31, 2019, the above-mentioned provision for Onerous contract amounted to NT$4,069,986 thousand.

10. Losses due to major disaster: None.

11. Subsequent Events:

(1) In order to streamline the corporate structure, it was resolved by the Board of Directors on December 12, 2019 to merge the 100% held subsidiary, Sunrise PV World Co. After the merger, the Company was the survival company while Sunrise PV World Co. was the eliminated company. The consolidated base date for this merger was January 31, 2020.

(2) By resolution of the Board of Directors on December 12, 2019, in order to meet the operating needs, the Company intended to purchase plant and equipment from Crystalwise Technology Inc. for NT$860,000 thousand. The deposit of NT$250,000 thousand was paid at the time of signing the sale contract in January 2020, and the remaining price will be paid after completing the ownership transfer registration.

12. Others

The functions of employee benefits, depreciation and amortization expenses are summarized as follows:

By Function / By item	2019			2018		
	Cost of goods sold	**Operating expenses**	**Total**	**Cost of goods sold**	**Operating expenses**	**Total**
Employee benefits						
Salary	512,497	286,210	798,707	651,338	170,896	822,234
Labor and health insurance	45,532	10,772	56,304	69,949	11,417	81,366
Pension	19,657	4,814	24,471	30,460	9,942	40,402
Directors' remuneration	-	41,790	41,790	-	69,115	69,115
Other Employee benefits	34,640	3,462	38,102	38,322	3,597	41,919
Depreciation	451,978	39,354	491,332	929,936	51,977	981,913

The employee benefits information of the Company on December 31, 2019 and 2018 were as follows:

	2019	2018
Employees	890	1,377
Non concurrently as employees of Directors	9	9
Average employee benefits expense	$ 1,052	716
Average salaries expense	$ 916	597
Adjustment of Average salaries expense	53%	

13. Other disclosures

(1) Information on significant transactions

In 2019, in accordance with the provisions of the Regulations Governing the Preparation of Financial Reports by Securities Issuers, the relevant significant transactions that should be disclosed by the Company as follows:

1. Loans to other parties: Please refer to Attachment 1 for details.
2. Guarantees and endorsements for other parties: Please refer to Attachment 2 for details.
3. Securities held as of December 31, 2019 (excluding investment in subsidiaries, associates and joint ventures): Please refer to Attachment 3 for details.
4. Individual securities acquired or disposed of with accumulated amounts exceeding the lower of NT$300 million or 20% of the capital stock: Please refer to Attachment 4 for details.
5. Acquisition of individual real estate with amount exceeding the lower of NT$ 300 million or 20% of the capital stock: Please refer to Attachment 5 for details.
6. Disposal of individual real estate with amount exceeding the lower of NT$ 300 million or 20% of the capital stock: None.
7. Related party transactions for purchases and sales with amounts exceeding the lower of NT$ 300 million or 20% of the capital stock: Please refer to Attachment 6 for details.
8. Receivables from related parties with amounts exceeding the lower of NT$ 100 million or 20% of the capital stock: Please refer to Attachment 7 for details.
9. Trading in derivative instruments: Please refer to note 6(2) for details.

(2) Information on investees: Please refer to Attachment 8 for details.

(3) Information on investment in mainland China:

1. Relevant information on the name and main business items of the investee company in Mainland China: Please refer to Attachment 9 (1) for details.
2. Investment quotas for Mainland China: Please refer to Attachment 9 (2) for details.
3. Significant transactions:

   The significant inter-company transactions with the subsidiary in Mainland China, which were eliminated in the preparation of standalone financial statements , are disclosed in the “Information on significant transactions”.

14. Segment information

For details of segment Revenue (loss), please refer to the standalone financial statements of 2019.

Sino-American Silicon Products Inc.
Loans to other parties
For the year ended December 31, 2019

Attachment 1

Unit: NT$ Thousand

No.	Name of lender	Name of borrower	Account name	Related party	Highest balance of financing to other parties during the period	Ending balance	Actual usage amount during the period	Range of interest rates during the period	Purposes of fund financing for the borrower (Note 1)	Transaction amount for business between two parties	Reasons for short term financing	Loss allowance	Collateral		Individual funding loan limits (Note 2)	Maximum limit of fund financing (Note 3)
													Item	Value		
0	Sino-American Silicon Products Inc.	Sulu	Loan receivable – related party	Yes	948,000 (USD30,000)	899,400 (USD30,000)	298,901 (USD9,970)	2.00%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	Loan receivable – related party	Yes	500,000	500,000	-	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV Five	Loan receivable – related party	Yes	300,000	-	-	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV Electric	Loan receivable – related party	Yes	200,000	-	-	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
0	Sino-American Silicon Products Inc.	Sunrise PV Three Energy	Loan receivable – related party	Yes	300,000	300,000	52,000	2.50%	2	-	Working capital	-		-	10,668,096	10,668,096
1	SSTI	Sulu	Loan receivable – related party	Yes	419,269 (USD13,268)	317,788 (USD10,600)	317,788 (USD10,600)	2.00%	2	-	Working capital	-		-	1,943,776	1,943,776
1	SSTI	AMLED	Loan receivable – related party	Yes	339,709 (USD11,138)	333,917 (USD11,138)	333,917 (USD11,138)	2.00%	2	-	Working capital	-		-	1,943,776	1,943,776
2	SAS Sunrise Inc.	Sulu	Loan receivable – related party	Yes	191,084 (USD6,200)	-	-	4.00%	2	-	Working capital	-		-	922,234	922,234

No.	Name of lender	Name of borrower	Account name	Related party	Highest balance of financing to other parties during the period	Ending balance	Actual usage amount during the period	Range of interest rates during the period	Purposes of fund financing for the borrower (Note 1)	Transaction amount for business between two parties	Reasons for short term financing	Loss allowance	Collateral		Individual funding loan limits (Note 2)	Maximum limit of fund financing (Note 3)
													Item	Value		
3	Aleo Solar	Aleo Sunrise	Loan receivable – related party	Yes	282,560 (EUR8,000)	-	-	2.00%	2	-	Working capital	-		-	385,238	385,238
4	Aleo Solar	Aleo Sunrise	Loan receivable – related party	Yes	219,936 (USD6,960)	-	-	2.00%~ 4.00%	2	-	Working capital	-		-	1,098,202	1,098,202
5	Sunrise PV World Co.	Sunrise PV Four	Loan receivable – related party	Yes	30,000	-	-	2.00%	2	-	Working capital	-		-	110,532	110,532
6	GWJ	GlobalWafers	Loan receivable – related party	Yes	4,420,500	4,140,000	4,140,000	0.47909%~ 0.53909%	1	5,998,428	Business transactions	-		-	5,998,428	15,279,926
6	GWJ	MEMC Japan	Loan receivable – related party	Yes	294,700	276,000	-	0.56909%	2	-	Working capital	-		-	15,279,926	15,279,926
7	MEMC SpA	GWS	Loan receivable – related party	Yes	2,759,640	2,620,020	2,047,302	3.559%	2	-	Working capital	-		-	11,849,317	11,849,317
8	Taisil	GlobalWafers	Loan receivable – related party	Yes	6,400,000	6,400,000	6,400,000	1.50%	2	-	Business transactions	-		-	7,091,890	7,091,890
9	GTI	MEMC LLC	Loan receivable – related party	Yes	632,000	599,600	-	3.51%	2	-	Working capital	-		-	9,486,787	9,486,787
10	GWS	GWBV	Loan receivable – related party	Yes	3,050,000	2,998,000	2,998,000	2.50%	2	-	Working capital	-		-	25,151,706	25,151,706

No.	Name of lender	Name of borrower	Account name	Related party	Highest balance of financing to other parties during the period	Ending balance	Actual usage amount during the period	Range of interest rates during the period	Purposes of fund financing for the borrower (Note 1)	Transaction amount for business between two parties	Reasons for short term financing	Loss allowance	Collateral		Individual funding loan limits (Note 2)	Maximum limit of fund financing (Note 3)
													Item	Value		
10	GWS	GlobalWafers	Loan receivable – related party	Yes	10,792,800	10,792,800	-	2.50%	2	-	Working capital	-		-	6,434,620	6,434,620
10	GWS	GWI	Loan receivable – related party	Yes	3,258,826	3,258,826	3,258,826	2.50%	2	-	Working capital	-		-	3,492,437	3,492,437

Note 1: The entry method for the loaning of funds is as follows:
(1) For business transactions, please fill in 1.
(2) Necessary for short-term financing, please fill in 2.

Note 2: (1) For the Company's loan of funds to those having business transactions, the individual loan is limited to the trade amount between the two parties in the most recent year; for the loan of funds to companies necessary for short-term financing, the individual loan is limited to 40% of the net worth of the company that lends loan; for loan of funds among foreign companies that the Company directly and indirectly holds 100% of the voting shares, the individual loan is limited to 40% of the net worth of the company that lends loan.
(2)For GlobalWafers and its subsidiaries’ loan of funds to those having business transactions, the individual loan is limited to the trade amount between the two parties in the most recent year; for the loan of funds to companies necessary for short-term financing, the individual loan is limited to 40% of the net worth of GlobalWafers; the fund-lendings between the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company, or from the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company to the Company are not subject to the previous provision of net worth and not subject to the one-year limit of the term of funds in Article 4, Paragraph 1, but should still specify in its internal operating procedures for fund-lending limit and period.

Note 3: (1) For the Company's loan of funds to those having business transactions, the total loan is limited to 40% of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 40% of the net worth of the company that lends loan; the fund-lendings between the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company, or from the foreign companies whose voting shares are 100% owned, directly or indirectly, by the Company to the Company are not subject to the previous provision of net worth and not subject to the one-year limit of the term of funds in Article 4, Paragraph 1, but should still specify in its internal operating procedures for fund-lending limit and period.
(2) For GlobalWafers and its subsidiaries' loan of funds to those having business transactions, the total loan is limited to 40% of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 40% of the net worth of the company that lends loan; for loan of funds among foreign companies that GlobalWafers directly and indirectly holds 100% of the voting shares, or between the foreign companies and GlobalWafers, the total loan is limited to 2 times of the net worth of GlobalWafers.
(3) For loan of funds of Aleo Solar, the total loan is limited to 100% of the net worth of the company that lends loan.
(4) For loan of funds of Sulu and Sunrise PV World to those having business transactions, the total loan is limited to 40% of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 40% of the net worth of the company that lends loan; for loan of funds among foreign companies that the company that lends loan directly and indirectly holds 100% of the voting shares, the total loan is limited to 40% of the net worth of the company that lends loan.
(5) For loan of funds of SSTI、 SAS Sunrise Inc. and SAS Sunrise Pte Ltd. to those having business transactions, the total loan is limited to 2 times of the company that lends loan; for the loan of funds to companies necessary for short-term financing, the total loan is limited to 2 times of the net worth of the company that lends loan; for loan of funds among foreign companies that the company that lends loan directly and indirectly holds 100% of the voting shares, the total loan is limited to 40% of the net worth of the company that lends loan.

Note 4: Transactions with standalone parties as mentioned above were eliminated when preparing the standalone reports.

Sino-American Silicon Products Inc.
Guarantees and endorsements for other parties
For the year ended December 31, 2019

Attachment 2

Unit: NT$ Thousand

No.	Name of guarantor	Counter party of guarantee and endorsement		Limitation on amount of guarantees and endorsements for a specific enterprise	Highest balance for guarantees and endorsements during the period (Notes 3, 8 and 9)	Balance of guarantees and endorsements as of reporting date	Actual usage amount during the period	Property pledged for guarantees and endorsements (Amount)	Ratio of accumulated amounts of guarantees and endorsements to net worth of the latest financial statements	Maximum amount for guarantees and endorsements	Parent company endorsements/ guarantees to third parties on behalf of subsidiary (Notes 3, 8and 9)	Subsidiary endorsements/ guarantees to third parties on behalf of parent company	Endorsements/ guarantees to third parties on behalf of companies in Mainland China
		Name	Relationship with the Company (Note 2)										
0	Sino-American Silicon Products Inc.	SAS Sunrise Inc.	2	26,670,241	252,800 (USD8,000) (note4)	-	-	-	-	26,670,241	Y	N	N
0	Sino-American Silicon Products Inc.	Sulu	2	1,545,758 (note7)	1,453,600 (USD46,000) (note6)	1,379,080 (USD46,000)	1,379,080 (USD46,000) (note6)	-	5.17%	1,545,758 (note7)	Y (note5)	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	2	26,670,241	200,000	200,000	4,230	-	0.75%	26,670,241	Y	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World and its 100% owned subsidiaries	2	26,670,241	500,000	500,000	-	-	1.87%	26,670,241	Y	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World Co	2	26,670,241	100,000	-	-	-	-	26,670,241	Y	N	N
1	GlobalWafers	Topsil A/S	2	45,067,015	117,950	112,250	33,675	-	0.25%	135,201,045	N	N	N
1	GlobalWafers	GWS	2	45,067,015	1,896,000	1,798,800	384,827	-	3.99%	135,201,045	N	N	N
2	GTI	MEMC LLC	2	47,433,935	474,000	449,700	97,831	-	4.74%	47,433,935	N	N	N

No.	Name of guarantor	Counter party of guarantee and endorsement		Limitation on amount of guarantees and endorsements for a specific enterprise	Highest balance for guarantees and endorsements during the period (Notes 3, 8 and 9)	Balance of guarantees and endorsements as of reporting date	Actual usage amount during the period	Property pledged for guarantees and endorsements (Amount)	Ratio of accumulated amounts of guarantees and endorsements to net worth of the latest financial statements	Maximum amount for guarantees and endorsements	Parent company endorsements/ guarantees to third parties on behalf of subsidiary (Notes 3, 8and 9)	Subsidiary endorsements/ guarantees to third parties on behalf of parent company	Endorsements/ guarantees to third parties on behalf of companies in Mainland China
		Name	Relationship with the Company (Note 2)										
3	Sunrise PV World Co.	Sunrise PV Four	2	1,105,320	170	170	170	-	0.06%	1,105,320	N	N	N
3	Sunrise PV World Co.	Sunrise PV Three	2	1,105,320	421	421	421	-	0.15%	1,105,320	N	N	N

Note 1: The method of filling the nature of endorsement guarantee is as follows:
(1) The issuer fills in 0.
(2) The investee company is numbered sequentially by the company starting from the Arabic number 1.

Note 2: There are the following seven types of relationship between the endorsement guarantor and the endorsed object:
(1) A company with business transactions.
(2) Companies that the Company directly and indirectly holds more than 50% of the voting shares.
(3) Companies that directly and indirectly holds more than 50% of the voting shares of the Company.
(4) Among companies that the Company directly and indirectly holds more than 90% of the voting shares.
(5) Companies in the same industry or joint constructors that are mutually guaranteed under contractual requirements based on the needs of contracting project.
(6) A company that is endorsed by all the contributing shareholders in accordance with their shareholding ratio due to the joint investment relationship.
(7) The joint performance guarantee of the pre-sale house sales contract among companies in the same industry in accordance with Consumer protection law.

Note 3: (1)The amount of endorsements/guarantees provided by the endorsement guarantor company for a single enterprise is limited to 10% of the net worth of the company providing the endorsements/guarantees, but for the subsidiary company, limited to one time of the net worth of the company providing the endorsements/guarantees. The total amount of accumulated endorsements/guarantees shall not exceed the net worth of the Company. The total amount of the Company's endorsements/guarantees and that for a single enterprise shall not exceed five times the net worth of the company providing endorsements/guarantees. The aforesaid net worth is based on the financial statements recently audited or reviewed by an accountant. For endorsements/guarantees due to business transactions, except subject to the provisions of the preceding item, the endorsement guarantee amount should be equal to the higher of the purchase or sales amount.
(2) The Company's performance bond for duty paid after customs release is NT$ 10,000 thousands

Note 4: This amount is USD 8,000 thousands individual quota for SAS Sunrise Inc..

Note 5: The Company controls the financial and operating strategies of Sulu through effective agreements with other investors of Sulu, so Sulu is considered as a subsidiary.

Note 6: Sulu shares with the company a quota of USD 10,000 thousands and Sulu's individual quota is USD 36,000 thousands. The Company resolved on October 14, 2016 by the board of directors to repay part of the loan, and reduce the endorsements/guarantees quota to USD 46,000 thousands and repay the bank loan on October 19, 2016. The actual disbursement amount was reduced to USD 46,000 thousands.

Note 7: The endorsements/guarantees quota for Sulu is calculated as US$ 46,211 thousands, the amount of sales at the time of endorsements/guarantees.

Note 8: The method of endorsements/guarantees of GlobalWafers and its subsidiaries s are as follows:
(1) The total amount of accumulated endorsements/guarantees of GlobalWafers shall not exceed three times the net worth of the most recent financial statements of GlobalWafers.
(2) The amount of endorsements/guarantees of GlobalWafers for a single enterprise shall not exceed 10% of the net worth of the most recent financial statements of GlobalWafers. For subsidiaries, 1 time of the net worth of GlobalWafers.
(3) GlobalWafers's performance bond for duty paid after customs release is NT$ 9,000 thousands.

(3) Taisil's performance bond for duty paid after customs release is NT$ 5,000 thousands.

Note 9: The method of endorsements/guarantees of Sunrise PV World and its subsidiaries s are as follows:

(1) The total amount of accumulated endorsements/guarantees of Sunrise PV World shall not exceed four times the net worth of the most recent financial statements of Sunrise PV World.

(2) The amount of endorsements/guarantees of Sunrise PV World for a single enterprise shall not exceed 10% of the net worth of the most recent financial statements of Sunrise PV World. For subsidiaries, 4 times of the net worth of Sunrise PV World.

(3) The total amount of Sunrise PV World's endorsements/guarantees and that for a single enterprise shall not exceed five times the net worth of the most recent financial statements of Sunrise PV World.

(4) For endorsements/guarantees due to business transactions, except subject to the provisions of the preceding item, the endorsement guarantee amount of Sunrise PV World should be equal to the higher of the purchase or sales amount.

Sino-American Silicon Products Inc.

Securities held as of December 31, 2018 (excluding investment in subsidiaries, associates and joint ventures)

December 31, 2019

Attachment 3 Unit: NT$ thousand / thousand shares / thousand sheets; thousand units

Name of holder	Category and name of security	Relationship with the Company	Account title	Ending balance				Remarks
				Shares/Units (thousands)	Carrying value	Percentage of ownership (%)	Fair value	
Sino-American Silicon Products Inc.	Corporate bonds of Crystalwise Technology	Affiliated companies	Financial assets measured at amortized cost-current and non-current	530	507,680	-	507,680	
Sino-American Silicon Products Inc.	Stock of Powertec Energy Corporation	-	Financial assets at fair value through other comprehensive income	30,410	-	2.31%	-	
Sino-American Silicon Products Inc.	Stock of Giga Epitaxy Technology Corp.	-	Financial assets at fair value through other comprehensive income	531	6,095	1.61%	6,095	
Sino-American Silicon Products Inc.	Stock of Big Sun	-	Financial assets at fair value through other comprehensive income	7,500	-	4.12%	-	
SSTI	Stock of SILFAB SPA	-	Financial assets at fair value through other comprehensive income	300	326,090	15.00%	326,090	
Sino-American Silicon Products Inc.	Stock of SONGLONG ELECTRONICS CO., LTD.	Sino-American Silicon Products Inc.'s management is the director of the company	Financial assets at fair value through profit or loss-non current	221	-	13.81%	-	
Sino-American Silicon Products Inc.	Stock of 21-Century Silicon Inc.	-	Financial assets at fair value through profit or loss-non current	1,000	-	-	-	
SSTI	Stock of Clean Venture 21 Corporation	-	Financial assets at fair value through profit or loss-non current	10	-	7.20%	-	
GlobalWafers	CDIB Capital Growh Partners L.P	-	Financial assets at fair value through profit or loss-non current	-	95,163	3.85%	95,163	
GWBV	Overseas securities held	-	Financial assets at fair value through profit or loss-current	-	1,876,656	-	1,876,656	

Sino-American Silicon Products Inc.

Accumulatively buy or sell the same marketable securities amounting to NT$ 300 million or 20% of paid-in capital

For the year ended December 31, 2019

Attachment 4

Unit: thousand shares /NT$ thousand

Buying and selling companies	Types and names of securities	Account titles	Counter party	Relationship	Beginning of the period		Buy		Sell				End of the period	
					Number of shares	Amount	Number of shares	Amount	Number of shares	Selling price	Carrying cost	Disposition gain or loss	Number of shares	Amount
Sino-American Silicon Products Inc.	Stock of URE	Financial assets at fair value through other comprehensive income	-	-	34,492	270,073 (note)	-	-	34,492	313,662	348,370	(34,708)	-	-
Sino-American Silicon Products Inc.	Stock of Actron	Financial assets at fair value through other comprehensive income/investment in equity method	-	-	3,210	319,427 (note)	10,975	1,009,500	-	-	-	-	14,185	1,031,956 (note)
GWBV	Overseas securities held	Financial assets at fair value through profit or loss	-	-	-	-	-	1,876,656	-	-	-	-		1,876,656

Note: including the unrealized valuation gain or loss measured by Fair value and investment gain or loss under equity method.

Sino-American Silicon Products Inc.

Acquisition of individual real estate with amount exceeding the lower than NT$300 million or 20% of the capital stock

For the year ended December 31, 2019

Attachment 5 Unit: NT$ Thousand

Name of company	Name of property	Transaction date	Transaction amount	Status of payment	Counter-party	Relationship with the Company	If the counter party is a related party, disclose the previous transfer information				References for determining price	acquisition and current condition	Other
							Owner	Relationship with the Company	Date of transfer	Amount			
MEMC Korea	Property, plant and equipment	October 5, 2018	1,788,848	To the progress of the project	Sungdo Eng. Company	Non-parties Company	-	-	-	-	Fair value	For operating purpose	None
MEMC Korea	Property, plant and equipment	September 2018	323,297	To the progress of the project	L.Keeley Construction	Non-parties Company	-	-	-	-	Fair value	For operating purpose	None
Sino-American Silicon Products Inc.	Stock of Actron	December 12,2019	860,000	-	Crystalwise	Parent company	-	-	-	-	Accounted for at fair value	For operational use	The deposit of $250,000 thousand was paid at the time of signing the sale contract, and the remaining price will be paid after completing the ownership transfer registration.

Sino-American Silicon Products Inc.

Related party transactions for purchases and sales with amounts exceeding the lower than NT$ 300 million or 20% of the capital stock

For the year ended December 31, 2019

Attachment 6

Unit: NT$ Thousand

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
Sino-American Silicon Products Inc.	Aleo Solar	Subsidiaries directly held by the parent company.	Sales	(142,736)	(2)%	Net 90 days	-		-	-%	
Aleo Solar	Aleo Solar Distribuzion Italia S.r.l	Subsidiaries indirectly held by the parent company.	Sales	(268,427)	(19)%	Net 60 days	-		88,870	66%	Note
Sunrise PV World Co.	Sunrise PV One	Chairman of the parent company is also the Chairman of Sino-American Silicon Products Inc.	Sales	(713,625)	(88)%	15 days after the contract is agreed	-		13,191	99%	Note
GlobalWafers	Sino-American Silicon Products Inc.	Subsidiaries directly held by the parent company.	Purchase	877,825	6%	O/A 30 days EOM	-		(220,875)	(9)%	Note
GlobalWafers	GTI	Subsidiary and affiliated enterprise of Sino-American Silicon Products Inc.	Purchase	2,074,272	14%	O/A 60 days	-		(310,922)	(12)%	
GlobalWafers	Kunshan Sino	Subsidiaries directly held by the parent company.	Purchase	1,969,639	13%	O/A 60 days	-		(265,059)	(10)%	Note
GlobalWafers	GWJ	Subsidiaries indirectly held by the parent company.	Purchase	5,998,428	40%	O/A 60-90 days	-		(1,365,605)	(53)%	Note

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
GlobalWafers	Topsil A/S	Subsidiaries indirectly held by the parent company.	Purchase	620,593	4%	O/A 30-60 days	-		(42,126)	(2)%	Note
GlobalWafers	GWS	Subsidiaries indirectly held by the parent company.	Purchase	585,759	4%	O/A 60 days	-		(58,237)	(2)%	Note
Taisil	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,324,609	11%	O/A 60 days	-		(249,946)	(8)%	Note
GWS	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	549,011	4%	O/A 60 days	-		(177,954)	(6)%	Note
Actron Technology Corporation	GlobalWafers	Chairman of the parent company is also the Chairman of Sino-American Silicon Products Inc.	Purchase	229,325	2%	O/A 60 days EOM	-		(48,111)	(2)%	Note
MEMC Korea	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	778,020	6%	O/A 60 days	-		(109,525)	(4)%	Note
MEMC SpA	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	847,708	7%	O/A 60 days	-		(139,596)	(5)%	Note
GTI	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	3,294,333	26%	O/A 45 days	-		(256,098)	(9)%	Note
Kunshan Sino	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	886,190	7%	O/A 30 days	-		(72,513)	(2)%	Note
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,681,018	13%	O/A 60-90 days	-		(426,609)	(14)%	Note

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
Topsil A/S	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	442,842	3%	O/A 30-60 days	-		(62,464)	(2)%	Note
GWS	MEMC LLC	Subsidiaries indirectly held by the parent company.	Purchase	1,113,615	6%	O/A 60 days	-		(210,402)	(7)%	Note
GWS	MEMC LLC		Sales	(556,291)	(2)%	O/A 60 days	-		75,379	2%	
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	Purchase	1,686,518	8%	O/A 60 days	-		(221,284)	(7)%	Note
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	Sales	(661,023)	(3)%	O/A 60 days	-		75,452	2%	Note
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	Purchase	3,831,532	19%	O/A 60 days	-		(509,008)	(17)%	Note
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	Sales	(3,436,429)	(15)%	O/A 60 days	-		593,826	19%	Note
GWS	MEMC Korea	Subsidiaries indirectly held by the parent company.	Purrchase	1,486,461	7%	O/A 60 days	-		(201,533)	(7)%	Note
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	Purchase	4,382,815	22%	O/A 60 days	-		(707,117)	(23)%	Note
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	Sales	(1,572,917)	(7)%	O/A 60 days	-		210,912	7%	Note
GWS	Taisil	Subsidiaries indirectly held by the parent company.	Purchase	6,982,787	35	O/A 60 days	-		(1,041,120)	(34)%	Note

Name of company	Related party	Nature of relationship	Transaction situation				Transactions with terms different from others		Notes/Accounts receivable (payable)		Remarks
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
GWS	Taisil	Subsidiaries indirectly held by the parent company.	Sales	(524,118)	(2)%	O/A 60 days	-		173,631	5%	Note

Note: Transactions with standalone parties as mentioned above were eliminated when preparing the standalone reports.

Sino-American Silicon Products Inc.

Receivables from related parties with amounts exceeding the lower than NT$ 100 million or 20% of the capital stock

December 31, 2019

Attachment 7

Unit: NT$ Thousand

Name of company	Counter party	Nature of relationship	Ending balance	Turnover rate	Overdue		Amounts received in subsequent period (Note 1)	Allowance for bad debts
					Amount	Action taken		
Sino-American Silicon Products Inc.	Sulu	Subsidiaries indirectly held by the parent company.	299,621	note2	-		-	-
SSTI	AMLED	Subsidiaries indirectly held by the parent company.	334,686	note2	-		-	-
SSTI	Sulu	Subsidiaries indirectly held by the parent company.	317,927	note2	-		-	-
GlobalWafers	GTI	Subsidiaries indirectly held by the parent company.	256,098	11.33	-		256,098	-
GlobalWafers	GWJ	Subsidiaries indirectly held by the parent company.	426,609	3.80	-		181,827	-
GlobalWafers	GWS	Subsidiaries indirectly held by the parent company.	177,954	5.72	-		177,954	-
GlobalWafers	MEMC Korea	Subsidiaries indirectly held by the parent company.	109,525	3.66	-		79,480	-
GlobalWafers	MEMC SpA	Subsidiaries indirectly held by the parent company.	139,596	5.24	-		139,596	-
GlobalWafers	Taisil	Subsidiaries indirectly held by the parent company.	249,946	8.21	-		249,946	-
Taisil	GlobalWafers	Subsidiaries indirectly held by the parent company.	6,400,000	note2	-		-	-
Sino-American Silicon Products Inc.Aleo Solar	GlobalWafers	Subsidiaries indirectly held by the parent company.	220,875	4.59	-		220,875	-
GTI	GlobalWafers	Subsidiaries indirectly held by the parent company.	310,922	6.65	-		310,922	-
Kunshan Sino	GlobalWafers	Subsidiaries indirectly held by the parent company.	265,059	4.85	-		236,851	-

Name of company	Counter party	Nature of relationship	Ending balance	Turnover rate	Overdue		Amounts received in subsequent period (Note 1)	Allowance for bad debts
					Amount	Action taken		
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	1,365,605	3.89	-		857,018	-
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	4,140,000	note2	-		-	-
GWS	GWBV	Subsidiaries indirectly held by the parent company.	2,998,000	note2	-		-	-
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	210,912	8.89	-		210,912	-
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	593,826	7.67	-		593,826	-
GWS	GWI	Subsidiaries indirectly held by the parent company.	3,258,826	note2	-		-	-
GWS	MEMC LLC	Subsidiaries indirectly held by the parent company.	173,631	3.42	-		173,631	-
MEMC Sdn Bhd	GWS	Subsidiaries indirectly held by the parent company.	221,284	8.33	-		221,284	-
MEMC SpA	GWS	Subsidiaries indirectly held by the parent company.	509,008	8.16	-		509,008	-
MEMC SpA	GWS	Subsidiaries indirectly held by the parent company.	2,047,302	note2	-		-	-
MEMC Korea	GWS	Subsidiaries indirectly held by the parent company.	201,533	7.63	-		201,533	-
MEMC Japan	GWS	Subsidiaries indirectly held by the parent company.	707,117	4.94	-		-	-
Taisil	GWS	Subsidiaries indirectly held by the parent company.	1,041,120	7.34	-		-	-
MEMC LLC	GWS	Subsidiaries indirectly held by the parent company.	210,402	6.74	-		210,402	-

Note 1: The amount recovered after February 26, 2019.
Note 2: Receivables from related parties generated by financing.
Note 3: The above transactions related to the standalone standalone have been written off when preparing the standalone financial statements.

Sino-American Silicon Products Inc.

Information on investees (excluding information on investees in Mainland China)

For the year ended December 31, 2019

Attachment 8

Unit: NT$ Thousand

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
Sino-American Silicon Products Inc.	SSTI	British Virgin Islands	Investment and triangular trade center with subsidiaries in China	1,425,603 (USD 45,255)	1,425,603 (USD 45,255)	48,526	100.00%	971,888	11,694	11,694	Subsidiary Note 5
Sino-American Silicon Products Inc.	GlobalWafers	Taiwan	Semiconductor silicon wafer materials and components manufacturing and trade	8,955,952	8,955,952	222,727	51.17%	23,060,434	13,644,095	6,981,683	Subsidiary
Sino-American Silicon Products Inc.	Aleo Solar	Prenzlau	Solar module manufacturing and sale and wholesale of electronic materials	558,139 (EUR 13,500)	558,139 (EUR 13,500)	Note 1	100.00%	385,238	161,178	161,178	Subsidiary Note 2
Sino-American Silicon Products Inc.	Aleo Sunrise	Germany	Manufacturing of solar cell as well as sale and wholesale of electronic materials	-		Note 1	100.00%	-	(251,617)	(194,488)	Subsidiary Note 4
Sino-American Silicon Products Inc.	SAS Sunrise Inc.	Cayman	Reinvestments in various businesses	794,373 (USD 24,500)	794,373 (USD 24,500)	24,500	100.00%	461,117	(52,533)	(52,533)	Subsidiary
Sino-American Silicon Products Inc.	Sunrise PV World Co.	Taiwan	Power generating business	300,000	300,000	30,000	100.00%	276,330	29,842	29,597	Subsidiary
Sino-American Silicon Products Inc.	Sunrise PV Five Electric	Taiwan	Power generating business	1,000	-	100	100.00%	989	(11)	(11)	Subsidiary
Sino-American Silicon Products Inc.	Crystalwise Technology Inc.	Taiwan	Optical wafer and substrate manufacturing and trade	2,215,803	2,010,843	86,923	41.93%	280,554	(751,496)	(307,020)	Affiliated companies Note 2

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
Sino-American Silicon Products Inc.	Accu Solar Corporation	Taiwan	Solar energy system provider	112,193	112,193	7,452	24.70%		(5,488)	(713)	Affiliated companies
Sino-American Silicon Products Inc.	Cathy Sunrise	Taiwan	Power generating business	450,000	450,000	45,000	30.00%	459,333	25,615	8,847	Affiliated companies
Sino-American Silicon Products Inc.	TSCS	Taiwan	Semiconductor special gas and chemical material manufacturer	990,000	900,000	90,000	30.93%	839,830	(150,029)	(78,333)	Affiliated companies Note 2
Sino-American Silicon Products Inc.	Actron Technology Corporation	Taiwan	Semiconductor electric wafer materials and components manufacturing and trade	1,147,715	-	14,185	15.50%	1,031,956	323,478	12,458	Affiliated companies Note 2
Sunrise PV World Co.	Sunrise PV Electric	Taiwan	Power generating business	-	42,000	-	-	-	415	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Two	Taiwan	Power generating business	-	15,000	-	-	-	(123)	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Three	Taiwan	Power generating business	15,000	100,000	1,500	100.00%	16,623	1,488	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Four	Taiwan	Power generating business	100,000	100,000	10,000	100.00%	15,490	449	-	Subsidiary Note 7
Sunrise PV World Co.	Sunrise PV Five	Taiwan	Power generating business	-	65,000	-	-	-	266	-	Subsidiary Note 7
SAS Sunrise Inc.	SAS Sunrise Pte.Ltd.	Singapore	Reinvestments in various businesses	719,292 (USD 22,000)	719,292 (USD 22,000)	30,934	100.00%	549,101	(25,460)	-	Subsidiary Note 7
SAS Sunrise Pte.Ltd.	AMLED	Philippines	Reinvestments in various businesses	-	-	-	-	-	-	-	Subsidiary Note 6 and 7
SAS Sunrise Pte.Ltd.	Sulu	Philippines	Power generating business	440,667 (USD 13,435)	440,667 (USD 13,435)	420,000	40.00%	306,658	(46,753)	-	Subsidiary Note 7
AMLED	Sulu	Philippines	Power generating business	297,229 (USD 9,065)	297,229 (USD 9,065)	472,500	45.00%	173,902	(46,753)	-	Subsidiary Note 7
Aleo Solar	Aleo Solar Distribuzione Italia S.r.l	Italy	Solar module sale and wholesale of electronic materials	4,078 (EUR 100)	4,078 (EUR 100)	Note 1	100.00%	2,994	4,652	-	Subsidiary Note 7

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
GlobalWafers	GWI	Cayman	Reinvestments in various businesses	2,241,668 (USD 73,423)	2,241,668 (USD 73,423)	90,000	100.00%	4,360,907	2,074,206	-	Subsidiary Note 7
GlobalWafers	GSI	Cayman	Business investment and triangular trade center with subsidiaries in China	756,809 (USD 26,555)	756,809 (USD 26,555)	25,000	100.00%	1,521,431	202,929	-	Subsidiary Note 7
GlobalWafers	GWJ	Japan	Semiconductor silicon wafer manufacturing and trading	5,448,015	5,448,015	128	100.00%	15,262,418	1,904,017	-	Subsidiary Note 3 and 7
GlobalWafers	GWafers Singapore	Singapore	Reinvestments in various businesses	11,966,930	11,966,930	364,000	67.20%	23,271,556	5,553,670	-	Subsidiary Note 7
GlobalWafers	Topsil A/S	Denmark	Semiconductor silicon wafer manufacturing and trading	1,964,069 (DKK407,600)	1,964,069 (DKK407,600)	1,000	100.00%	1,660,861	64,061	-	Subsidiary Note 7
GlobalWafers	Whole Global Investment Corporation	Taiwan	Reinvestments in various businesses	309,760	200,000	30,976	30.98%	571,929	65,636	20,331	Affiliated companies
GlobalWafers	Taisil	Taiwan	Semiconductor silicon wafer manufacturing and sales	14,504,663	14,504,663	9,999	99.99%	17,705,613	3,546,184	-	Subsidiary
GWI	GWafers Singapore	Singapore	Reinvestments in various businesses	5,411,947	5,411,947	177,674	32.80%	4,360,907	5,553,670	-	Subsidiary Note 3 and 7
GWJ	MEMC Japan	Japan	Semiconductor silicon wafer manufacturing and sales	373,413 (JPY 100,000)	373,413 (JPY 100,000)	750	100.00%	3,066,944	227,673	-	Subsidiary Note 3 and 7
Topsil A/S	Topsil PL	Poland	Semiconductor silicon wafer manufacturing and trading	-	-	0.1	100.00%	-	13,719	-	Subsidiary Note 3 and 7
GWafers Singapore	GWS	Singapore	Investment, marketing and trading business	14,671,320 (USD 436,398)	14,671,320 (USD 436,398)	299,445	100.00%	25,151,706	6,223,239	-	Subsidiary Note 3 and 7
GWS	GWBV	Netherlands	Reinvestments in various businesses	6,413,892 (USD 162,723)	6,413,892 (USD 162,723)	0.1	100.00%	40,918,549	3,547,609	-	Subsidiary Note 3 and 7
GWBV	MEMC SpA	Italy	Semiconductor silicon wafer manufacturing and sales	6,732,641 (USD 204,788)	6,732,641 (USD 204,788)	65,000	100.00%	11,849,317	1,425,916	-	Subsidiary Note 3 and 7

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value			
GWBV	MEMC BV	Singapore	Reinvestments in various businesses	-	-	-	-	-	414,476	-	Subsidiary Note 3 and 7
MEMC SpA	MEMC SarL	France	Trading business	1,316 (USD 40)	1,316 (USD 40)	0.5	100.00%	807	753	-	Subsidiary Note 3 and 7
MEMC SpA	MEMC GmbH	Germany	Trading business	4,622 (USD 141)	4,622 (USD 141)	0.002	100.00%	4,817	(617)	-	Subsidiary Note 3 and 7
MEMC SpA	MEMC BV	Netherlands	Reinvestments in various businesses	-	2,430,141 (USD 73,918)	-	-	-	414,476	-	Subsidiary Note 3 and 7
MEMC BV	MEMC Korea	Korea	Semiconductor silicon wafer manufacturing and sales	-	2,427,650 (USD 73,842)	-	-	-	1,270,737	-	Subsidiary Note 3 and 7
GWBV	MEMC Korea	Korea	Semiconductor silicon wafer manufacturing and sales	3,641,474 (USD 110,763)	3,641,474 (USD 110,763)	25,200	100%	15,373,703	1,270,737	-	Subsidiary Note 3 and 7
GWBV	GTI	U.S.A.	Epitaxial silicon wafer production and trade of epitaxy foundry business	2,779,849 (USD 91,262)	2,779,849 (USD 91,262)	1	100.00%	9,486,787	947,639	-	Subsidiary Note 3 and 7
GWBV	MEMC Sdn Bhd	Malaysia	Semiconductor silicon wafer R&D, manufacturing and sales	898,016 (USD 27,315)	898,016 (USD 27,315)	1,036	100.00%	740,576	75,835	-	Subsidiary Note3 and 7
GWBV	MEMC Ipoh	Malaysia	Semiconductor silicon wafer manufacturing and sales	93,907 (USD 1,323)	146,624 (USD 3,020)	612,300	100.00%	3,807	236	-	Subsidiary Note 3 and 7
GTI	MEMC LLC	U.S.A.	Semiconductor silicon wafer R&D, manufacturing and sales	543,384 (USD 17,839)	543,384 (USD 17,839)	-	100.00%	4,263,233	178,816	-	Subsidiary Note 3 and 7

Note:1 Corporation limited

Note 2: The investment gain or loss recognition includes the investment cost and the amortization of the net equity acquired.

Note 3: The investees are indirect subsidiaries of the Company. GWafer Singapore had been restructured so the Company and GWI held 67.2 %and 32.8 p%, respectively, of its shares on July 1, 2018. In addition, GTI was transferred to GWBV; and MEMC LLC was transferred to GTI. In June 18, 2019, MEMC BV was transferred to GWBV and was liquidated in September 2019. MEMC Korea was transferred from GWBV and MEMC BV to GWBV.

Note 4: Aleo sunrise was100% owned by Sino-American Silicon Products Inc from March, 2019.

Note 5: Not including earnings transferred to capital increase.

Note 6: The Company does not hold the ownership interests of AMLED, but the Company can control the financial and operating strategies of AMLED and obtain all the benefits of its operations and net assets in accordance with the terms of the agreements with such standalone, so AMLED is considered as a subsidiary.

Note 7: The profit and loss of the investee company is included in its investment company. To avoid confusion, it will not be expressed here.

Note 8: The above transactions relating to the standalone standalone have been written off when preparing the standalone financial statements.

Sino-American Silicon Products Inc.
Information on investment in mainland China
For the year ended December 31, 2019

Attachment 9 Unit: NT$ Thousand

(I) The names of investees in Mainland China, the main businesses and products, and other information

Name of investee	Main businesses and products	Total amount of paid in capital	Method Of investment	Accumulated outflow of investment from Taiwan as of January 1, 2017	Investment flows		Accumulated outflow of investment from Taiwan as of December 31, 2018	Net income (losses) of the investee	Shareholding ratio of direct or indirect investment of GlobalWafers	Investment income (losses) (Note 4)	Book value	Accumulated remittance of earnings in current period
					Outflow	Inflow						
Kunshan Sino	Silicon rods and silicon wafer processing and trade	769,177 (Note 7)	(Note 1)	713,300 (USD 21,729)	-	-	713,300 (USD21,729)	195,307	100.00%	195,307	1,425,100	-
SunEdison Shanghai	Trading business	7,527 (RMB 1,500)	(Note 2)	(Note 2)	-	-	(Note 2)	(557)	100.00%	(557)	8,914	-
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	Sales and marketing business	9,756 (RMB 2,000)	(Note 3)	-	-	-	-	(21,528)	60.00%	(12,917)	7,627	-

(II) Limitation on investment in Mainland China

Company Name	Accumulated Investment in Mainland China as of December 31, 2018	Investment Amounts Authorized by Investment Commission, MOEA	Upper Limit on Investment
GlobalWafers	713,300 (USD 21,729)	818,233 (USD 25,000)(Note 5)	27,043,950 (Note 6)

Note 1: Investments through GSI registered in mainland China.
Note 2: Investments through GWBV registered in mainland China which is acquired from the acquisition of GWS (SSL).
Note 3: Kunshan Sino was invested by Shanghai GROWFAST in mainland China, without limit on investment, due to not having any investment from Taiwan.
Note 4: The basis for investment income (loss) recognition is from the financial statements audited.
Note 5: Initial investment amounts denominated in foreign currencies are translated into New Taiwan Dollars using the Historical Foreign Exchange Rate.
Note 6: Calculated by 60% of the quota of the "Review Principles of Investment or Technical Cooperation in Mainland China" August 29, 2008, multiplied by the net worth of GlobalWafers on December 31, 2018.
Note 7: Retained earnings Transferred to Capital was included.

Sino-American Silicon Products Inc.

List of cash and cash equivalents

December 31, 2019

Expressed in thousands of New Taiwan Dollars
(Foreign currency in $ / JPY)

Items	Summary	Amount
Cash	Petty cash and cash on hand	$ 146
Bank deposits	Check deposits	3,930
	Demand deposits	143,414
	Foreign currency deposit (USD: 36,935,93.05 ; CHF: 5,840.68 ; JPY: 1,857,518 ; EUR: 19,085.09; RMB: 144,706.13)	1,109,298
	Subtotal	1,256,642
	Total	**$ 1,256,788**

Note: Foreign currency exchange rates at the balance sheet date are as follows:

USD exchange rate: 29.98

CHF exchange rate: 30.925

JPY exchange rate: 0.276

EUR exchange rate: 33.59

RMB exchange rate: 4.305

Sino-American Silicon Products Inc.
Statement of Notes and Accounts Receivable
December 31, 2019

Expressed in thousands of New Taiwan Dollars

Customer Name		Amount
Company D	$	85,295
Company A		59,643
Company B		33,788
Others (individual amount does not exceed 5%)		54,104
		232,830
Less: Allowance for bad debt		(33,788)
	$	**199,042**

Note: 1. Notes and accounts receivable resulting from business activities.

2. Accounts receivable – related party is not included in the accounts receivable referred to above. Please refer to Note VII to the financial statements for details.

Sino-American Silicon Products Inc.
Statement of Inventories
December 31, 2019

Expressed in thousands of New Taiwan Dollars

Items	Amount: Costs	Amount: Net realizable value	Remark
Finished goods and products	$ 226,545	247,988	Please refer to Note 4 (7) to the standalone financial statements for the reference of net realizable value of inventory, in detail.
Work in progress	39,051	58,984	
Raw materials	78,664	72,477	
Supplies	63,685	17,828	
Subtotal	407,945	**397,287**	
Less: Allowance for reduction of inventory to market	(72,304)		
Total	**$ 355,641**		

Sino-American Silicon Products Inc.
Statement of other current assets
December 31, 2019

Expressed in thousands of New Taiwan Dollars

Items	Amount
Income tax refund receivable	$ 22,593
Prepaid insurance expense	4,425
Others (individual amount does not exceed 5%)	11,373
	$ 38,391

Sino-American Silicon Products Inc.

Financial assets measured at fair value through other comprehensive gain or loss — Non-current change statement

For the year ended December 31, 2019

Expressed in thousands of New Taiwan Dollars

	Beginning balance		Increase (decrease) for the period		Reclassified		Gain or loss on evaluation	End of the period				
Name	**Shares**	**Fair value**	**Shares**	**Amount**	**Shares**	**Amounts**	**Amount**	**Shares**	**Fair value**	**Accumulated impairment loss**	**Guarantee or collateral provided**	**Remarks**
Actron Technology Corporation	3,210	$ 316,427	1,748	195,973	4,958	(485,420)	(29,980)	-	-	-	None	
Giga Electronic Technology Corp.	395	4,458	136	1,637		-	-	531	6,095	-	None	
Powertech Energy Corp.	30,410	130,764	-	-	-	-	(130,764)	30,410	-	-	None	
Bigsun Technology Corporation	7,500	-	-	-	-	-	-	7,500	-	-	None	
Phoenix Silicon International Corporation	1,956	76,284	(1,956)	(76,284)		-	-	-	-	-	None	
URE	34,492	270,073	(34,492)	(270,073)		(485,420)	-	-		-	None	
Total		$ 801,006		(148,747)	4,958	(485,420)	(160,744)		6,095			

Note: Capital reduction to make up for losses

Sino-American Silicon Products Inc.

Financial assets measured at amortized cost - non-current changes statement

For the year ended December 31, 2019

Unit: thousand sheets / NT$ thousands

Name	Beginning balance		Increase (decrease) for the period		Decrease of the year		End of the period				
	Number of sheets	Carrying Amount	Number of sheets	Amount	Number of sheets	Amount	Number of sheets	Carrying Amount	Accumulated impairment loss	Guarantee or collateral provided	Remarks
Crystalwise Technology - Corporate bonds	280	$ 281,366	250	252,287	-	-	530	507,680	25,973	None	

Sino-American Silicon Products Inc.
Statement of changes in investments under equity method
For the year ended December 31, 2019

Unit: NT$ thousands /thousand shares

Investee company name	Beginning balance		Increase (decrease) for the period		Current reclassification		Net change in net equity value of subsidiaries and related enterprises recognized by equity method (Note 2)	Investment profits and losses	Exchange differences on translation of foreign financial statements	Remeasurement of defined benefit plan of subsidiaries	Other adjustment items (Note 3)	Ending balance			Market price or net equity value		Guarantee or collateral provided
	Shares	Amount	Shares	Amount	Shares	Amount						Shares	Amount	Shareholding ratio (%)	Unit price	Total price	
Subsidiary:																	
SSTI	48,526	$ 973,360	-	-	-	-	-	11,694	(23,970)	-	10,804	48,526	971,888	100.00	-	971,888	None
GlobalWafers	222,293	22,074,512	-	(5,568,175) (note1)	-	-	2,050	6,981,683	(614,868)	29,988	155,244	222,727	23,060,434	51.17	382.50	85,193,077	None
Aleo Solar	-	239,786	-	-	-	-	-	161,178	(15,726)	-	-	-	385,238	100.00	-	385,238	None
Aleo sunrise	30,000	-	-	194,488	-	-	-	(194,488)	-	-	-	-	-	-	-	-	None
Sunrise PV World Co.	24,500	246,733	-	-	-	-	-	29,597	-	-	-	30,000	276,330	100.00	-	276,330	None
SAS Sunrise Inc.	9,000	498,283	-	-	-	-	-	(52,533)	15,367	-	-	24,500	461,117	100.00	-	461,117	None
Sunrise PV Five Electric	-	-	100	1,000 (note1)	-	-	-	(11)	-	-	-	100	989	100.00	-	989	None
		24,032,674		(5,372,687)		-	2,050	6,937,120	(639,197)	29,988	166,048		25,155,996			87,288,639	None
Affiliated enterprises:																	
Crystalwise Technology Inc.	65,923	415,391	21,000	204,960	-	-	(12,106)	(307,020)	(5,087)	-	(15,584)	86,923	280,554	41.93	11.85	1,030,041	None
Cathy Sunrise	45,000	464,252	-	(13,766) (note1)	-	-	-	8,847	-	-	-	45,000	459,333	30.00	-	459,333	None
Accu Solar Corporation	7,452	65,648	-	-	-	-	-	(713)	-	-	-	7,452	64,935	24.70	-	64,935	None
TSCS	90,000	918,163	-	-	-	-	-	(78,333)	-	-	-	90,000	839,830	30.93	-	839,830	None
Actron Technology Inc.	-	-	9,227	788,735(note1)	4,958	485,420(note2)	(269,194)	12,458	(1,910)	-	16,447	14,185	1,031,956	15.50	97.3	1,380,234	None
		1,863,454		979,929		485,420	(281,300)	(364,761)	(6,997)	-	863		2,676,608		-	3,774,373	
Unrealized gain fromaffiliate accounts		(12,690)		(25,668)	-	-	-	-	-	-	-	-	(38,358)				
Total		$ 25,883,438		(4,418,426)		485,420	(279,250)	6,572,359	(646,194)	29,988	166,911	-	27,794,246				

Note 1: The cash dividend of NT$ 5,568,175 thousand for the subsidiary、the cash dividend of NT$ 13,766 thousand by Cathy Sunrise、the increase of investment of NT$ 1000 thousand for the subsidiary、the increase of investment of NT$ 813,527 thousand for the affiliate company and the cash dividend of NT$ 5,568,175 thousand by Actron Technology.

Note 2: The recognized into financial assets measured at fair value through other comprehensive gain or loss transfer into investment under equity method base on Fair value.

Note 3: Including the changes due to the subsidiary's not subscribing in accordance with the shareholding ratio.

Note 4: Including unrealized gain or loss of the financial assets of affiliated enterprises, the employees' unearned remuneration.

Sino-American Silicon Products Inc.
Statement of changes of property, plant and equipment
For the year ended December 31, 2019

Please refer to Note 6 (9) for relevant information of property, plant and equipment.

Sino-American Silicon Products Inc.
Statement of Right for use assets
For the year ended December 31, 2019

Please refer to Note 6 (10) for relevant information of right for use assets.

Statement of other non-current assets
For the year ended December 31, 2019

Expressed in thousands of New Taiwan Dollars

Items	Amount	
Deferred Income tax assets – non-current	$	70,335
Others (individual amount does not exceed 5%)		3,973
	$	**74,308**

Sino-American Silicon Products Inc.
Statement of Short term borrowings
December 31, 2019

Expressed in thousands of New Taiwan Dollars

Lending bank	Explanation	Ending balance	Contract duration	Range of Interest Rate	The unutilized credit amount	Mortgage or guarantee
Taipei Fubon Bank	Working capital	$ 200,000	Note 1	0.73%	1,750,000	None.

Note 1: The loan period is based on the actual practice and it is usually repaid in one month. The operation turnover is for one year.

Note 2: In addition to the above booked, the Company still has undisbursed financing amount of NT$ 8,479,867 thousands.

Sino-American Silicon Products Inc.
Statement of Accounts payable
December 31, 2019

Supplier Name	Amount
Supplier甲	$ 141,656
Supplier丙	79,354
Supplier戊	51,992
Supplier乙	39,392
Others (individual amount does not exceed 5%)	188,499
Total	$ 500,893

Note: 1. Accounts payable resulting from business activities.
2. Accounts payable – related parties were not included in the above accounts. Please refer to Note 7 to the standalone financial statements for details.

Sino-American Silicon Products Inc.
Statement of lease liabilities
December 31, 2019
Expressed in thousands of New Taiwan Dollars

Items	description	Rental term	Discount rate	Ending balance	Remark
Building	Warehouse	2015/7/1-2025/6/30	1.11%	$ 120,94700	-
Land	Science park	2019/1/1-2027/12/31	1.11%	31,832	-
Office and other equipments	Cars	2019/3/11-2022/3/10	1.11%	1,834	-
Office and other equipments	Cars	2019/1/1-2021/12/27	1.11%	804	-
				155,417	
Less: lease liabilities -current				(26,511)	
				$ 128,906	

Sino-American Silicon Products Inc.
Statement of contract liabilities
December 31, 2019

Customer Name	Amount
United Renewable Energy Co., Ltd.	$ 883,220
Company G	203,800
Company I	58,418
Others (individual amount does not exceed 5%)	58,757
	1,240,195
Less: contract liability - current	(88,538)
Total	$ 1,115,657

Sino-American Silicon Products Inc.
Statement of other current liabilities
December 31, 2019

Expressed in thousands of New Taiwan Dollars

Items	Summary	Amount
Equipment payable		$ 30,215
Lease liabilities-current		26,511
Others (individual amount does not exceed 5%)	Labor service, water and electricity, and interest payable	306,875
Total		**$ 363,601**

Sino-American Silicon Products Inc.
Statement of other liabilities-non current
December 31, 2019

Items	Summary	Amount
Lease liabilities-current		$ 128,906
Defer tax liabilities-non current		32,839
Total		**$ 161,745**

Sino-American Silicon Products Inc.
Operating revenues statement
For the year ended December 31, 2019

Expressed in thousands of New Taiwan Dollars

Items	Sales volume	Amount
Sales revenue:		
Solar energy – cells	96,544 thousand/pcs	$ 3,020,157
Solar energy – bricks	538 thousand/kg	792,922
Solar energy – modules	50 thousand/pcs	178,923
Solar energy – wafers	9,974 thousand/pcs	144,715
Revenues from sale of goods and raw materials		1,854,756
		5,991,474
Processing revenue		3,276
Electricity Revenue and others		8,135
Net operating revenues		**$ 6,002,885**

Sino-American Silicon Products Inc.
Statement of Operating Cost
For the year ended December 31, 2019
Expressed in thousands of New Taiwan Dollars

Items	Amount
Beginning inventory - Finished goods	$ 22,495
Add: Purchase in this period	1,343,365
Less: Inventories at the end of the period	5,111
Realized sale gain from inter-affiliate accounts	1,820
Transfer of expenses	829
Cost of goods purchased and sold	1,358,100
Raw material consumption	
Beginning raw materials	465,062
Add: Material purchased in this period	2,951,991
Less: Ending raw materials	142,349
Reclassify as fixed assets	1,645
Realized sale gain from inter-affiliate accounts	2,729
Reclassified as expenses	456,390
Sale in this period	1,065,354
Consumption of raw materials in this period	1,748,586
Direct labor	288,827
Manufacturing expenses	1,447,963
Manufacturing cost	3,485,376
Add: Beginning WIP goods	61,709
Transfer in of finished goods	456,689
Less: Ending WIP goods	39,051
Costs of finished goods	3,964,723
Add: Beginning finished goods	352,462
Less: Finished goods at end of period	221,434
Other	16,243
Transfer out of finished goods	456,689
Cost of finished goods sold	3,622,819
Cost of goods sold	4,980,919
Add: Cost of raw materials sold	1,065,354
Unamortized fixed manufacturing expense	170,471
The impairment loss of prepaid purchase	13,000
The impairment loss of purchase contract	3,884,607
Realized profit and offset from sales to affiliated companies	19,953
Less: Appropriation for inventory loss in valuation	10,942
Total operating cost	**$ 9,895,050**

Sino-American Silicon Products Inc.

Statement of operating expense

For the year ended December 31, 2019

Expressed in thousands of New Taiwan Dollars

Items	Selling expenses	Administrative expenses	Research and development expenses
Salary expenses	$ 31,854	191,525	62,831
Import/export expenses	9,073	17	87
Directors remuneration	-	41,790	-
Depreciation	100	17,966	21,288
Service fees	7	30,596	638
Others (summary of individual amount not exceeding 5%)	9,667	33,020	26,925
Total	**$ 50,701**	**314,914**	**111,769**

Sino-American Silicon Products Inc.

Statement of other gains and losses, net

For the year ended December 31, 2019

Please refer to Note 6 (24) of the standalone financial statements for relevant information of other gains and losses, net.

Sino-American Silicon Products Inc.

Statement of finance cost

For the year ended December 31, 2019

Please refer to Note 6 (25) of the standalone financial statements for relevant information of finance cost.

Sino-American Silicon Products Inc.

Employee benefits, depreciation, depletion, and amortization expenses summarized by functions.

For the year ended December 31, 2019

Please refer to Note 12 of the standalone financial statements for relevant information of employee benefits, depreciation, depletion, and amortization expenses.