Attachment 1

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, 2018 under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports, and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with International Financial Reporting Standards No. 10 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 21, 2019

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, 2018 and 2017, 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, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and with the International Financial Reporting Standards ("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% and 1% of the total assets respectively On December 31, 2018 and 2017. The share of gain or loss of related companies under equity method for 2018 and from January 1 to December 31, 2017 accounted for (3)% and (5)% of the net profit before tax respectively.

The consolidated company has prepared standalone financial statements for 2018 and 2017, 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(16) “Revenue recognition” for accounting policy and note 6(27) “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, 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 (15) 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(12) “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(16) “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 21, 2019

Sino-American Silicon Products Inc. and subsidiaries

Consolidated Balance Sheet

December 31, 2018 and 2017

Expressed in thousands of New Taiwan Dollars

Code	Assets	2018.12.31 Amount	%	2017.12.31 Amount	%
	Current assets:				
1100	Cash and cash equivalents (Note 6(1))	$ 36,829,131	35	20,342,780	23
1110	Financial assets at fair value through profit or loss—current (Note 6(2))	323,548	-	21,546	-
1170	Notes and accounts receivable, net (Note 6(5))	9,767,417	9	8,715,836	10
1180	Accounts receivable due from related parties, net (Note 7)	113,915	-	113,707	-
130X	Inventories (Note 6(6))	7,881,367	8	10,047,905	11
1476	Other financial assets – current (Note 8)	770,117	1	174,383	-
1479	Other current assets	1,575,354	2	1,589,902	2
		57,260,849	55	41,006,059	46
	Non-current Assets:				
1523	Available for sale financial assets – non-current (Note 6(7))	-	-	685,194	1
1527	Held-to-maturity financial assets - non-current (Notes 6 (8) and 7)	-	-	281,366	-
1543	Financial assets measured at cost - non-current (Note 6 (9))	-	-	838,181	1
1517	Financial assets at fair value through other comprehensive income - non-current (Note 6 (3))	1,204,924	1	-	-
1535	Financial assets measured at amortized cost - non-current (Note 6 (4) and 7)	281,366	-	-	-
1550	Investments accounted for using equity method (Note 6 (10))	2,041,896	2	1,694,717	3
1600	Property, plant and equipment (Note 6 (15) and 8)	37,438,555	36	37,528,808	42
1780	Intangible assets (Note 6 (16))	3,649,397	4	3,939,134	4
1840	Deferred tax assets (Note 6 (23))	1,514,843	2	2,014,732	2
1980	Other financial assets – non-current (Note 8)	325,660	-	403,078	-
1990	Other non-current assets (Note 6 (22))	267,825	-	951,264	1
		46,724,466	45	48,336,474	54
	Total assets	**$ 103,985,315**	**100**	**89,342,533**	**100**

Code	Liabilities and Equity	2018.12.31 Amount	%	2017.12.31 Amount	%
	Current Liabilities:				
2100	Short-term borrowings (Note 6 (17))	$ 9,334,809	9	13,753,204	15
2120	Financial liabilities at fair value through profit or loss–current (Note 6(2))	110	-	5,152	-
2130	Contract liabilities - current (Note 6 (27), 7 and 9)	4,662,837	5	-	-
2170	Notes and accounts payable	5,184,889	5	5,342,167	6
2180	Accounts payable to related parties (Notes 7 and 9)	51,342	-	9,708	-
2230	Current tax liabilities	2,127,809	2	1,316,654	2
2201	Payroll and bonus payable	2,295,168	2	1,990,597	2
2310	Advance sales receipts - current (Notes 7 and 9)	-	-	2,496,832	3
2322	Long term borrowings—current portion (Note 6 (18))	-	-	613,333	1
2399	Other current liabilities (Note 6 (19) and (20))	6,496,720	6	2,709,351	3
		30,153,693	29	28,236,998	32
	Non-current Liabilities:				
2527	Contract liabilities-non-current (Note 6 (27), 7 and 9)	15,712,134	15	-	-
2540	Long-term borrowings (Note 6 (18))	2,040,200	2	5,033,539	5
2570	Deferred tax liabilities (Note 6 (23))	3,664,664	4	2,066,271	2
2600	Other non-current liabilities (Note 6 (19) and (20))	1,327,730	1	1,235,658	2
2640	Net defined benefit liabilities-non-current (Note 6 (22))	3,173,029	3	2,898,535	3
2670	Advance sales receipts – non-current(Note 7 and 9)	-	-	6,094,621	7
		25,917,757	25	17,328,624	19
	Total liabilities	56,071,450	54	45,565,622	51
	Equity (Note 6 (24))				
3110	Ordinary shares	5,863,207	6	5,920,587	7
3170	Pending share capital	(330)	-	-	-
		5,862,877	6	5,920,587	7
3200	Capital surplus	21,757,292	21	24,205,831	27
	Retained earnings:				
3310	Legal reserve	311,579	-	311,579	-
3320	Special reserve	513,302	1	513,302	1
3350	Unappropriated retained earnings (accumulated loss)	1,507,753	1	(317,629)	-
		2,332,634	2	507,252	1
3400	Other equity interest	(3,071,087)	(3)	(3,322,937)	(4)
3500	Treasury shares	-	-	(169,861)	-
	Total equity attributable to shareholders of Sino-American Silicon Products Inc.	26,881,716	26	27,140,872	31
36XX	Non-controlling interests (Note 6 (12 and 13))	21,032,149	20	16,636,039	18
	Total equity	47,913,865	46	43,776,911	49
	Total liabilities and equity	**$ 103,985,315**	**100**	**89,342,533**	**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, 2018 and 2017

Expressed in thousands of New Taiwan dollars

		2018		2017	
		Amount	**%**	**Amount**	**%**
4000	**Operating revenue** (Note 6 (27), (28) and 7)	$ 69,238,945	100	59,371,198	100
5000	**Operating costs** (Note 6 (6), (21), (25) and 7)	50,597,092	73	47,967,962	81
	Gross profit from operations	18,641,853	27	11,403,236	19
	Operating expenses (Note 6 (21), (22), (25) and 7)				
6100	Selling expenses	1,416,904	2	1,379,950	2
6200	Administrative expenses	2,094,839	3	2,026,389	3
6300	Research and development expenses	1,849,867	3	1,671,895	3
6450	Impairment loss determined in accordance with IFRS 9 (Note 6(5))	102,738	-	-	-
	Total operating expenses	5,464,348	8	5,078,234	8
	Net operating income	13,177,505	19	6,325,002	11
	Non-operating income and expenses:				
7010	Other Revenue (Note 6 (30) and 7)	517,896	-	146,938	-
7020	Other gains and losses, net (Note 6 (31))	71,244	-	(586,987)	(1)
7050	Financial costs (Note 6 (32))	(212,003)	-	(506,347)	(1)
7060	Shares of profit of associates and joint ventures accounted for using equity method (Note 6 (10))	(236,409)	-	(252,865)	-
		140,728	-	(1,199,261)	(2)
7900	**Income before income tax**	13,318,233	19	5,125,741	9
7950	Income tax expenses (Note 6 (23))	4,682,753	7	1,607,113	3
	Net income for the year	8,635,480	12	3,518,628	6
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 (22))	(265,423)	-	506,710	1
8316	Unrealized gains (losses) from investments in equity instruments measured at fair value through other comprehensive income	(521,764)	(1)	-	-
8349	Income tax related to components of other comprehensive income that will not be reclassified to profit or loss (Note 6 (23))	68,152	-	(88,347)	-
		(719,035)	(1)	418,363	1
8360	**Items that may be reclassified subsequently to profit or loss**				
8361	Exchange differences on translation of foreign operations	940,983	1	(722,292)	(1)
8362	Unrealized gains or losses on valuation of financial assets available for sales	-	-	23,914	-
8370	Share of other comprehensive income of associates and joint ventures accounted for using equity method (Note 6 (33))	(173,644)	-	105,196	-
8399	Income tax related to components of other comprehensive income that will be reclassified to profit or loss (Note 6 (23))	(102,154)	-	110,730	-
	Total Items that may be reclassified subsequently to profit or loss	665,185	1	(482,452)	(1)
8300	**Other comprehensive income (after tax)**	(53,850)	-	(64,089)	-
	Total comprehensive income	**$ 8,581,630**	**12**	**3,454,539**	**6**
	Net income attributable to:				
	Shareholders of Sino-American Silicon Products Inc.	$ 1,950,503	2	1,035,505	2
	Non-Controlling Interests	6,684,977	10	2,483,123	4
		$ 8,635,480	**12**	**3,518,628**	**6**
	Total comprehensive gain or loss attributable to:				
	Shareholders of Sino-American Silicon Products Inc.	$ 1,604,225	2	971,676	2
	Non-Controlling Interests	6,977,405	10	2,482,863	4
		$ 8,581,630	**12**	**3,454,539**	**6**
	Basic earnings per share (NT dollars) (Note 6 (26))				
9750	Basic earnings per share	**$**	**3.36**		**1.80**
9850	Diluted earnings per share	**$**	**3.34**		**1.79**

(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, 2017 to December 31, 2018

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, 2017	$ 5,800,312	-	18,821,483	311,579	513,302	(1,565,754)	(740,873)	(1,617,512)	-	(1,188,654)	-	(6,354)	(2,812,520)	(169,861)	20,898,541	6,328,546	27,227,087
Net income for the year	-	-	-	-	-	1,035,505	1,035,505	-	-	-	-	-	-	-	1,035,505	2,483,123	3,518,628
Other comprehensive income for the year	-	-	-	-	-	212,620	212,620	(355,822)	-	79,373	-	-	(276,449)	-	(63,829)	(260)	(64,089)
Comprehensive income for the year	-	-	-	-	-	1,248,125	1,248,125	(355,822)	-	79,373	-	-	(276,449)	-	971,676	2,482,863	3,454,539
Cash dividends distribution from capital surplus	-	-	(861,714)	-	-	-	-	-	-	-	-	-	-	-	(861,714)	-	(861,714)
Employees execute stock options to issue new shares	60,625	-	234,013	-	-	-	-	-	-	-	-	-	-	-	294,638	-	294,638
Share of net worth changes of associates and joint ventures accounted for using equity method	-	-	5,670,627	-	-	-	-	-	-	-	-	2,052	2,052	-	5,672,679	8,362,023	14,034,702
Shares issued with restrictions on employee rights	60,000	-	343,200	-	-	-	-	-	-	-	(283,200)	-	(283,200)	-	120,000	-	120,000
Remuneration coast of shares with restrictions on employee rights	-	-	-	-	-	-	-	-	-	-	45,752	-	45,752	-	45,752	-	45,752
shares with restrictions on employee rights written-off	(350)	-	(1,778)	-	-	-	-	-	-	-	1,428	-	1,428	-	(700)	-	(700)
Cash dividends paid by subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(537,393)	(537,393)
Balance at December 31, 2017	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	-	-	-	-	-	-	-	-	-	-
Distribution of cash dividends out of capital reserve	-	-	(1,759,511)	-	-	-	-	-	-	-	-	-	-	-	(1,759,511)	-	(1,759,511)
Share changes of associates and joint ventures accounted for using equity method	-	-	124	-	-	-	-	-	-	-	-	922	922	-	1,046	-	1,046
Treasury share cancellation	(55,550)	-	(114,311)	-	-	-	-	-	-	-	-	-	-	169,861	-	-	-
Non-controlling equity changes	-	-	(245,804)	-	-	-	-	-	-	-	-	-	-	-	(245,804)	(425,701)	(671,505)
Received by gift	-	-	239	-	-	-	-	-	-	-	-	-	-	-	239	-	239
Remuneration coast of shares with restrictions on employee rights	-	-	(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)
Dispose of equity instruments measured at fair value through other comprehensive gains and losses	-	-	-	-	-	(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

(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, 2017 to December 31, 2018
Expressed in thousands of New Taiwan dollars

		2018	2017
Cash flows from operating activities:			
Income before income tax	$	13,318,233	5,125,741
Adjustments:			
Adjustments to reconcile profit (loss)			
Depreciation expense		5,628,233	5,889,914
Amortization expenses		354,779	351,116
Expected credit losses / Provisions for bad debt expense		102,738	19,581
Net gains on financial assets or liabilities at fair value through profit or loss		(44,659)	(37,583)
Interest expenses		212,003	506,347
Interest income		(482,902)	(131,992)
Dividend income		(34,994)	(14,946)
Share-based payment remuneration cost		151,199	45,752
Shares of profit of associates and joint ventures accounted for using equity method		236,409	252,865
Gains on disposal of property, plant and equipment		(129,992)	(2,303)
Financial asset impairment loss		-	69,501
Reversal of inventory valuation allowance and obsolescence loss		(37,345)	(401,724)
Non-financial asset impairment loss		1,436,217	-
Other net loss without affecting cash flow		-	(33,993)
Total adjustments		7,391,686	6,512,535
Changes in operating assets and liabilities:			
Notes and accounts receivable (including related parties)		(1,153,986)	(289,277)
Inventories		2,203,883	62,440
Prepayments for purchase of materials		1,079,561	660,001
Other current assets		(408,244)	-
Other financial assets		(524,740)	458,718
Notes and accounts payable (including related parties)		(115,644)	(996,186)
Provisions		443,404	(460,680)
Contract liabilities/Advance sales receipts		14,252,038	6,767,274
Net defined benefit liabilities		5,838	(27,949)
Other operating liabilities		811,517	(495,880)
Total changes in operating assets and liabilities		16,593,627	5,678,461
Total adjustments		23,985,313	12,190,996
Cash inflow generated from operations		37,303,546	17,316,737
Interest received		452,590	128,302
Dividends received		34,994	14,946
Interest paid		(233,845)	(509,916)
Income tax paid		(1,467,974)	(834,955)
Net cash flows from operating activities		36,089,311	16,115,114

(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, 2017 to December 31, 2018
Expressed in thousands of New Taiwan dollars

	2018	2017
Cash flows from investing activities:		
Acquisition of financial assets at fair value through other comprehensive income	(197,197)	-
Proceeds from capital reduction of financial assets at fair value through other comprehensive income	8,732	-
Acquisition of financial assets at fair value through profit or loss	(276,529)	-
Acquisition of financial assets measured at cost	-	(49,896)
Acquisition of investments accounted for using equity method	(990,000)	(649,000)
Cash dividends from investments accounted for using equity method	6,422	-
Acquisition of property, plant and advance payments received for equipment	(6,597,886)	(3,347,558)
Proceeds from disposal of property, plant and equipment	560,149	659,779
Acquisition of intangible assets	-	(2,530)
Net cash outflows from subsidiaries from mergers and acquisitions	-	(3,254)
Decrease in other financial assets	56,023	346,884
Net cash flows used in investing activities:	(7,430,286)	(3,045,575)
Cash flows from financing activities:		
Decrease in short term borrowings	(4,464,007)	(2,723,221)
Increase in long term borrowings	1,026,000	7,993,539
Repayments of long term borrowings	(4,632,672)	(19,944,479)
Increase (decrease) in guarantee deposits received	17,858	(745,817)
Distribution of cash dividends out of capital reserve	(1,759,511)	(861,714)
Shares issued with restrictions on employee rights	-	120,000
Employees execute stock options	-	294,638
Shares with restrictions on employee rights written-off	(4,320)	(700)
Received by gift	239	-
Change in non-controlling interests	(575,394)	14,032,548
Cash dividends of distributing non-controlling interests	(2,149,570)	(537,393)
Net cash flows used in financing activities	(12,541,377)	(2,372,599)
Effect of exchange rate changes	368,703	376,380
Net increase in cash and cash equivalents	16,486,351	11,073,320
Cash and cash equivalents at beginning of period	20,342,780	9,269,460
Cash and cash equivalents at end of period	$ **36,829,131**	**20,342,780**

Assets acquired by the Mergers and Acquisitions transaction and the fair value of liabilities assumed are as follows:	
Cash and equivalents	$ 1,064
Inventories	300
Other current assets	1,823
Property, plant and equipment	32,672
Short term borrowings	(11,015)
Notes and accounts payable	(20,526)
Fair value of acquiring the subsidiary's equity at the acquisition date	4,318
Less: the cash received from subsidiaries	(1,064)
Cash paid for control (net of acquired cash)	$ **3,254**

(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, 2018 and 2017
(Expressed in Thousands of New Taiwan Dollars, Unless Otherwise Specified)

1. Company history

Sino-American Silicon Products Inc. (hereinafter referred to as “the parent 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 (collectively referred hereinafter as the “Company”) 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 21, 2019.

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, 2018.:

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

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 15 "Revenue from Contracts with Customers"

The standard replaces IAS No. 18 "Revenue" and IAS No.11 "Construction Contracts" and related interpretations. The single analysis model determines the method, time and amount of revenue recognition by the company in five steps. The consolidated company's cumulative impact method applies IFRS No.15. Therefore, the comparative information of previous periods does not need to be rewritten and continues to apply IAS No. 18, IAS No. 11 and related interpretations. The cumulative effect of the initial application of IFRS No. 15 is to adjust the retained earnings of the on January 1, 2018.

The nature and impact of this accounting policy change are as follows:

(1) Sales of goods

For the sale of products, in the past, there was evidence of persuasiveness (usually a signed customer order) and the significant risks and rewards of ownership have been transferred to the buyer, and the revenue was recognized at that time. At this point in time, the customer has accepted the product and the significant risks and rewards of the relevant ownership have been transferred to the customer. The revenue and cost can be reliably measured, the consideration is likely to be recovered, and the management of the commodity is no longer continued. Under IFRS No. 15, revenue is recognized when a customer gains control over a product.

(2) Providing labor services

The Company provides labor services to clients. If the labor service in a single agreement is provided during different reporting periods, in the past, the consideration was paid to different services based on the relative fair value, and the labor service revenue was recognized according to the completion ratio method. Under IFRS No. 15, the consideration for the overall service contract is based on the relative individual selling price of the labor service. The consolidated company determines the individual selling price based on the price at which the labor service is sold separately.

(3) Construction contract

Contract revenue used to be recognized within the scope of the most likely revenue generation and can be reliably measured, including the original amount agreed in the contract, plus any changes related to the contract, claims for remuneration and incentive payments. In the case of recognition of claims and changes, the degree of contract completion or contract price is revised and the status of the contract is reassessed on a cumulative basis on each reporting date. Under IFRS No. 15, it is subject to change in the contract when the contract's claim and change have been approved.

(4) Impacts on financial statements

The group adopted IFRS 15 using the cumulative effect method, wherein no adjustment was made to the opening balance of its retained earnings at January 1, 2018. Therefore, the adoption of IFRS 15 did not have any material impact on its consolidated financial statements in 2018.

2. IFRS 9 “Financial Instruments”

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

As a result of the adoption of IFRS 9, the Group adopted the consequential amendments to IAS 1 “Presentation of Financial Statements”, which requires impairment of financial assets to be presented in a separate line item in the statement of profit or loss and OCI. Previously, the Group’s approach was to include the impairment of trade receivables in operating expenses. Additionally, the Group adopted the consequential amendments to IFRS 7 Financial Instruments: Disclosures that are applied to disclosures about 2018 but generally have not been applied to comparative information.

The details of new significant accounting policies, as well as the nature and effect of the changes to the previous accounting policies are set out below:

(1) Classification of financial assets and financial liabilities

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, fair value through other comprehensive income (FVTOCI) and fair value through profit or loss (FVTPL). The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. The standard eliminates the previous IAS 39 categories of held to maturity, loans and receivables and available for sale. Under IFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification. For an explanation of how the Group classifies and measures financial assets and accounts for related gains and losses under IFRS 9, please see note 4(7).

The adoption of IFRS 9 did not have any a significant impact on the Group's accounting policies on financial liabilities.

(2) Impairment of financial assets

IFRS 9 replaces the 'incurred loss' model in IAS 39 with the 'expected credit loss' (ECL) model. The new impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVTOCI, but not to investments in equity instruments. Under IFRS 9, credit losses are recognized earlier than they are under IAS 39, please see note 4(7).

(3) Transition

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

- Differences in the carrying amounts of financial assets resulting from the adoption of IFRS 9 are recognized in retained earnings and other equity interest as on January 1, 2018. Accordingly, the information presented for 2017 does not generally reflect the requirements of IFRS 9, and therefore, is not comparable to the information presented for 2018 under IFRS 9.
- The following assessments have been made on the basis of the facts and circumstances that existed at the date of initial application:
    - The determination of the business model within which a financial asset is held.
    - The designation and revocation of previous designations of certain financial assets and financial liabilities as measured at FVTPL.
    - The designation of certain investments in equity instruments not held for trading as at FVTOCI.
- If an investment in a debt security had low credit risk at the date of initial application of IFRS 9, then the Group assumed that the credit risk on its asset will not increase significantly since its initial recognition.

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

The following table shows the original measurement categories under IAS 39 and the new measurement categories under IFRS 9 for each class of the Group's financial assets as of January 1, 2018:

	IAS 39		IFRS 9	
	Measurement categories	**Carrying Amount**	**Measurement categories**	**Carrying Amount**
Financial assets				
Cash and equivalents	Loans and receivables	$ 20,342,780	Amortized cost	20,342,780
Derivative instruments	Hold for trading	21,546	Mandatorily at FVTPL	21,546
Debt instrument investment	Hold to maturity date	281,366	Amortized cost	281,366
Equity instruments	Available-for-sale	685,194	FVTOCI	685,194
Equity instrument investment	Financial assets measured at cost - non-current (Note)	838,181	FVTOCI	825,927
Account and other receivables, net	Loans and receivables	8,829,543	Amortized cost	8,829,543
Other financial assets current and non-current	Loans and receivables	577,461	Amortized cost	577,461

Note: These equity instruments represent investments in the long-term holding strategy of the consolidated company. In accordance with IFRS No. 9, the consolidated company specifies that the investment is classified as measured at fair value through other comprehensive gains and losses on the initial application date. The carrying amount of these assets decreased by NT$ 12,254 thousands on January 1, 2018, and other equity items, retained earnings and non-controlling interests decreased by NT$ 1,229,017 thousands, increased by NT$ 1,222,787 thousands and decreased by NT$ 6,024 thousands respectively.

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

	2017.12.31 IAS 39 Carrying Amount	Reclassifications	Remeasurements	2018.1.1 IFRS 9 Carrying Amount	2018.1.1 Retained earnings	2018.1.1 Other equity	2018.1.1 Non-controlling equity
Financial assets measured at fair value through gain or loss							
Equity method investments	$ 21,546	-	-	21,546	-	-	-
Fair value through other comprehensive income							
Available for sale (including measured at cost) IAS 39 the amount of the beginning of the period	$ 1,523,375	-	(12,254)	1,511,121	1,222,787	(1,229,017)	(6,024)
Financial assets measured at amortized cost							
Cash and cash equivalents, holdings to maturities, receivables and other financial assets IAS 39 the amount of the beginning of the period	$ 30,031,150	-	-	30,031,150	-	-	-

There is no impact on the earnings per share in 2018 and 2017 due to the change.

3. Amendments to IAS 7 “Disclosure Initiative”

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

To satisfy the new disclosure requirements, the Group presents a reconciliation between the opening and closing balances for liabilities with changes arising from financing activities at note 6(37).

(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, or after, January 1, 2019 in accordance with Ruling No. 1070324857 issued by the FSC on July 17, 2018:

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

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”.

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

   (1) Determining whether an arrangement contains a lease

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

      - IFRS 16 definition of a lease to all its contracts; or
      - a practical expedient that does not need any reassessment whether a contract is, or contains, a lease.

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

   (2) Transition

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

      - Retrospective approach; or
      - Modified retrospective approach with optional practical expedients

      The consolidated company is expected to adopt a revised retrospective transition to the new standard. Therefore, the adoption of the new standard has no effect on the retained earnings January 1, 2019, without rewriting the comparative period information.

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

      - Apply a single discount rate to a portfolio of leases with similar characteristics.
      - Adjust the right of use assets, based on the amount reflected in IAS 37 onerous contract provision, immediately before the date of initial application, as an alternative to an impairment review.
      - Apply the exemption not to recognize the right of use assets and liabilities to leases with lease term that ends within 12 months of the date of initial application.
      - Use hindsight when determining the lease term if the contract contains

options to extend or terminate the lease.

(3) Up to now, the most significant impact of the Company's assessment of the application of the new standard is the recognition of the right to use assets and lease liabilities with offices, factory buildings and storage locations under the current operating lease. It is estimated that the above differences may make the right to use assets and lease liabilities on January 1, 2019 increase by NT$ 1,150,876 thousands. There is no significant impact on the current contracts dealt with finance leases. In addition, the consolidated company expects that the application of the new standard will not affect the ability to comply with the maximum number of financing leverages agreed in its loan contract.

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 its 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.

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

(3) The impact of IFRS issued by IASB 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	The effective date announced by the IASB
Amendments to IFRS 3 "Definition of a Business"	January 1, 2020
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets Between an Investor and Its Associate or Joint Venture"	To be decided by IASB
IFRS 17 "Insurance Contracts"	January 1, 2021
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020

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

1. Basis of measurement

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

(1) Financial instruments measured at fair value through profit or loss are measured at fair value;
(2) Financial assets at fair value through other comprehensive income are measured at fair value;
(3) Cash settled shared based payment liability is measured at fair value;
(4) Net defined benefit liabilities are measured at the fair value of the assets of the pension fund, less the present value of the defined benefit obligation and the upper limit impact as stated in Note 4 (17).

2. 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

1. Principles of preparation of the consolidated financial statements.

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

The financial statements of the subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. Intra group balances and transactions, and any unrealized income and expenses arising from intra group transactions are eliminated in preparing the consolidated financial statements. Losses applicable to the non-controlling interests in a subsidiary are allocated to the non-controlling interests, even if doing so causes the non-controlling interests to have a deficit balance.

Subsidiaries' financial statements are adjusted to align the accounting policies with those of the Company.

Changes in the Company's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to shareholders of the parent.

2. List of subsidiaries in the consolidated financial statements:
   Subsidiaries included in the consolidated financial statements include:

Name of Investor	Name of subsidiary	Business	Percentage of Ownership 2018.12.31	2017.12.31	Note
Sino-American Silicon Products Inc.	Sino Silicon Technology Inc. (hereinafter referred to as "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%	50.84%	
Sino-American Silicon Products Inc.	Sino-American Material Inc. (hereinafter referred to as Sino-American Material)	referred hereinafter as Sino-American Material	-	90%	Note 4
Sino-American Silicon Products Inc.	Aleo Solar GmbH (hereinafter referred to as Aleo Solar)	Solar cell manufacturing and sale and wholesale of electronic materials	100%	100%	
Sino-American Silicon Products Inc.	SAS Sunrise Inc.	Reinvestments in various businesses	100%	100%	
Sino-American Silicon Products Inc.	Sunrise PV World Co. (hereinafter referred to as "Sunrise PV World")	Power generating business	100%	100%	
SAS Sunrise Inc.	SAS Sunrise Pte. Ltd.	Reinvestments in various businesses	100%	100%	
SAS Sunrise Pte.Ltd.	Sulu Electric Power and Light Inc.(hereinafter referred to as Sulu)	Power generating business	40%	40%	Note 1
SAS Sunrise Pte.Ltd.	AMLED International Systems Inc.(hereinafter referred to as 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 (hereinafter referred to as Aleo Sunrise)	Manufacturing of solar cell as well as sale and wholesale of electronic materials	100%	100%	
Sunrise PV World Co.	Sunrise PV Two Co., Ltd. (hereinafter referred to as Sunrise PV Two)	Power generating business	100%	100%	
Sunrise PV World Co.	Sunrise PV Electric Power Two (hereinafter referred to as Sunrise PV Electric)	Power generating business	100%	100%	
Sunrise PV World Co.	Sunrise PV Three Co., Ltd. (hereinafter referred to as Sunrise PV Three)	Power generating business	100%	100%	
Sunrise PV World Co.	Sunrise PV Four Co., Ltd. (hereinafter referred to as Sunrise PV Four)	Power generating business	100%	100%	
Sunrise PV World Co.	Sunrise PV Five Co., Ltd. (hereinafter referred to as Sunrise PV Five)	Power generating business	100%	100%	
GlobalWafers	GlobalSemiconductor Inc. (hereinafter referred to as "GSI")	Reinvestments in various businesses	100%	100%	
GlobalWafers	GlobalWafers Inc. (hereinafter referred to as "GWI")	Reinvestments in various businesses	100%	100%	

Notes to the consolidated financial statements of Sino-American Silicon Products Inc. and its subsidiaries (continued)

Name of Investor	Name of subsidiary	Business	Percentage of Ownership 2018.12.31	Percentage of Ownership 2017.12.31	Note
GlobalWafers	GWafers Co., Ltd. (hereinafter referred to as “GWafers”)	Reinvestments in various businesses	-	100%	Note 3 (3)
GlobalWafers	GlobalWafers Japan Co., Ltd. (hereinafter referred to as “GWJ”)	Semiconductor silicon wafer manufacturing and trading	100%	-	Note 3 (3)
GlobalWafers	GWafers Singapore Pte. Ltd.(hereinafter referred to as GWafers Singapore)	Reinvestments in various businesses	67.2%	100%	Note 3 (5)
GlobalWafers	Topsil GlobalWafers A/S (hereinafter referred to as Topsil A/S)	Semiconductor silicon wafer manufacturing and trading	100%	100%	
GlobalWafers	Taisil Electronic Materials Corp. (hereinafter referred to as Taisil)	Semiconductor silicon wafer manufacturing and sales	99.98%	99.98%	Note 3 (1)
GSI	Kunshan Sino Silicon Technology Co., Ltd. (hereinafter referred to as “Kunshan Sino”)	Processing and trading of silicon ingots and silicon wafers	100%	100%	
GWI	GlobiTech Incorporated (hereinafter referred to as “GTI”)	Manufacturing of epitaxy, silicon wafer as well as OEM and trading of epitaxy	-	100%	Note 3 (5)
GWI	GWafers Singapore	Reinvestments in various businesses	32.8%	-	Note 3 (5)
GWafers	GlobalWafers Japan Co., Ltd.(hereinafter referred to as GWI)	Semiconductor silicon wafer manufacturing and trading	-	100%	Note 3 (3)
GWJ	MEMC Japan Ltd. (hereinafter referred to as MEMC Japan)	Semiconductor silicon wafer manufacturing and sales	100%	100%	Note 3 (2)
Kunshan Sino	Shanghai GrowFast Semiconductor Technology Co., Ltd. (hereinafter referred to as Shanghai GrowFast)	Sales and marketing business	60%	60%	
Topsil A/S	Topsil Semiconductor sp z o.o. (hereinafter referred to as Topsil PL)	Semiconductor silicon wafer manufacturing and trading	100%	100%	
GWafers Singapore	GlobalWafers Singapore Pte Ltd. (the original name was SunEdison Semiconductor Limited, hereinafter referred to as GWS)	Investment, marketing and trading business	100%	100%	
GWS	GlobalWafers B.V. (the original name was SunEdison Semiconductor B.V., hereinafter referred to as GWBV)	Reinvestments in various businesses	100%	100%	
GWS	SunEdison Semiconductor Technology Pte. Ltd. (hereinafter referred to as SSTPL)	Reinvestments in various businesses	-	100%	Note 3 (4)
GWBV	MEMC Electronic Materials, SpA (hereinafter referred to as MEMC SpA)	Semiconductor silicon wafer manufacturing and sales	100%	100%	
MEMC SpA	MEMC Electronic Materials France SarL (hereinafter referred to as MEMC SarL)	Trading business	100%	100%	
MEMC SpA	MEMC Electronic Materials GmbH (hereinafter referred to as MEMC GmbH)	Trading business	100%	100%	
MEMC SpA	MEMC Holding B.V. (hereinafter referred to as MEMC BV)	Reinvestments in various businesses	100%	100%	

Name of Investor	Name of subsidiary	Business	Percentage of Ownership 2018.12.31	2017.12.31	Note
GWBV, MEMC BV	MEMC Korea Company (hereinafter referred to as MEMC Korea)	Semiconductor silicon wafer manufacturing and sales	100%	100%	
GWBV	MEMC LLC (the original name was SunEdison Semiconductor LLC, hereinafter referred to as MEMC LLC)	Semiconductor silicon wafer R&D, manufacturing and sales	-	100%	Note 3 (5)
GWBV	MEMC Electronic Materials, Sdn Bhd (hereinafter referred to as MEMC Sdn Bhd)	Semiconductor silicon wafer R&D, manufacturing and sales	100%	100%	
GWBV	SunEdison Semiconductor Technology (Shanghai) Ltd. (hereinafter referred to as SunEdison Shanghai)	Trading business	100%	100%	
GWBV	GTI	Manufacturing of epitaxy, silicon wafer as well as OEM and trading of epitaxy	100%	-	Note 3 (5)
GTI	MEMC LLC	Semiconductor silicon wafer R&D, manufacturing and sales	100%	-	Note 3 (5)
GWBV	SunEdison Semiconductor Holdings B.V. (hereinafter referred to as SSHBV)	Reinvestments in various businesses	-	100%	Note 3 (4)
GWBV	MEMC Ipoh Sdn Bhd (hereinafter referred to as MEMC Ipoh)	Semiconductor silicon wafer manufacturing and sales	100%	-	Note 3 (4)
SSHBV	MEMC Ipoh Sdn Bhd (hereinafter referred to as MEMC Ipoh)	Semiconductor silicon wafer manufacturing and sales	-	100%	Note 3 (4)

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) Taisil was transferred from GWBV and SSHBV to GlobalWafers investment in October 2017;

(2) MEMC Japan was transferred from GWBV to GWJ investment in October 2017;

(3) GWafers and GWJ were merged in January 2018, and the existing company was GWafers, which was later renamed GWJ.

(4) SSHBV and SSTPL have been cleared for liquidation and have not been incorporated into the consolidated financial statements since the completion of the liquidation. MEMC Ipoh was transferred from SSHBV to GWBV investment.

(5) GWafers Singapore has been adjusted with GlobalWafers and GWI holding 67.2% and 32.8% of equity respectively since July 1, 2018. In

addition, GTI is transferred from GWI to GWBV investment, and MEMC LLC is transferred from GWBV to GTI investment.

Note 4: Sino-American Materials Co., Ltd. has been settled by the shareholders' meeting resolution.

Sunrise PV World sold the subsidiary Sunrise PV One to Cathy Sunrise Corporation (hereinafter referred to as Cathy Sunrise) on March 23, 2017 after reporting to the board of directors.

Sino-American Silicon established Sunrise PV Two, Sunrise PV Three, Sunrise PV Four and Sunrise PV Electric for the expansion of power generation business. These companies were registered in April and December; Sunrise PV Four increased the capital by cash NT$ 85,000 thousands on June 2017.

In order to align with the overall industrial layout and accelerate the solar energy industry to expand the downstream access and obtain long-term stable return, Sunrise PV World Co. acquired 100% equity of Sunrise PV Five in July 2017.

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

(4) Foreign currencies

1. Foreign currency transactions

Transactions in foreign currencies are translated to the functional currencies at the exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the last date of reporting period (hereinafter referred as “the reporting date”) are retranslated to the functional currency at the exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortized cost in the functional currency at the beginning of the period adjusted for the effective interest and payments during the period, and the amortized cost in foreign currency translated at the exchange rate at the reporting date.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured based on historical cost are translated using the exchange rate at the date of transaction.

Except foreign currency exchange differences arising from conversion of monetary (available for sale) equity instruments measured at fair value through other comprehensive gain or loss are recognized in other comprehensive gain or loss, the rest are recognized as profit and loss.

2. Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to New Taiwan Dollars at the exchange rates at the reporting date. The income and expenses of foreign operations are translated to New Taiwan Dollars at the average rate. Foreign currency differences are recognized in other comprehensive income.

When the settlement of a monetary receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, foreign currency differences are considered parts of investment in foreign operations and 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.

1. It is expected to be realized, or intended to be sold or consumed, in the normal operating cycle;
2. It is held primarily for the purpose of trading;
3. It is expected to be realized within twelve months after the reporting period; or
4. 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.

liability is classified as current under one of the following criteria, and all other liabilities are classified as non-current:

1. It is expected to be settled in the normal operating cycle;
2. It is held primarily for the purpose of trading;
3. It is due to be settled within twelve months after the reporting period; or
4. 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.

(6) Cash and cash equivalent

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.

(7) Financial instruments

1. Financial assets (policy applicable from January 1, 2018)

   Financial assets are classified into the following categories: measured at amortized cost, fair value through other comprehensive income (FVTOCI), and fair value through profit or loss (FVTPL).

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

   (1) Financial assets measured at amortized cost

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

   - It is held within a business model whose objective is to hold assets to collect contractual cash flows; and.
   - Its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

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

   (2) Fair value through other comprehensive income (FVTOCI)

   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

   - Holds the financial asset in a business model for the purpose of collecting contractual cash flows and selling.

- The cash flow of on a specific date of the contractual terms of the financial asset is solely the interest paid on the principal and the amount of the outstanding principal.

The consolidated company may make an irrevocable selection in the initial recognition to present the subsequent fair value changes of the investment in equity instruments that are not held for trading in other comprehensive gain or loss. The aforementioned selections are made on a case-by-case basis.

The initial recognition is measured at fair value plus directly attributable transaction costs; subsequently measured at fair value, except for foreign currency exchange gain or loss of debt instrument investment, interest Revenue calculated by effective interest method, and impairment loss and equity instrument investment dividend Revenue (except for the recovery of the portion of the investment costs) that are recognized in other comprehensive gain or loss, changes in the remaining carrying amount are recognized as other comprehensive gains and losses, accumulated as unrealized profit and loss of financial assets measured at fair value through other comprehensive gain or loss under the equity item. At the time of derecognition, a debt instrument investor reclassifies the accumulated interest or loss under equity to gain or loss; An equity instrument investor reclassifies the accumulated interest or loss under equity to retained earnings and does not reclassify to 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.

Dividend Revenue from equity investments is recognized on the date on which the consolidated company has the right to receive dividends (usually the ex-dividend date).

(3) 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 Group 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 Revenue and interest Revenue) 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.

(4) 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.

Evaluate whether the contractual cash flow is entirely the interest paid on the principal and the outstanding principal amount. The consolidated company considers the terms of the financial instrument contract, including assessing whether the financial asset contains a contractual term that changes the point or amount of the contractual cash flow, resulting in not meeting this condition. At the time of the assessment, the consolidated company considers:

- 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 right to request of the consolidated company is limited to the terms of the cash flow from a particular asset (e.g. non-recourse characteristics).

(5) Impairment of financial assets

The consolidated 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 following financial assets are measured as allowance losses based on the expected amount of credit losses for the twelve months, and the rest are measured by the amount of expected credit losses during the duration:

- Determining the credit risk of debt securities on the reporting date is low; 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.

Expected credit losses during the duration of the period are expected credit losses arising from all possible defaults during the expected duration of the financial instrument.

The expected credit losses for twelve months are expected credit losses arising from the possible default of the financial instrument in the twelve months following the reporting period (or a shorter period if the expected duration of the financial instrument is less than twelve months).

The longest period of measurement of expected credit losses is the longest contract period in which the consolidated company is exposed to credit risk.

In determining whether the credit risk has increased significantly since the initial recognition, the consolidated company considers reasonable and provable information (which can be obtained without excessive cost or investment), including qualitative and quantitative information, and based on the historical experience of the consolidated company, analysis of credit assessments and forward-looking information.

If the credit risk rating of a financial instrument is equivalent to the “investment grade” defined by the world (for S&P's investment grade BBB-, Moody's investment grade Baa3 or China Huaxin's investment grade twA, or higher than this grade), the consolidated company considers the debt securities to have a low credit risk.

If the contract amount is overdue for more than 30 days, the consolidated company assumes that the credit risk of the financial asset has increased significantly.

If the contract amount is overdue for more than 180 days, or the borrower is unlikely to perform its credit obligations to pay the full amount to the consolidated company, the consolidated company is deemed to have the default on the financial asset.

Expected credit losses are probability-weighted estimates of credit losses for the expected duration of the financial instrument. The credit loss is measured by the present value of all cash shortfalls, which is the difference between the cash flows that the consolidated company can receive based on the contract and the cash flows expected to be received by the consolidated company. Expected credit losses are discounted at the effective interest rate of financial assets.

On each reporting date, the consolidated company assesses whether the financial assets are credit-deductible based on the amortized cost. The financial asset has been credit-deducted when one or more events that have an adverse effect on the estimated future cash flows of the financial asset have occurred. Evidence of credit impairment on financial assets includes observable information on:

- significant financial difficulties for the borrower or issuer;
- breach of contract, such as delay or overdue for more than 90 days;
- Due to economic or contractual reasons related to the financial difficulties of the borrower, the consolidated company gives the borrower a concession that would not have been considered;
- The borrower is likely to claim bankruptcy or other financial restructuring; or
- The active market for the financial assets disappeared due to financial difficulties.

The allowance for financial assets measured as amortized cost is deducted from the carrying amount of the asset.

When the consolidated company cannot reasonably expect the total or part of the recovered financial assets, it will directly reduce the total carrying amount of its financial assets. Usually, the consolidated company determines that the debtor's assets or sources of Revenue cannot generate sufficient cash flow to repay the amount of the write-off. However, the written-off financial assets can still be enforced to meet the procedures for the consolidated company to recover the overdue amount.

(6) Derecognition of financial assets

The Company derecognizes financial asset when the contractual rights to receive cash flows from the financial asset has transferred, or the Company has transferred substantially all risks and rewards of ownership of the financial asset.

2. Derivative financial instruments

The consolidated company holds derivative financial instruments to avoid the risk of foreign currency and interest rate risk. The initial recognition is measured at fair value, and the transaction costs are recognized as gain or loss. Subsequent measured at fair value, benefits or losses of re-measurement is directly included in gain or loss and is presented under non-operating Revenue and expense. If fair value of derivative is positive, it is classified as financial asset; if fair value of derivative is negative, it is classified as a financial liability.

3. Financial assets (applicable before January 1, 2018)

   Financial assets of the consolidated company are classified into: financial assets measured at fair value through gain or loss, receivables, held-to-maturity financial assets, financial assets measured at cost, and available for sale financial assets.

   (1) Financial assets measured at fair value through profit and loss

   Such financial assets are financial assets held for trading. The main purpose of its acquisition or occurrence is to sell or buy back in the short term.

   Such financial assets are measured at fair value during the initial recognition. The transaction cost is recognized in gain or loss upon recognition. The subsequent evaluation is measured at fair value with the profit and loss (including related dividend Revenue and interest Revenue) arising from the re-measurement recognized in gain or loss and reported in the “non-operating Revenue and expense” account. The purchase or sales of financial assets in ordinary course of business is handled in accordance with the accounting treatment of the trading date.

   (2) Financial assets in available-for-sale

   Such financial assets are designated as financial assets available for sale or non-derivatives financial assets of other category. Financial assets are measured at fair value plus attributed transaction cost at initial recognition; financial assets are subsequently measured at fair value. Except for impairment losses and dividend Revenue recognized as gains or losses, the change in carrying amount is recognized in other comprehensive Revenue and the unrealized gain or loss of the financial assets available-for sale is accumulated under the equity account. When derecognizing, the cumulative amount of gain or loss under the equity account is reclassified to gain or loss and reported under the “non-operating Revenue and expense” account. The purchase or sales of financial assets in ordinary course of business is handled in accordance with the accounting treatment of the trading date.

   If such financial assets are equity investments “without quoted market price and reliably measured fair value,” it is measured at cost net of impairment loss and reported at “financial assets measured at cost” account.

   Dividend Revenues from equity investment are recognized on the day the Company is entitle to receive it, generally the ex-dividend date, and as under other non-operating Revenue and expenditures.

   (3) Held-to-maturity financial assets

   Such financial assets are debt securities that the consolidated company has a positive intention and ability to hold until maturity. The initial recognition is measured at fair value plus the directly attributable transaction cost; the subsequent evaluation is measured by the effective interest rate method after the amortized cost minus the impairment 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.

   Interest Revenue is reported in the “non-operating Revenue and expense” account.

   (4) Receivables

   Accounts receivables are financial assets without a quoted market price and with fixed or determinable payment amount, including notes and accounts receivables and other receivables. It is measured at fair value plus directly attributed transaction cost at initial recognition. In the subsequent period it is measured in accordance with the effective interest rate method and the amortized cost is net of impairment loss, except for short-term receivables with insignificant interest recognized The purchase or sales of financial assets in ordinary course of business is handled in accordance with the accounting treatment of the trading date.

Interest income is reported in the “non-operating income and expense” account.

(5) Impairment of financial assets

Except for financial assets measured at fair value through profit or loss, financial assets are assessed for impairment at each reporting date. A financial asset is impaired if, and only if, there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset and that loss event has an impact on the estimated future cash flows of the financial asset that can be estimated reliably.

Objective evidence that financial assets are impaired includes the severe financial difficulties, default or delinquency by debtor (such as interest and payment are delay or unpaid), indications that a debtor or issuer will enter bankruptcy, possibility of restructuring increase and economic conditions that correlate with defaults of issuers and the disappearance of an active market for a security. In addition, for an investment in an equity security, a significant or prolonged decline in its fair value below its cost is accounted for as objective evidence of impairment.

After the individual assessment of the accounts receivable has not been derogated, the impairment is assessed on a group basis. The objective impairment evidence for the portfolio of receivables may include past experience of the consolidated company’s past collections, the increase in delayed payments over the average credit period of the group, and changes in national or regional economic conditions associated with arrears of receivables.

For financial assets measured at amortized cost, the amount of impairment loss recognized is the difference between the carrying amount of the asset and the present value of the estimated future cash.

The recognized impairment loss of financial assets measured at cost is the difference between the carrying amount of the assets and the present value of the estimated future cash flow discounted at the market return rate on similar assets. Such impairment loss cannot be reversed in the subsequent period.

Impairment loss of financial assets is directly deducted from carrying amount of financial asset; however, the carrying amount of accounts receivables is adjusted down with the allowance account. The account receivable determined to be uncollectible is written off against the allowance account. The amount recovered that was previously written off is credited to the allowance account. Changes in the carrying amount of the allowance account are recognized in the gain or losses.

If there is impairment loss of the available-for-sale financial instruments, the accumulated gain or loss previously recognized as other comprehensive Revenue shall be reclassified as gain or loss.

When a financial asset is measured at amortized cost, if the amount of the impairment loss in the subsequent period decreases and the decrease is objectively linked to the occurrence of the impairment loss, the previously recognized impairment loss is recognized in gain or loss, except that the carrying amount of the investment on the deductible reversal date shall not be greater than the amortized cost if the impairment is not recognized.

The impairment loss of equity investments available-for-sale that was previously recognized in the gain or loss shall not be reversed and recognized in gain or loss. The recovery in fair value of any impairment loss previously recognized is recognized in other comprehensive Revenue and accumulated under the “other equity interest” account.

The loss and recovery of the bad debt of accounts receivable are reported as Selling expenses. The impairment loss and recovery of financial assets other than accounts receivables are reported under the “non-operating Revenue and expense” account.

(6) Derecognition of financial assets

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

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

The Group separates the part that continues to be recognized and the part that is derecognized based on the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part derecognized, and the sum of the consideration received for the part derecognized and any cumulative gain or loss allocated to it that had been recognized in other comprehensive income, shall be recognized in profit or loss, under non-operating income and expenses.

A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is derecognized based on the relative fair values of those parts.

4. Financial liabilities and equity instruments

(1) Classification of debt or equity

The consolidated company's debt and equity instruments are classified as financial liabilities or equity based on the substance of the contractual agreements and the definition of financial liabilities and equity instruments.

Equity instrument refers to any contract signifying the Company’s residual interest after deducting all liabilities from the assets. The equity instrument issued by the Company is recognized at the acquisition cost net of the direct issue cost.

Interest and loss or gain related to the financial liabilities are recognized in gain or loss and reported under the “non-operating Revenue and expense” account.

(2) Other financial liabilities

Financial liabilities not held for trading and are not designated as measured at fair value through gain or loss include long-term and short-term borrowings, accounts payable and other payables. Initial recognition is measured at fair value plus directly attributable transaction costs; the evaluation then uses the effective interest rate method measured at amortized cost. Interest expense not capitalized as an cost of asset is reported under the “non-operating Revenue and expense” account.

(3) Derecognition of financial liabilities

The Company’s financial liability is derecognized when the contractual obligations have been performed, cancelled or expired.

When derecognizing financial liability, the difference between the carrying amount and the total consideration paid or payable (including any non-cash assets transferred or liabilities assumed) is recognized in the gains or losses and reported in the “non-operating Revenue and expense” account.

(4) Offsetting of financial assets and liabilities

Financial assets and liabilities are offset and reported in the net amount in balance sheet when there is a legally enforceable right to offset the recognized amounts and there is intention to settle on a net basis or realize the asset or settle the liability simultaneously

5. Derivative financial instruments

The Group holds derivative financial instruments to hedge its foreign currency exposures. Derivatives are recognized initially at fair value, and attributable transaction costs are recognized in profit or loss as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are recognized in profit or loss and included in other gains and losses. When the fair value of a derivative instrument is positive, it is classified as a financial asset, and when the fair value is negative, it is classified as a financial liability.

(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 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.

(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 equity accounted investees, after adjustments to align their accounting policies with those of the Group, from the date that significant influence commences until the date that significant influence ceases. The Group 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.

Unrealized gains on transactions between the Company and affiliates are eliminated to the extent of the Company’s interest in the affiliates. The elimination of unrealized loss is the same as the written-off unrealized gain but is limited to the circumstances when the impairment evidence is not available.

When the Company's share of losses in the affiliates equals or exceeds its interests in the affiliates, including any other unsecured receivables, the Company does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the affiliates, then additional loss or relevant liability would be recognized.

When the Company subscribes to additional shares in the affiliated companies or jointly controlled entity at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Company's proportionate interest in the net assets of the affiliated companies or jointly controlled entity. The Company records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital reserve. However if the balance of capital reserve is insufficient from investment accounted under equity method, the difference should debit to retained earnings. If the Company's ownership interest is reduced due to the additional subscription to the shares of affiliated companies or joint controlled entity by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive Revenue in relation to that affiliated companies or jointly controlled entity shall be reclassified to gain or loss on the same basis as would be required if the associate or jointly controlled entity had directly disposed of the related assets or liabilities.

(10) Property, plant and equipment

1. Recognition and measurement

Recognition and measurement of property, plant and equipment is based on the cost model. The cost of property, plant and equipment is net of the accumulated depreciation and accumulated impairment. Costs include expenditures directly attributable to assets acquisition. The cost of self-built assets includes raw materials and direct labor, direct attributable cost to have the assets available for the intended use, demolition, removal and restoration of the location, and the loan cost in line with the requirements of assets capitalization. Software acquired for integrating the function of the related equipment is capitalized as part of the equipment.

When property, plant, and equipment contains different components and the cost is relatively significant to the total cost of the item; also, when the use of a different depreciation rate or method is more appropriate, it should be treated as a separate item of the property, plant and equipment (a significant component).

The profit and loss from disposition of property, plant and equipment is determined according to the difference between the carrying amount and the disposition amount of the property, plant and equipment; the difference is recognized under the "non-operating Revenue and expense" account at a net amount.

2. Subsequent cost

If the future benefits for incurring subsequent costs of the property, plant and equipment is expected to flow in the parent company, and the amount can be reliably measured, the expenditures can be included in the asset's carrying amount. The carrying amount of the replacement is derecognized. The routine repair and maintenance cost of property, plant and equipment is recognized in gain or loss when incurred.

3. Depreciation

Depreciation is calculated in accordance with the asset cost net of residual value, the estimated years of useful life and the straight-line method. Each significant component the asset is assessed. If the useful life of an integral component is different from others in the asset, the unique component should be depreciated separately. The appropriated depreciation is recognized in gain or loss.

No depreciation on land.

Estimated useful lives for the current and comparative periods are as follows:

(1) Buildings:2-50 years
(2) Machinery and equipment: 1-25 years
(3) Other equipment and leased assets: 1-25 years

The significant components of the building and construction mainly include the main building of the plant, electromechanical power engineering and wastewater treatment system, and are depreciated according to their durability years of 25 to 50 years, 25 years and 4 to 25 years respectively.

The Company should at least review the depreciation method, useful life and salvage value. If the expected value is different from previous estimate, appropriate adjustment should be made. The change will be treated as changes of accounting estimate.

(11) Lessee

In accordance with the lease terms, if the Company assumes almost all risks and rewards in relation to ownership of the leased assets, it is classified as finance lease. Assets held under finance lease are initially recognized as assets at fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. Subsequently they are treated pursuant to accounting policy relevant to these assets.

The minimum finance lease payments should be apportioned between the finance charge and the reduction of the outstanding liability. The finance charge should be allocated so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Other leases are operating lease which are not booked in the balance sheet of the parent company's balance sheet.

For operating leases (not including service charges such as insurance and maintenance fees), the lease payments are recognized as expenses in the Revenue statement over the lease term on a straight-line basis.

Expenditure on the acquisition of land use rights is based on the acquisition cost and is amortized on average over the period of 50 years and 99 years.

(12) Intangible Assets

1. Goodwill

(1) Initial recognition

Goodwill from acquiring subsidiaries are included in the intangible assets.

(2) Subsequent measurement

Goodwill is measured as costs minus accumulated impairment loss. In term of investment accounted for under equity method, the carrying amount of goodwill is included in the carrying amount of the investment. Therefore impairment loss of such investment is not allocated to goodwill and any asset, and is a portion of the carrying value of the investment accounted for under equity method.

2. Research and development

During the research phase, activities are carried out to obtain and understand new scientific or technical knowledge. Expenditures during this phase are recognized in profit or loss as incurred.

Expenditures arising from the development phase shall be recognized as an intangible asset if all the conditions described below can be demonstrated; otherwise, they are recognized in profit or loss as incurred:

(1) The technical feasibility of completing the intangible asset so that it will be available for use or sale.
(2) The intention to complete the intangible asset and use or sell it.
(3) The ability to use or sell the intangible asset.
(4) How the intangible asset will generate probable future economic benefits.
(5) The availability of adequate technical, financial, and other resources to complete the development and to use or sell the intangible asset.
(6) The ability to measure reliably the expenditure attributable to the intangible asset during its development.

3. Other intangible assets

Other intangible assets that are acquired by the Group are measured at cost less accumulated amortization and any accumulated impairment losses.

4. 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 is recognized in profit or loss as incurred.

5. Amortization

The amortizable amount is the cost of an asset less its residual value.

Except for goodwill, amortization is recognized in profit or loss on a straight line basis over the estimated useful lives from the date that they are available for use.

(1) Patents and trademarks: 4-6 years
(2) Development costs: 10 years

The residual value, amortization period, and amortization method of intangible assets are reviewed at least annually at each fiscal year end. Any change shall be accounted for as a changes in accounting estimates.

(13) Impairment of non-financial assets

The Company assesses at each balance sheet date whether there is any indications the assets, except inventories and deferred tax assets, are impaired and the recoverable amount. If the recoverable amount cannot be assessed for individual item, the recoverable amount of each cash generating unit is used for assess of the recoverable amount.

For goodwill, intangible assets whose durability years are not determined and intangible assets that are not yet available for use, the impairment test is conducted annually, regardless of whether there is any indication of impairment.

The recoverable amount is the fair value of an individual asset or the cash-generating unit net of the sale cost or value in use, whichever is higher. In assessing value in use, the estimated future cash flows are translated using the pre-tax discount rate to the present value. The discount rate should reflect the current market's assessment of the time value of money and the specific risks to the asset or cash-generating unit.

If the recoverable amount of an individual asset or cash-generating unit is lower than the carrying amount, the carrying amount of the individual asset or cash-generating unit is adjusted down to the recoverable amount with the impairment loss recognized. Impairment loss is recognized immediately in gain or loss of the current period.

For the testing of impairment, goodwill should be allocated to each cash generating unit that expects to receive synergized benefit (or cash generating units) If the recoverable amount of the cash-generating unit is less than its book value, the impairment loss is applied to offset the carrying amount of the goodwill amortized to the cash-generating unit and then to the book value of the assets within the unit proportionately. The goodwill impairment loss recognized cannot be reversed in the subsequent period.

The Company reassesses on every reporting date whether there are indications that the impairment loss of non-financial assets other than goodwill recognized previously have been eliminated or reduced. If the estimates used to determine the recoverable amount are changed, the impairment loss should be reversed in order to increase the carrying amount of the individual asset or cash-generating unit to the recoverable amount; however, it shall not exceed the carrying amount of the individual assets or cash-generating unit in the prior period before recognizing the impairment loss but after appropriating the depreciation or amortization.

(14) Provisions

A provision is recognized if, as a result of a past event, the Group has a present legal or constructive 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.

1. Site restoration

   In accordance with the environmental policy and applicable regulatory requirements announced by the consolidated company, the provision for recovery liabilities is provided for the environmental remediation obligation, and the relevant expenses are recognized during the period when the land is contaminated and the recovery liabilities are prepared for the leased land, and related costs are recognized during the lease term.

2. 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) Treasury stock

The Company has the outstanding stock shares repurchased and classified as “Treasury stock” for the considerations (including the amount attributable to the cost) net of taxes paid and debited to the equity. If the disposition price of the treasury stock is higher than the book value, the difference is classified as “Additional paid-in capital - Treasury stock;” if the disposition price is lower than the book value, the difference is applied to write off the additional paid-in capital of the treasury stock in the same category or debited to retained earnings, if there is an insufficient amount. The carrying amount of treasury stock is calculated in accordance with the weighted average method and is calculated separately in accordance with the reason for repurchase.

When the treasury stock is cancelled, the “capital reserve – Treasury stock” is debited proportionately to the equity shares, the difference is applied to write off the capital reserve - treasury stock in the same category or debited to retained earnings, if there is an insufficient amount. If the carrying amount is lower than the sum of par value and the premium from issuing stocks, it shall be debited to the additional paid in capital from transactions of the treasury stock in the same category

(16) Revenue recognition

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

   Revenue is measured based on the consideration to which the Group expects to be entitled in exchange for transferring goods 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:

   (1) Sale of goods

   The consolidated company researches, develops, designs, manufactures and markets semiconductor silicon wafer materials and their components, varistors, optoelectronics and communication wafer materials. The consolidated company recognizes the revenue when the control of the product is transferred. 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 consolidated company has objective evidence that all acceptance conditions have been met.

   The consolidated company recognizes the accounts receivable when the goods are delivered, because the consolidated company has the right to unconditionally collect the consideration at that time.

   (2) Product processing services

   The consolidated company provides processing of the company's products and recognizes the relevant Revenue during the financial reporting period of the labor service. 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 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 consolidated company recognizes the accounts receivable when the goods are delivered, because the consolidated company has the right to unconditionally collect the consideration at that time.

(3) Engineering contract

The consolidated company 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.

2. Revenue recognition (before January 1, 2018)

(1) Sales of goods

The Revenue from product sales in the course of business is measured at the fair value of the considerations received or receivable net of sales return, sales discount and volume discount. Revenue is recognized when persuasive evidence is available (usually a signed purchase order from the customers), the significant risks of ownership and considerations are transferred to the buyer, the proceeds are likely to be collected, the associated cost and possible sales returns can be estimated reliably, do not continue to be involved in instrument management and the amount of Revenue can be measured reliably. If a discount is likely to occur and the amount can be measured reliably, it is credited to the Revenue when the sale is recognized.

The timing for the transfer of risks and considerations depends on the individual term of the sales contracts. Export sales are mainly made FOB Shipping Point, and the risks and returns are transferred to the buyer when the goods are brought on board at the port. For sales in domestic market, the risks and returns are generally transferred to the buyer when the goods are delivered to the customer's warehouse for inspection and acceptance.

(2) Services

The Company provides labor services to clients. Labor service Revenue is recognized in accordance with the percentage of completion on the reporting date.

(3) Government grants

The government R&D grants obtained by the consolidated company are recognized under the item of non-operating Revenue and expenses in accordance with the proportion of incurred costs to the estimated total cost.

(17) Employee Benefits

1. Defined contribution plans

   Obligations for contributions to defined contribution pension plans are recognized as an employee benefit expense in profit or loss in the periods during which services are rendered by employees.

2. Defined benefit plans

   A defined benefit plan is a post employment benefit plan other than a defined contribution plan. The Group’s net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. Any fair value of any plan asset is deducted. The discount rate used in calculating the present value is the market yield at the reporting date of government bonds that have maturity dates approximating the terms of the Group’s obligations and that are denominated in the same currency in which the benefits are expected to be paid.

   Enterprise’s net obligation is calculated annually by a qualified actuary in accordance with the project unit credit method. When the calculation results are beneficial to the consolidated company, the results are limited to the total amount of the present value of economic benefits available from the funds returned by the plan or the reduction of the accrual for the plan for the plan in the future. The minimum fund appropriation needed for any plan of the Company should be considered when calculating the present value of the economic benefits. If a benefit can be realized in the plan period or upon the liquidation of the plan liability, it is with economic benefit to the Company.

   For the plan benefit that is improved due to the service provided by the employees, the relevant expenses are recognized as gain or loss immediately.

   Remeasurements of the net defined benefit liability (asset), comprising: (1) actuarial gains and losses; (2) return on plan assets, but not including net interest on the net defined benefit liability (asset); and (3) changes in the effect of the asset ceiling, but not including the net interest on the net defined benefit liability (asset). The remeasurement of net defined benefit liabilities (assets) are recognized in other comprehensive Revenue. The consolidated company has chosen to transfer the amount recognized under other consolidated profit and loss items to the retained earnings.

   The Company, when experiencing curtailment or settlement, should recognize the curtailment or settlement gain or loss of the defined benefit plan. Curtailment or settlement gains and losses include any changes in the fair value of any plan assets and changes in the present value of defined benefit obligations.

3. Short term employee benefits

   Short term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

   A liability is recognized for the amount expected to be paid under short term cash bonus or profit sharing plans if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

(18) 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.

(19) Income tax

Income tax expenses include both current taxes and deferred taxes. Except for expenses related to business combinations, recognized directly in equity or other comprehensive income, all current and deferred taxes are recognized in profit or loss.

Current taxes include tax payables and tax deduction receivables on taxable gains (losses) for the year calculated using the statutory tax rate on the reporting date or the actual legislative tax rate, as well as tax adjustments related to prior years.

Deferred taxes arise due to temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their respective tax bases. However, deferred taxes are not recognized for the following:

1. Assets and liabilities that are initially recognized but are not related to the business combination and have no effect on net income or taxable gains (losses) arising from the transaction.
2. Temporary differences arising from equity investments in subsidiaries or joint ventures where there is a high probability that such temporary differences will not reverse.
3. Initial recognition of goodwill

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, which are normally tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and liabilities may be offset against each other if the following criteria are met:

1. The entity has the legal right to settle tax assets and liabilities on a net basis; and
2. The taxing of deferred tax assets and liabilities fulfills one of the scenarios below:
   (1) Levied by the same taxing authority; or
   (2) Levied by different taxing authorities, but where each such authority intends to settle tax assets and liabilities (where such amounts are significant) on a net basis every year of the period of expected asset realization or debt liquidation, or where the timing of asset realization and debt liquidation is matched.

A deferred tax asset is 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 profit will be available against which the unused tax losses, unused tax credits, and deductible temporary differences can be utilized. Such unused tax losses, unused tax credits, and deductible temporary differences are also be reevaluated every year on the financial reporting date, and adjusted based on the probability that future taxable profit will be available against which the unused tax losses, unused tax credits, and deductible temporary differences can be utilized.

(20) Business combination

The Company has goodwill measured in accordance with the fair value of the consideration paid on the transfer date, including any non-controlling interests attributable to the acquired company, less the identifiable assets acquired and liabilities assumed (usually, it is the fair value). If the balance after deduction is a negative value, the Company will have the purchase interest in a bargain recognized in the gain or loss after reassessing whether all the assets acquired and liabilities assumed have been properly identified.

Except for those related to debt issue or equity instruments, the transaction cost related to the merger must be recognized immediately as the parent company's expense upon its occurrence.

For the non-controlling interests of the entity acquired, if they are interests currently owned and owners are entitled to the entity's net assets in proportion to their shares in the entity upon its liquidation, the Company should measure all transactions, item by item, and choose to measure in accordance with fair value of assets on the acquisition date or the amount already recognized in proportion to its shares through the ownership instrument on the identifiable assets of the entity to be acquired. Other components of non-controlling interests must be measured at acquisition date fair values or in accordance with other applicable IFRSs.

For a merger conducted in progress, the Company will have the fair value of the interests of the acquired company re-measured on the acquisition date and with the relevant gain or loss, if any, recognized in the gain or loss. For the changes in the interests of the acquired company recognized in other comprehensive Revenue prior to the acquisition date, the Company shall have it handled pursuant to the same manner as having the equity disposed of directly. If the equity at the time of disposition should be reclassified as profit and loss, the amount should be reclassified to the gain or loss.

If the original accounting process of the merger is yet to complete prior to the end of the merger reporting period, the Company may have the pending accounting items reported in a provisional amount; also, the provisional amount must be adjusted retro-actively throughout the measurement period or should have additional assets or liabilities recognized to reflect the information of the existing fact and status on the acquisition date throughout the measurement period. The measurement period shall not be more than one year from the acquisition date onwards.

(21) Earnings per share

The Company illustrated the basic and diluted earnings per share attributable to the interests of common stock shareholders. The basic earnings per share of the consolidated company is calculated by dividing the profit and loss attributable to the holders of the ordinary shares of Sino-American Silicon Products Inc.by the current weighted average number of ordinary shares outstanding. Diluted earnings per share is calculated by having the profit and loss attributable to the Company's common stock interests shareholders and the weighted average number of common stock shares outstanding adjusted for the effects of all potential diluted common stock shares, respectively. The potential dilute ordinary shares of Sino-American Silicone Products Inc. include restricted employee rights stocks not obtained and employee remuneration that has not been resolved by the board of directors and has been issued in the form of stocks.

(22) Operating segment

Operating segment is a component of the Company engaging in activities that may earn revenues and incur expenses, including relevant revenues and expenses from other components of the Company. Operating results of all segments are routinely provided to the chief operating decision-maker for review for set up policy to allocate resources and assess performance of the operating segments. Each operating segment shall have its separate financial information.

5. Significant accounting assumptions and judgments, and major sources of estimation uncertainty

While preparing the financial statements in compliance with the IFRSs as approved by FSC, the management should make judgment, estimate and assumption that would impact the adoption of accounting policy, as well as the amount reported for assets, liabilities, revenues and expenses. 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

Information that involves significant judgement of the accounting policy has a significant impact on the amounts recognized in this consolidated financial statements is as follows:

(1) Assessment of impairment of property, plant and equipment

In the process of asset impairment assessment, the consolidated company shall rely on subjective judgment and determine the independent cash flow of the specific asset group, the number of years of durability of the asset and the future Revenue and loss due to the asset use model and industry characteristics. Due to economic conditions, any estimated changes resulting from changes or corporate strategies may result in significant impairments or reversal of impairment losses recognized in the future. Please refer to Note 6 (15) for the key assumptions used in the recoverable amount.

(2) Impairment assessment of goodwill

The assessment process of goodwill impairment relies on the subjective judgment of the consolidated company, including identifying the cash-generating unit, apportioning goodwill to the relevant cash-generating unit, and determining the recoverable amount of the relevant cash-generating unit. Please refer to Note 6 (16) for the description of the goodwill impairment assessment.

The accounting policy and disclosure of the Company include the fair value measurement of financial and non-financial assets and liabilities. The Company's financial and accounting departs are responsible for the independent verification of fair value. They have obtained information from independent sources to make the valuation result approximate to the market condition and ensure the information source to be independent, reliable and consistent with other resources and representing exercisable price. They have also rectified the valuation model, conducted retroactive test, update the input value required by the valuation model and other adjustment as necessary to the fair value, in order to ensure the valuation result to be reasonable.

The Company had made its best efforts to use observable input value available in the market when measuring the assets and liabilities. 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).

In case there is movement between fair value hierarchy, the Companies should recognize such movement at the reporting date. The relevant information on the assumptions used to measure fair value is detailed in Note 6 (34) financial instruments.

6. Explanation of significant accounts

(1) Cash and cash equivalents

	2018.12.31	2017.12.31
Cash on hand	$ 12,175	43,721
Demand deposits	10,475,332	10,510,542
Time deposits	26,267,152	9,788,517
Repurchase agreement	74,472	-
Cash and cash equivalents as stated in the cash flow statement	$ 36,829,131	20,342,780

Please refer to Note 6 (34) for the disclosure of interest rate risk and sensitivity analysis of the consolidated financial assets and liabilities

(2) Financial assets and liabilities at fair value through profit or loss

	2018.12.31	2017.12.31
Mandatorily measured at fair value through profit or loss:		
Forward exchange contracts	$ 81,798	-
Stocks listed on domestic markets	177,053	-
Privately offered funds	64,697	-
Financial assets designated as at fair value through profit or loss:		
Forward exchange contracts	-	21,546
	$ 323,548	21,546
Financial liabilities designated as at fair value through profit or loss:		
Forward exchange contract	$ 119	5,152

The consolidated company engages in derivative financial instrument transactions to circumvent the exchange rate risk exposed by the business activities. The breakdown of the derivatives of the financial assets and financial liabilities that are available for the transaction due to the failure to apply the hedge accounting report is as follows:

	2018.12.31			
	Contract amount ($ 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

	2017.12.31			
	Contract amount ($ thousands)		**Currency**	**Maturity date**
Forward exchange contracts sold	USD	20,700	USD against EUR	2018.1.23- 2018.2.22
Forward exchange contracts sold	KRW	74,506,300	KRW against USD	2018.1.24
Forward exchange contracts sold	NTD	267,000	NTD against JPY	2018.1.26
Forward exchange contracts sold	NTD	264,900	NTD against JPY	2018.3.22
Forward exchange contracts sold	NTD	263,000	NTD against JPY	2018.3.28
Forward exchange contracts purchased	JPY	50,000	JPY against EUR	2018.2.18

Please refer to Note 6 (31) for the amount recognized in gain or loss at fair value.
Please refer to Note 6 (35) for market risk information.
The above financial assets are not guaranteed as long-term loans and financing

guarantees

(3) Financial assets at fair value through other comprehensive income

		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		352,282
Domestic non-booked (OTC) company stock – Powertech Energy Corp.		130,764
Domestic non-booked (OTC) company stock - GIGA Electronic Technology Corporation		4,458
Total	**$**	**1,204,924**

The consolidated company'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. For the financial assets available for sale and the financial assets measured at cost recognized on December 31, 2017, please refer to Note 6 (7) and 6 (9).

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 consolidated company 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 penalty was NT$ 1,558,196 thousand. The aforementioned cumulative disposed losses have been transferred from other equity to retained earnings.

Except for the above, the consolidated company did not dispose of the strategic investment in the year of 2018. During the period, the accumulated gain or loss were not transferred within the equity.

Dividend Revenue recognized in 2018 was NT$ 12,776 thousands as a result of the above-mentioned equity instrument investment of the consolidated company, which was measured at fair value through other comprehensive gain or loss.

Please refer to Note 6 (35) for market risk information.

The above financial assets are not guaranteed as long-term loans and financing guarantees

(4) Financial assets measured at amortized cost

		2018.12.31
Corporate debt - Crystalwise Technology	$	281,366

The consolidated company'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 October 2016, the combined company purchased the private equity corporate bonds of Crystalwise Technology Inc. for a five-year period at a nominal amount of NT$ 280,000 thousands. The coupon rate and effective interest rate were 2.00%. For investment classified as held to maturity date on December 31, 2017, please refer to Note 6 (8).

Please refer to Note 6 (35) for credit risk information.

The above financial assets are not guaranteed as long-term loans and financing guarantees

(5) Notes and accounts receivable, net

		2018.12.31	2017.12.31
Notes receivable	$	187,522	145,568
Accounts receivable		9,598,538	8,687,046
Accounts receivable-fair value through other comprehensive income		42,578	-
Less: Allowance for doubtful accounts		(61,221)	(99,852)
Allowance for sales discounts and returns		-	(16,926)
	$	9,767,417	8,715,836

The consolidated company used a simplified approach to estimate the expected credit losses for all notes receivables and accounts on December 31, 2018, that is, the use of expected credit losses during the existing period. For the purpose of this measure, the notes receivable and the accounts are grouped by the common credit risk characteristics that represent the ability of the customer to pay all of the maturity amounts in accordance with the terms of the contract, and have been incorporated into forward-looking information. The expected credit losses of the accounts receivable of the solar energy division of the consolidated company on December 31, 2018 are as follows:

	Carrying amount of receivables	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 585,381	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	$ 662,416		50,023

The expected credit losses of the notes receivables and accounts receivable of the semiconductor business unit of the consolidated on December 31, 2018 are as follows:

	Carrying amount of notes and accounts receivable	**Weighted average loss rate**	**Loss allowance provision**
Current	$ 8,631,396	0%	-
1 to 30 days past due	480,384	0%	-
31 to 60 days past due	46,169	3%	3,507
61 to 90 days past due	464	26%	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	100%	7,170
Total	$ 9,166,222		11,198

On December 31, 2017, use the credit loss model that has occurred to consider the allowance for bad debts of notes and accounts receivable. The ageing analysis of the consolidated company's overdue but not deductible notes and accounts receivable (including related parties) as on December 31, 2017 is as follows:

		2017.12.31
Overdue 1-30 days	$	655,295
Overdue 31-60 days		27,814
Overdue 61-90 days		6,894
Overdue 91-120 days		27
Overdue 121-150 days		350
Overdue 181-365 days		334
	$	690,714

On December 31, 2017, the notes and accounts receivable that were overdue but not deducted were recognized. After assessing that the credit quality has not changed significantly, there is no derogation. In addition, the consolidated company did not take any collateral for these notes and accounts receivable.

The changes in the allowance for notes and accounts receivable of the consolidated company are as follows:

			2017	
		2018	Individual assessment of impairment losses	Group assessment of impairment losses
Balance on January 1, 2018 and 2017 per IAS39	$	99,852	48,679	31,592
Adjustment on initial application of IFRS 9		-		
Balance on January 1, 2018 per IFRS 9		99,852		
Impairment losses recognized		35,446	-	19,581
Amounts written off		(73,536)	-	-
Foreign exchange losses		(541)	-	-
Balance on December 31, 2018 and 2017	$	61,221	48,679	51,173

In order to control the credit risk of accounts receivable, the consolidated company is engaged in the sale of accounts receivable on the reporting date as follows:

The consolidated company enters into a non-recourse sale receivables creditor's contract with the bank and the accounts receivable underwriter. According to the contract, the consolidated company, within the sales quota, does not need to guarantee the ability of the debtor of the receivables to pay at the time of the debt transfer and debt fulfillment. As of the reporting date, the relevant information of debt transfer in relation to accounts receivable (including related party) receivable meet the derecognition criteria are as follows:

Unit: Japanese Yen in thousands

2018.12.31

Counterpart	Amount de-recognized	Quota	Advanced amount	Range of Interest Rate	Guarantee item
Mitsubishi UFJ and other Accounts receivable underwriter	$ 502,978	-	502,978	1.175%-1.475%	None

2017.12.31

Counterpart	Amount de-recognized	Quota	Advanced amount	Range of Interest Rate	Guarantee item
Mitsubishi UFJ and other Accounts receivable underwriter	$ 4,269,636	-	4,269,636	1.175%-1.475%	None

The accounts receivable factoring agreement mentioned above has a revolving line of credit.

The notes and accounts receivable of the consolidated company were not provided as collateral guarantee.

(6) Inventories

		2018.12.31	2017.12.31
Finished goods and products	$	2,047,805	2,695,705
Work in progress		2,160,209	2,249,776
Raw materials		3,673,353	5,102,424
	$	7,881,367	10,047,905

Component of operating cost are as follows:

	2018	2017
Cost of sales	48,156,805	48,419,394
Accrual of impairment loss of property, plant and equipment (Note 6 (15))	1,497,261	-
Reversal of inventory valuation	(37,345)	(401,724)
Unallocated fixed manufacturing expense	536,967	410,972
Add (use) debt preparation (Note 6 (20))	443,404	(460,680)
	50,597,092	47,967,962

The inventories of the consolidated company were not provided as a collateral guarantee.

(7) Available for sale financial assets –non-current

		2017.12.31
Booked shares- Solartech Energy	$	439,258
OTC Stocks – Actron Technology Corporation		245,936
	$	685,194

The above investment targets are booked in the series of financial assets measured at fair value through other comprehensive gain or loss on December 31, 2018. Please refer to Note 6 (3).

For credit risk and market risk information, please refer to Note 6 (35).

None of the above financial assets of the combined company was provided as a pledge guarantee.

(8) Held-to-maturity financial assets - non-current

		2017.12.31
Corporate debt - Crystalwise Technology	$	281,366

The above corporate bonds booked in the series of financial assets measured at amortized cost on December 31, 2018. Please refer to Note 6 (4).

Please refer to Note 6 (35 for credit risk information.

The financial assets held by the consolidated company to the maturity date are not provided as collateral guarantee.

(9) Financial assets at amortized cost－non-current

	2017.12.31
Equity investment	$ 2,543,262
The cumulative amount of impairment loss recognized	(1,705,081)
	$ 838,181

Cumulative impairments changes are as follows:

	2017
Cumulative impairments – beginning	$ 1,727,916
Impairment loss appropriated this period	69,501
Effect of changes in exchange rates	(92,336)
Cumulative impairments - ending	**$ 1,705,081**

The Company’s stock investment referred to above is measured at cost, net of impairment loss on the reporting date. Since the fair value is with a broad range of reasonable estimation and the probability of estimations cannot be reasonably assessed; therefore, the management of the Company believes that the fair value cannot be reliably measured.

Financial assets presented at fair value through other comprehensive gain or loss on December 31, 2018 are detailed in Note 6 (3).

For credit risk and market risk information, please refer to Note 6 (35).

None of the above financial assets of the combined company was provided as a pledge guarantee.

(10) Investments accounted for using equity method

The fair value of the Company's associates which have quoted market price was as follows

	2018.12.31	2017.12.31
Affiliated companies		
Taiwan Specialty Chemicals Corporation (Hereinafter referred to as TSCS)	$ 918,163	-
Cathy Sunrise Corporation (Hereinafter referred to as Cathy Sunrise)	464,252	453,708
Crystalwise Technology Inc.	415,391	849,211
Whole-Global Investment Corporation (Hereinafter referred to as TSCS)	178,442	318,622
Accu Solar Corporation (Hereinafter referred to as TSCS)	65,648	73,176
	$ 2,041,896	1,694,717

Names of affiliated companies	The nature of the relationship with the consolidated company	Main location/ country registered in	Ownership interest and Proportion of voting rights	
			2018.12.31	2017.12.31
TSCS	The main business is manufacturing of semiconductor special gas and chemical materials.	Taiwan	30.93%	-
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	40.11%	40.11%
Whole-Global Investment (Note)	The main business is general investment	Taiwan	24.39%	24.39%
Accu Solar Corporation	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.

	2018.12.31	2017.12.31
Crystalwise Technology Inc.	$ 791,079	1,179,391

Financial information of the affiliated companies that are significant to the Company are summarized as follows. The financial information has been adjusted with amount included in the standalone financial statements of affiliated prepared in accordance with IFRSs to reflect the difference between the adjustment made by the parent company on the fair value upon obtaining the shares of the affiliated companies and the accounting policy.

Financial Summary of Crystalwise Technology:

	2018.12.31	2017.12.31
Current Assets	$ 1,055,915	1,370,465
Non-current Assets	2,134,030	2,627,539
Current Liabilities	(1,225,269)	(1,392,433)
Non-current Liabilities	(872,017)	(1,013,279)
Net assets attributed to owner of the investee parent company	$ 1,092,659	1,592,292

	2018	2017
Operating Revenues	$ 1,317,193	1,496,642
Operating net loss from continuing operations	$ (449,780)	(527,910)
Revenue and loss from discontinued operations	-	(93,711)
Other comprehensive Revenue	(59,599)	(19,047)
Total comprehensive Revenue attributed to owner of the investee company	$ (509,379)	(640,668)

		2018	2017
The Company's share on net assets of the subsidiaries and affiliated companies accounted for under equity method – beginning of the period.	$	849,211	1,112,819
Recognized change in equity net worthof affiliated companies under equity method this period		124	102
Total operating profit and loss and the impairment loss accrued attributable to the consolidated company		(410,495)	(258,295)
Other comprehensive profit and loss and other attributable to the consolidated company		(23,449)	(5,415)
The Company's share on net assets of the subsidiaries and affiliated companies accounted for under equity method – end of the period.	$	**415,391**	**849,211**

2. The consolidated company's affiliated companies under equity method are individually insignificant. The aggregated financial information is as follows. The financial information is the amount included in the consolidated company's financial statement:

		2018.12.31	2017.12.31
Total carrying amount of the closing balance of the interests of individual insignificant affiliated companies	$	**1,626,505**	**845,506**

		2018	2017
Share attributable to the consolidated company:			
Net loss this period	$	(53,306)	5,592
Other comprehensive income (loss)		(149,273)	57,278
Total comprehensive Revenue	$	**(202,579)**	**62,870**

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. Guarantee

   None of the investments in the consolidated company's equity method has been provided as a collateral guarantee.

(11) Business combination

1. The consolidated company gained control in July 2017 by acquiring 100% equity interest in Sunrise PV Five. Sunrise PV Five is a ground-based solar power plant.

   The consolidated company acquired 100% equity interest in Sunrise PV Five for NT$ 4,318 thousand. The fair value of the identifiable assets and liabilities assumed by Sunrise PV Five on the acquisition date are as follows:

Cash and equivalents	$	1,064
Inventories		300
Other current assets		1,823
Property, plant and equipment (Note 6 (15))		32,672
Short term borrowings		(11,015)
Notes and accounts payable		(20,526)
	$	**4,318**

2. From the acquisition date to December 31, 2017, the revenue contributed by Sunrise PV Five was NT$ 6,114 thousands, and the net profit before tax was NT$ 2,687 thousands. If the acquisition took place on January 1, 2017, the management estimates that the consolidated company's revenue from January 1 to December 31, 2017 will reach NT$ 59,371,990 thousand, and the net profit before tax will be NT$ 5,124,927 thousand. In determining the amounts, the management assumes that the acquisition occurred on January 1, 2017, and the provisional fair value adjustments generated on the date of the acquisition are the same.

(12) Changes in equity of subsidiaries

1. Additional shares obtained of the subsidiary

The consolidated company acquired the equity of GlobalWafers in October 2018 with an increase of cash of NT$ 91,006 thousand, increasing the equity from 50.84% to 50.94%. The consolidated company did not trade with non-controlling interests in 2017.

The effect of changes in the ownership of the booked subsidiaries on the equity of the owners of the parent company is as follows:

		2018
Carrying amount of non-controlling interests purchased	$	41,341
Consideration and other benefits paid to non-controlling interests		(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)**

2. 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)**

3. Subsidiary cash increase was not subscribed according to the shareholding ratio and did not result in loss of control.

In April 2017, GlobalWafers handled the cash increase and issued new shares to participate in the issuance of overseas depositary receipts to the non-controlling interests of NT$ 14,035,424 thousands. Sino-American Silicon Products. Inc. did not subscribe for the shareholding ratio. The impact of changes of the equity of Sino-American Silicon Products Inc. held by GlobalWafers on the owners' equity of the parent company is as follows:

	2017
The increase in interests the parent company is entitled to after the issuance of new shares by the subsidiary.	$ 5,670,467
Capital reserve - long-term equity investment recognized by equity method	$ 5,670,467

(13) Subsidiaries with significant non-control interests

Non-Controlling interests in the subsidiary that are significant to the parent company:

Name of subsidiary	**Main business place / company registered country**	**% of ownership interests under non-controlling interests as well as the voting rights**	
		2018.12.31	**2017.12.31**
GlobalWafers	Taiwan	48.83%	49.16%

The aggregated financial information of the above-mentioned GlobalWafers is as follows. The financial information is prepared in accordance with the International Financial Reporting Standards approved by FSC and reflects the fair value adjustments made by the consolidated company on the acquisition date, and the financial information is about the amount before the inter-company transaction has not been written off:

	2018.12.31	**2017.12.31**
Current Assets	$ 53,200,515	35,110,873
Non-Current Assets	36,621,606	35,121,464
Current Liabilities	(24,422,441)	(22,251,273)
Non-Current Liabilities	(22,243,567)	(13,926,658)
Net Assets	$ 43,156,113	34,054,406
Net assets attributed to non-controlling interests	$ 16,658	8,478

	2018	**2017**
Operating Revenues	$ 59,063,510	46,212,601
Net income for the year	$ 13,633,771	5,278,207
Other comprehensive income (loss)	431,248	18,274
Total comprehensive income	$ 14,065,019	5,296,481
Net income attributed to non-controlling interests	$ 3,098	3,484
Total comprehensive Revenue attributed to non-controlling interests	$ 9,762	(32,329)

	2018	2017
Cash flow from operating activities	$ 36,178,722	16,276,374
Cash flow from investing activities	(6,368,165)	(2,651,022)
Cash flow from financing activities	(13,767,728)	(754,734)
Effect of changes in exchange rates	377,132	295,765
Increase of cash and cash equivalent	**$ 16,419,961**	**13,166,383**

(14) Loss of control over subsidiaries

The consolidated company disposed of 100% equity interest in Sunrise PV One at the end of February 2017 and lost the control over it. The disposition price is NT$ 2,000 thousand, and the disposition of interest of NT$ 1,119 thousand is included in the item of "other interests and losses" of the consolidated profit and loss statement.

The carrying amount of Sunrise PV One's assets and liabilities at the end of February 2017 is as follows:

Cash and cash equivalents	$ 330
Current Assets	14,853
Property, plant and equipment	295,281
Non-current Assets	5,494
Current Liabilities	(313,783)
Non-current Liabilities	(1,294)
Carrying amount of the previous subsidiary's net assets	**$ 881**

(15) Property, plant and equipment

1. Changes in the cost, depreciation and impairment loss of the Company's property, plant and equipment are as follows:

	Land	Building	Machinery equipment	Other equipment	Construction in progress and quarantined equipment	Total
Cost:						
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**
Balance of January 1, 2017	$ 3,619,236	18,686,141	58,620,449	3,551,350	2,076,313	86,553,489
Acquired through merger	-	-	13,123	-	19,549	32,672
Additions	-	24,326	200,934	170,023	3,381,118	3,776,401
Disposals	-	(64,220)	(3,105,205)	(179,294)	(90,209)	(3,438,928)
Reclassification	3,030	114,902	1,994,590	672,797	(2,919,297)	(133,978)
Effect of changes in exchange rates	(213,475)	(865,052)	(963,033)	65,837	80,775	(1,894,948)
Balance of December 31, 2017	**$ 3,408,791**	**17,896,097**	**56,760,858**	**4,280,713**	**2,548,249**	**84,894,708**
Depreciation and impairment loss:						
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**
Balance of January 1, 2017	$ -	7,580,754	35,622,817	1,952,090	-	45,155,661
Current depreciation	-	791,488	4,590,816	507,610	-	5,889,914
Disposals	-	(46,108)	(2,637,444)	(97,899)	-	(2,781,451)
Reclassification	-	-	(2,114)	2,114	-	-
Effect of changes in exchange rates	-	(299,755)	(492,334)	(106,135)	-	(898,224)
Balance of December 31, 2017	**$ -**	**8,026,379**	**37,081,741**	**2,257,780**	**-**	**47,365,900**
Carrying amounts:						
December 31, 2018	**$ 3,466,034**	**9,442,754**	**18,830,354**	**2,321,983**	**3,377,430**	**37,438,555**
January 1, 2017	**$ 3,619,236**	**11,105,387**	**22,997,632**	**1,599,260**	**2,076,313**	**41,397,828**
December 31, 2017	**$ 3,408,791**	**9,869,718**	**19,679,117**	**2,022,933**	**2,548,249**	**37,528,808**

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 Balance Sheets.

The estimated value of use in 2018 is calculated at a pre-tax discount rate of 8.94%.

3. Guarantees

For details of long-term and short-term borrowings and financing quota guarantees as of December 31, 2018 and 2017, please refer to Note 8.

(16) Intangible assets

The breakdown of the costs and amortization of the intangible assets of the consolidated company in 2018 and 2017 is as follows:

	Goodwill	Patent and trademark	Development cost	Total
Costs:				
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**
Balance of January 1, 2017	$ 2,585,621	1,708,113	153,291	4,447,025
Acquired this period	-	-	2,530	2,530
Effect of changes in exchange rates	(156,595)	(5,888)	8,651	(153,832)
Balance of December 31, 2017	**$ 2,429,026**	**1,702,225**	**164,472**	**4,295,723**
Amortization:				
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**
Balance of January 1, 2017	$ -	2,286	8,666	10,952
Current amortization	-	331,893	11,411	343,304
Effect of changes in exchange rates	-	(485)	2,818	2,333
Balance of December 31, 2017	**$ -**	**333,694**	**22,895**	**356,589**
Carrying amount:				
December 31, 2018	**$ 2,488,317**	**1,038,261**	**122,819**	**3,649,397**
January 1, 2017	**$ 2,585,621**	**1,705,827**	**144,625**	**4,436,073**
December 31, 2017	**$ 2,429,026**	**1,368,531**	**141,577**	**3,939,134**

The amortization expenses of intangible assets in 2018 and 2017 were reported in the Consolidated Balance Sheets with operating expenses of NT$ 348,339 thousand and NT$ 343,304 thousand.

For the purpose of impairment test, goodwill is directly attributed to the semiconductor departed The Company conducts impairment test of the goodwill on the book at least once a year after the reporting date. The expected cash flow of the unit is used as basis to calculate recoverable amount.

Goodwill of the Company, after assess, has no indication of impairment.

None of the intangible assets of the consolidated company was provided as a pledge guarantee.

(17) Short-term borrowings

	2018.12.31	2017.12.31
Unsecured bank loans	$ 9,217,684	13,753,204
Purchase of materials loan	117,125	-
	$ 9,334,809	13,753,204
Unused credit lines	$ 23,333,968	13,014,095
Range of interest rates at year end	0.76% -3.88%	0.83%-3.42%

Please refer to Note 8 for the consolidated company's assets pledged as collateral for bank loans

(18) Long-term borrowings

Details, terms and conditions of the Company's long-term loan are as follows:

	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

	2017.12.31			
	Currency	Range of Interest Rate	expiry date	Amount
Unsecured bank loans	NTD	1.1%-1.17%	2019.06-2020.10	$ 3,976,333
Secured Bank Loans	NTD	1.28%-2.98%	2021.11-2032.01	1,670,539
Total				5,646,872
Less: due within one year				(613,333)
Total				$ 5,033,539
Unused credit lines				$ 2,527,000

Please refer to Note 8 for the Company's assets pledged as collateral for bank loans.

(19) Financial lease liabilities

The Company had part of the property, plant and equipment acquired through a financial lease with the finance lease liability payable booked in the "Other current liability" and "Other non-current liability" 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**

	2017.12.31		
	Future minimum lease payments	**Interest**	**Present value of minimum lease payments**
Within 1 year	$ 12,666	(1,735)	10,931
1-5 years	31,455	(2,737)	28,718
	$ 44,121	**(4,472)**	**39,649**

(20) Provision

The details of the changes in the liabilities provision of the consolidated company are as follows:

		Site restoration	Onerous contract	Total
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**
Balance of January 1, 2017	$	142,962	911,639	1,054,601
Provisions made during the year		5,401	-	5,401
Provisions used during the year		(77,701)	(388,380)	(466,081)
Effect of changes in exchange rates		(7,767)	(9,882)	(17,649)
Balance of December 31, 2017	**$**	**62,895**	**513,377**	**576,272**
Current	$	9,984	60,880	70,864
Non-current		52,911	452,497	505,408
Total	**$**	**62,895**	**513,377**	**576,272**

1. Site restoration

   The site restoration means that the consolidated company, in accordance with the factory lease contract, when the lease term expires and the lease is not renewed, the consolidated company has the obligation to restore the plant, and in accordance with the environmental policy issued by the consolidated company and applicable laws and regulations, liabilities provisions is accrued for environmental remediation obligation.

2. Onerous contract

   The consolidated company's accrual of loss-making contract liabilities provisions are due to the signing of long-term purchase contracts with a number of suppliers of silicon raw materials. The parties have agreed that from January 1, 2006 to December 31, 2019, the contracted supply and price will be delivered. The Company is to pre-pay the suppliers for the materials to be purchased and the payment can be made by installments but are non-refundable and the transaction is irrevocable. The materials supplier guarantees to have the agreed quantities of silicon materials supplied to the parent company. In view of the fluctuation of the spot market price, the consolidated company proposes the relevant liabilities provisions recognized under operating costs. Please refer to Note 9 for a description of the agreement with the raw material supplier.

(21) Operating lease

1. Lease of lessee

   The rent payment of the irrevocable operating leases is as follows:

		2018.12.31	2017.12.31
Within 1 year	$	199,460	191,541
1-5 years		680,949	528,324
Over 5 years		539,558	649,522
	$	1,419,967	1,369,387

   The operating expenses for 2018 and 2017 were stated at the expense of NT$ 249,592 thousands and NT$ 331,649 thousands respectively in the profit and loss item.

   The land, building and equipments for plants in Japan's Oguni, Hadano, Tokuyama are leased from the Japanese companies including Covalent Materials Corporation. The lease term for land and buildings are from November 30, 2011 to December 31, 2035 with annual rent amounted to a total of NT$ 30,155 thousand.

   The base of the consolidated company located in the factory building of Hsinchu Science Park was leased from the Science Park Bureau. The original lease period was from October 1, 2000 to December 31, 2037. 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$ 41,764 thousands.

   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

   The consolidated company leases land use rights under operating leases, with lease periods of 50 and 99 years respectively, and rents are 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 and 2017 were NT$ 225 thousands and NT$ 448 thousands respectively. 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.

(22) Employee benefits

1. Defined benefit plan

The present value of the Company's defined benefit obligations and fair value of the plan assets are adjusted as follows:

		2018.12.31	2017.12.31
Total present value of obligations	$	(8,164,777)	(8,176,190)
Fair value of plan assets		4,994,981	5,277,655
Recognized liabilities for defined benefit obligations	**$**	**(3,169,796)**	**(2,898,535)**

The details of the account are as follows:

		2018.12.31	2017.12.31
Recognized assets for defined benefit obligations	$	3,233	-
Recognized liabilities for defined benefit obligations		(3,173,029)	(2,898,535)
	$	**(3,169,796)**	**(2,898,535)**

The above defined benefit plans are calculated based on the base earned by the employee's service years.

(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:

		2018	2017
Defined benefit obligations at January 1	$	8,176,190	8,854,222
Current service cost and interest cost		463,686	472,758
Re measurements for defined benefit obligations			
- Actuarial gains and losses arising from experience adjustments		(25,922)	13,588
- Actuarial gains and losses resulting from changes in demographic assumptions		(172,289)	33,980
- Actuarial gains and losses resulting from changes in financial assumptions		72,519	(181,635)
Employer contributions		-	5,621
Benefits paid		(573,870)	(504,133)
Effect of changes in exchange rates		224,463	(518,211)
Defined benefit obligations at December 31	**$**	**8,164,777**	**8,176,190**

(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:

		2018	2017
Fair value of the plan assets at January 1	$	5,277,655	5,343,497
Interest income		144,935	140,457
Re measurements for defined benefit obligations			
- Return on plan asset (excluding interest revenue)		(391,115)	372,643
Contributions made		221,095	259,988
Benefits paid		(416,105)	(472,838)
Effect of changes in exchange rates		158,516	(366,092)
Fair value of the plan assets at December 31	**$**	**4,994,981**	**5,277,655**

As for plan assets of the defined benefit plan of Taiwan, 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 consolidated company's labor retirement reserve account at Bank of Taiwan on December 31, 2018 NT$ 233,587 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.

The plan assets of Korea's defined benefit plan are fixed-end bank deposits with interest rates ranging from 1.74% to 2.20%.

The plan assets of the defined benefit plan of Italy are allocated to the National Social Security Pension Fund (INPS).

The plan assets of the US defined benefit plan are deposited in a trust fund, and the funds of the trust fund are applied to commodities of different risks and rates of return. The investment portfolio includes cash, marketable securities and Revenue-based funds.

(3) Changes in the impact of the asset cap

The consolidated company in 2018 and 2017 did not have any effect of the changes in the impact of the defined benefit plan assets cap.

(4) Expenses recognized in profit or loss

The fees recognized as profit and loss for the consolidated company in 2018 and 2017 are as follows:

		2018	2017
Current service costs	$	445,871	457,247
Net interest of net liabilities for defined benefit obligation		(127,120)	(124,946)
	$	**318,751**	**332,301**
Operating Costs	$	270,245	274,294
Selling expenses		13,750	38,021
Administrative expenses		19,318	11,305
Research and development expenses		15,438	8,681
	$	**318,751**	**332,301**

(5) Re measurement of net defined benefit liability recognized in other comprehensive income

The remeasurement of the net defined benefit liabilities recognized by the consolidated company in other comprehensive gain or loss is as follows:

		2018	2017
Accumulated balance at January 1	$	368,017	(126,978)
Recognized during the period		(265,423)	506,710
Effect of changes in exchange rates		8,489	(11,715)
Accumulated balance at December 31	$	**111,083**	**368,017**

(6) Actuarial assumptions

The significant actuarial assumptions used by the Company to determine the present value of defined benefit obligation on the last day of financial reporting are as follows:

	2018.12.31	2017.12.31
Discount rate	0.26%-4.05%	0.20%-3.73%
Future salary increase rate	1.33%-9.96%	1.37%-6.56%

The consolidated company is expected to make a payment of NT$ 566,951 thousand to the defined benefit plan within one year after the reporting day in 2018.

The weighted average duration of the defined benefit plan is 9.1 to 18.73 years.

(7) Sensitivity analysis

The impact of the changes in the main actuarial assumptions adopted in 2018 and on December 31, 2017 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, 2018			
Discount rate	$	(183,551)	192,481
Future salary increase rate		80,785	(76,787)
December 31, 2017			
Discount rate	$	(203,390)	214,907
Future salary increase rate		81,832	(75,637)

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 and its domestic subsidiaries contribute monthly an amount based on 6% of the employees' monthly salaries and wages to the employees' individual pension accounts at the Bureau of Labor Insurance. According to the defined contribution plan, the parent company, after appropriating a fixed amount to the Bureau of Labor Insurance, Ministry of Labor is free from any legal or constructive obligations of making extra payments.

The pension expenses under the proposed retirement pension scheme for the consolidated company in 2018 and 2017 were NT$ 99,148 thousands and NT$ 91,988 thousands respectively, which were allocated to the Bureau of Labor Insurance Ministry of Labor.

If a foreign subsidiary adopts a retirement plan that is determined to be raised, the pension shall be paid in accordance with local laws and regulations, and the amount of the pension to be paid in the current period shall be recognized as the current expenses.

The pension expenses recognized by the foreign subsidiaries of the consolidated company in 2018 and 2017 were NT$ 80,721 thousands and NT$ 76,029 thousands respectively.

(23) Income tax

The Presidential Office issued an amendment to the Income Tax Act on February 7, 2018. The Income tax rate for the profit-making business has been raised from 17% to 20% since 2018.

1. Income tax expenses

The details of the Income tax expenses (interests) of the consolidated company in 2018 and 2017 are as follows:

		2018	2017
Income tax expenses current period			
Income tax expenses current period	$	2,640,682	1,066,239
Deferred Income tax expenses			
Temporary difference		1,908,161	540,874
Income tax rate change		133,910	-
		2,042,071	540,874
Income tax expenses	**$**	**4,682,753**	**1,607,113**

The breakdown of Income tax expenses (interests) recognized by the consolidated company in 2018 and 2017 in other comprehensive gain or loss is as follows:

		2018	2017
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement from defined benefit obligations	**$**	**(68,152)**	**88,347**
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign financial statements	**$**	**102,154**	**(110,730)**

The relationship between the Income tax expenses of the consolidated company in 2018 and 2017 and the net profit before tax is adjusted as follows:

		2018	2017
Income before income tax	$	13,318,233	5,125,741
Income tax using the Company’ s domestic tax rate		2,663,647	871,376
Effect of tax rates in foreign jurisdiction		353,279	424,660
Shares of profit of foreign subsidiaries accounted for using equity method		2,022,449	574,304
Tax effect of permanent differences		391,720	(631,540)
Adjustment in tax rate		133,910	-
Investment tax credits		(198,951)	(76,811)
Changes in unrecognized temporary differences and others		(683,301)	445,124
	$	**4,682,753**	**1,607,113**

2. Deferred Income tax assets and liabilities
   (1) The items not recognized by the consolidated company as deferred Income tax assets are as follows:

	2018.12.31	2017.12.31
Tax effect of deductible temporary differences	$ 1,444,153	2,619,897
Tax loss	611,452	320,062
	$ 2,055,605	2,939,959

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. These items are not recognized as deferred Income tax assets because it is not likely that Sino-American Silicon Products Inc. will have sufficient taxable Revenue for the temporary difference in the future.

As of December 31, 2018, the consolidated company has not recognized the taxable losses of deferred Income tax assets. The deductions and deductions are as follows:

Annual losses	Loss to be deducted	Deadline for deduction
2012 (verified)	$ 1,403,648	2022
2013 (verified)	9,728	2023
2017 (declared)	682,943	2027
2018(estimated)	960,942	2028
	$ 3,057,261	

   (2) The items that the consolidated company did not recognize as deferred Income tax liabilities are as follows:

	2018.12.31	2017.12.31
The aggregate amount of temporary differences related to the investee companies	$ (673,788)	(128,340)

The temporary differences related to the investment in subsidiaries on December 31, 2018 and 2017 are due to that the Company controls the time point of the temporary differences reversal and confirms the reversal will not happen in the foreseeable future. Therefore, the temporary differences are not recognized as deferred income tax liabilities.

(3) Recognized deferred Income tax assets and liabilities

The breakdown of deferred Income tax assets is as follows:

	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)

	2017.1.1	Recognized in profit or loss	Recognized in other comprehensive income	Effect of changes in exchange rates	2017.12.31
Assets:					
Allowance for inventory valuation	$ 188,462	(3,081)	-	(7,360)	178,021
Tax loss	556,473	(173,588)	-	25,824	408,709
Defined benefit obligations	255,217	35,092	3,260	869	294,438
Investment accounted for using equity method	425,283	(118,622)	120,604	-	427,265
Accounts receivable bad debt expenses	8,299	1,316	-	372	9,987
Depreciation life differences of property, plant and equipment	93,339	173,671	-	(1,441)	265,569
Unrealized exchange losses	179,500	(82,529)	-	(8,919)	88,052
Other	305,204	25,383	-	12,104	342,691
	$ 2,011,777	**(142,358)**	**123,864**	**21,449**	**2,014,732**

	2017.1.1	Recognized in profit or loss	Recognized in other comprehensive income	Effect of changes in exchange rates	2017.12.31
Liabilities:					
Investment accounted for using equity method	$ (526,017)	(445,553)	(101,481)	-	(1,073,051)
Depreciation life differences of property, plant and equipment	(476,819)	(82,794)	-	12,076	(547,537)
Fair value adjustment for the net assets acquired in business combinations	(491,461)	17,274	-	37,562	(436,625)
Other	(128,332)	112,557	-	6,717	(9,058)
	$ (1,622,629)	**(398,516)**	**(101,481)**	**56,355**	**(2,066,271)**

3. Assessment of tax filings

The Income tax settlement declaration for the profit-making business of Sino-American Silicon Products Inc. has been approved by the tax authorities to 2016.

(24) Capital and other interests

On December 31, 2018 and 2017, the total share capital of Sino-American Silicon Products. Inc. 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$ 5,863,207 thousands and NT$ 5,920,587 thousand respectively.

The adjustment table for the number of outstanding shares of Sino-American Silicon in 2018 and 2017 is as follows (expressed in thousands of shares):

	Common stock	
	2018	**2017**
Opening balance at January 1	580,539	574,476
Employees exercising stock options	-	6,063
new shares with restricting employee rights, restriction lifted	2,341	-
Closing balance at December 31	**582,880**	**580,539**

1. Issuance of common stock

The parent company participated in the global depositary receipts for NT$ 610,000 thousand with cash capital increase and with 61,000 thousand shares issued, of which 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 thousands and each GDR underlying 1 common stock share of the parent 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 cash capital increase, the parent company had sufficient stock shares issued and proceeds from subscription collected on September 9, 2010 amounted to US$ 177,193 thousand and US$ 174,931 thousands net of the underwriting fees of US$ 2,262 thousands, equivalent to NT$ 5,580,288 thousands after translation per the closing exchange rate of the trading day. The amount, after net of the related issuance cost of NT$ 11,531 thousand, the premium of NT$ 4,958,757 thousand was booked in the “capital reserve” item.

On June 27, 2017, Sino-American Silicon Products Inc. issued 6,000 thousand restricted employee shares through resolution of the shareholders' meeting which were approved by the competent authority, and October 13, 2017 was the capital increase base date, and the legal registration process was completed.

As of December 31, 2018 and 2017, due to the resignation of employees, the recovered and written off restricted employee shares were 216 thousand shares and 35 thousand shares respectively. As of December 31, 2018, there were still 33 thousand shares whose legal registration procedures are unfinished.

2. Capital surplus

The Capital surplus balance of the parent company is as follows:

	2018.12.31	2017.12.31
Additional paid in capital	$ 11,862,668	13,970,742
Difference between the disposition price and carrying value of the subsidiary’s equity	2,441,893	2,492,997
Capital reserve of long-term equity investment is recognized under the equity method	6,568,293	6,762,869
Treasury stock transactions	33,314	31,765
New restricted employee shares	244,849	341,422
Employee stock options, etc.	606,275	606,036
	$ 21,757,292	24,205,831

According to the Company Act amended in January 2012, 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.

Sino-American Silicon Products Inc. resolved through the shareholders' meeting the case of the profit and loss of 2017 on June 26, 2018. After the after-tax net profit of NT$ 1,035,505 thousands made up for the loss, the remaining amount was NT$ 317,629 thousands. And the capital reserve made up for the loss of NT$ 317,629 thousand, the relevant information can be inquired in the public information observatory and other pipelines.

Sino-American Silicon Products Inc. on June 26, 2018 and June 27, 2017, through resolution of the shareholders' meeting, distributed out of capital reserve cash of NT$ 1,759,511 thousands (NT$ 3 per share) and NT$ 861,714 thousands (NT$ 1.5 per share) in 2018 and 2017 respectively. Relevant information can be found in the public information observatory and other pipelines.

3. Legal reserve

According to the Company Act amended in January 2012, the parent company is to appropriate 10% of net Revenue as legal reserve until it is equivalent to the total capital amount. If there is no net loss, the company may have stock dividends or cash dividends distributed with legal reserve based on the resolution reached in the shareholder's meeting, but limited to the legal reserve amount exceeding 25% of the paid-in capital.

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. 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, 2018 and 2017, the special NT$ reserve was 102,349 thousand.

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. Distribution of surplus earnings and dividend policy

In accordance with the revised articles of association of Sino-American Silicon Products Inc., 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.

In order to maintain the company's sustainable development and steady growth of earnings per share, the shareholder's dividend is in principle over 50% of the current year's post-tax earnings deducted by the special reserve in the current year accrued in accordance with the law, and the cash dividend in the distribution ratio shall not be less than 50%.

Sino-American Silicon Products Inc. 's shareholder meeting decided to make a loss provision on June 26, 2018 and June 27 2017 respectively, and 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.

Sino-American Silicon Products Inc. on March 21, 2019, through the Board of Directors proposed the earnings distribution of 2018. The above-mentioned earnings distribution has yet to be resolved by the shareholders' meeting, the relevant information can be obtained from public information observatory and other pipelines after the relevant meeting resolution.

4. Treasury share

The balance of the treasury shares that have been bought back on December 31, December 31, 2018 and 2017 of Sino-American Silicon Products Inc. were 0 thousand shares and 5,555 thousand shares respectively. The acquisition costs were NT$ 0 thousands and NT$ 169,861 thousand respectively, accounted for in equity deductions.

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	-

	2017			
Reasons for buy back	**Beginning shareholdings**	**Increase of the year**	**Decrease of the year**	**Ending shareholdings**
Transferred to employee	5,555	-	-	5,555

According to the Securities Exchange Act, the repurchased shares and percentage shall not exceed 10% of the outstanding shares; the total amount of treasury stock shall not exceed the lump sum of the retained earnings, stock premium and capital reserve realized. When Sino-American Silicon Products Inc. bought back the treasury shares, it calculated the relevant limit according to the most recent financial statements checked by the accountant.

5. 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
Balance of January 1, 2018	$(1,973,334)	-	(1,109,281)	(236,020)	(4,302)	(3,322,937)
Effects of retrospective application of new standards	-	(2,338,298)	1,109,281	-	-	(1,229,017)
January 1, 2018 after adjusted	(1,973,334)	(2,338,298)	-	(236,020)	(4,302)	(4,551,954)
Exchange difference arising from conversion of a foreign institution's net assets	391,255	-	-	-	-	391,255
Share of conversion differences by affiliates under equity method	(4,162)	-	-	-	922	(3,240)
Unrealized gain or loss on financial assets measured at fair value through other comprehensive gain or loss	-	(529,832)	-	-	-	(529,832)
Unrealized gain or loss on financial assets measured at fair value through other comprehensive gain or loss under equity method	-	(96,198)	-	-	-	(96,198)
Dispose of equity instruments measured at fair value through other comprehensive gains and losses	-	1,558,196	-	-	-	1,558,196
Remuneration coast of shares with restrictions on employee rights	-	-	-	160,686	-	160,686
Balance of December 31, 2018	**$(1,586,241)**	**(1,406,132)**	**-**	**(75,334)**	**(3,380)**	**(3,071,087)**

	Exchange differences on translation of foreign operations	Unrealized gains (losses) on available for sale financial assets	Remuneration unearned by employees	Other	Total
January 1, 2017	$ (1,617,512)	(1,188,654)	-	(6,354)	(2,812,520)
Exchange difference arising from conversion of a foreign institution's net assets	(63,531)	-	-	-	(63,531)
Exchange difference of the subsidiaries and affiliated companies accounted for under equity method	(292,291)	-	-	-	(292,291)
Available-for-sale financial assets unrealized gains and losses	-	23,914	-	-	23,914
The unrealized gains or loss of the financial assets available-for-sale of the affiliated companies under the equity method	-	55,459	-	-	55,459
The un-earned remuneration of the employees of the affiliated companies under the equity method	-	-	-	2,052	2,052
Shares issued with restrictions on employee rights	-	-	(283,200)	-	(283,200)
Remuneration coast of shares with restrictions on employee rights	-	-	45,752	-	45,752
shares with restrictions on employee rights written-off	-	-	1,428	-	1,428
Balance of December 31, 2017	**$ (1,973,334)**	**(1,109,281)**	**(236,020)**	**(4,302)**	**(3,322,937)**

(25) Share-based payment

1. New Restricted employee shares

On June 27, 2017, Sino-American Silicon Products Inc. 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 Sino-American Silicon Products. Inc. 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 Sino-American Silicon Products Inc. at the issue price.

Relevant information of the new restricted employee shares of Sino-American Silicon Products. Inc. is as follows:

Unit: Thousand shares

	2018	2017
Quantity on January 1	5,965	-
Quantity given in this period	-	6,000
Quantity vested in this period	(2,341)	-
Quantity written off due to resignation in this period	(216)	(35)
Quantity on December 31	**3,408**	**5,965**

The remuneration costs recognized by Sino-American Silicon Products. Inc. in 2018 and 2017 were NT$ 151,199 thousands and NT$ 45,752 thousands respectively, and the operating costs and operating expenses were accounted for. The balance of the unpaid employee remuneration of Sino-American Silicon Products. Inc. On December 31, 2018 and 2017 were NT$ 75,334 thousands and NT$ 236,020 thousands, accounted for in reductions of other equity.

2. Cash delivery share-based payment

The consolidated company 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.

On December 31, 2018, the price of GlobalWafers stock was NT$ 280.5, and the number of non-acquired shares was 1,000 thousand. As of December 31, 2018, the consolidated company has recognized the remuneration cost as NT$ 70,125 thousand.

3. Employee stock option certificate

In June 2010, Sino-American Silicon Products. Inc. resolved by the board of directors to issue for the first time 10,000,000 units of employee stock option certificate for 2010. They were declared effective on November 12, 2010 and issued on

August 10, 2011, each unit can subscribe for 1 ordinary share of the consolidated company with the duration of six years. If the employee has two, three, four and five years of service from the date of grant of the stock option, the cumulative ratio of exercising stock option is 40%, 60%, 80% and 100% respectively.

On December 31, 2017, the consolidated company's employee stock option certificates were booked as follows:

Type	The effective date of declaration	Awarded date	Vested period	Vested unit (Thousand units)	Subscription unit price (NT$)	Market price per unit on the measurement date (NT$)	Adjusted performance price (NT$)
The first employee stock options in 2010	2010.11.12	2011.8.10	Service period 2-4 years	10,000	60.50	60.50	48.60

The consolidated company recognized the remuneration cost of the remuneration employee stock option plan for 2017 is NT$ 0 thousand. The fair value of the stock option awarded to employees on August 10, 2011 was estimated in accordance with Black-Scholes stock option valuation model and with the weighted average information of assumptions illustrated as follows:

Dividend rate	3.6%
Expected price volatility	48.065%
Risk-free interest rate	1.2905%
Expected duration	6 years

The information on the quantity and weighted average exercise price of the consolidated company's employee stock option certificate in 2017 is disclosed as follows:

	2017	
Employee stock options	**Quantity (thousand shares)**	**Weighted average exercise price (dollars)**
Outstanding at beginning of year	8,338	$ 52.20
Exercised	(6,063)	48.60
Forfeited	(2,275)	48.60
Outstanding at end of year	-	-
Options exercisable at end of year	-	-
Weighted-average fair value per employee stock options (dollars)	**$ 23.36**	

The above employee stock option certificate was completed on August 9, 2017. From January 1 to December 31, 2017, the employee's stock option certificate has been exercised for 6,063 thousand shares (including the number of shares exercised by employees of subsidiaries) worth a total of NT$ 294,638 thousand. October 5, 2017 is designated as the capital increase base date for the issuance of new shares, and the legal change registration has been completed in this capital increase case.

The weighted average remaining duration of employee stock options outstanding on December 31, 2017 was 0 years.

(26) Earnings per share

1. Basic earnings per share

	2018	2017
Net Revenue attributable to the Shareholders of GlobalWafers Co., Ltd	$ 1,950,503	1,035,505
Weighted-average number of ordinary shares outstanding during the year (in thousands of shares)	581,058	576,525
Basic earnings per share (dollars)	$ 3.36	1.80

2. Diluted earnings per share

	2018	2017
Net income attributable to the Shareholders of GlobalWafers Co., Ltd	$ 1,950,503	1,035,505
Weighted average number of ordinary shares outstanding during the year (in thousands of shares) (base)	581,058	576,525
Impact of dilution of potential ordinary shares (shares in thousands)	3,672	3,113
Weighted average number of outstanding common stock (shares in thousands)(diluted)	584,730	579,638
Diluted earnings per share (NT$)	$ 3.34	1.79

(27) Revenue from contracts with customers

1. Details of revenues

	2018		
	Semiconductor Department	Solar energy Department	Total
Primary geographical markets:			
Taiwan	$ 13,429,594	3,190,990	16,620,584
Korea	9,647,694	218,937	9,866,631
U.S.A.	8,340,541	1,060,459	9,401,000
Japan	7,616,281	1,201,536	8,817,817
Mainland China	6,002,196	1,283,532	7,285,728
Germany	3,038,700	799,484	3,838,184
Other countries	10,969,088	2,439,913	13,409,001
	$ 59,044,094	10,194,851	69,238,945
Major product categories:			
Semiconductor wafers	$ 58,447,151	-	58,447,151
Solar cell	-	3,141,457	3,141,457
Solar module	-	2,066,427	2,066,427
Solar wafer	-	581,924	581,924
Solar ingot	-	1,608,721	1,608,721
Semiconductor ingot	492,114	-	492,114
Other	104,829	2,796,322	2,901,151
	$ 59,044,094	10,194,851	69,238,945

For the Revenue of 2017, please refer to Note 6 (28).

2. Contract balance

	2018.12.31	2018.1.1
Contract liabilities	$ 20,374,971	8,591,453

The change in contractual liabilities is mainly due to the advance payment of customers according to the contract, and the revenue will be recognized when the goods are transferred to customers. The opening balance of the contractual liabilities on January 1, 2018 recognized from January 1, 2018 to December 31, 2018 as Revenue was NT$ 1,676,859 thousand.

(28) Revenue

	2017
Sales of goods	$ 59,148,158
Electricity fee Revenue	208,428
Processing Revenue and labor service supply	14,612
	$ 59,371,198

Please refer to Note 6 (27) for the amount of Revenue in 2018.

(29) Remuneration of employees and directors

In accordance with the articles of association of Sino-American Silicon Products Inc. 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.

Sino-American Silicon Products Inc.in 2018 accrued employee remuneration NT$ 131,990 thousand, and the director's remuneration, NT$ 44,010 thousand, which is based on the amount of the pre-tax net profit of the period deducted by employee and director remuneration, multiplied by the distribution ratio of employee and director remuneration as set out in the Articles of Association of the company. They are booked as operating costs or operating expenses for the period, in which if employees are paid by stocks, the number of shares allotted is calculated by the closing price of the ordinary share the day before the resolution of the board of directors. If there is a difference between the actual distribution amount and the estimated number of the next year, it will be treated according to the accounting estimates and the difference will be recognized as the profit and loss of the following year.

After the net profit of the Sino-American Silicon Products Inc. in 2017 made up for the loss, there was still a cumulative loss, so the employees and directors were not assessed. The relevant information can be obtained from the public information observatory.

The amount of remuneration of employees and directors distributed by the above-mentioned board of directors resolution is no different from the estimated amount in the consolidated financial statements of 2018 and 2017 of Sino-American Silicon Products Inc.

(30) Other Revenue

	2018	2017
Interest income	$ 482,902	131,992
Dividend income	34,994	14,946
	$ 517,896	146,938

(31) Other gains and losses

	2018	2017
Foreign currency exchange loss	$ (39,184)	(597,363)
Impairment loss	(227,392)	(69,501)
Unrealized gains (losses) on financial assets (liabilities) measured at fair value through profit or loss	67,241	37,583
Realized gains (losses) on financial assets (liabilities) measured at fair value through profit or loss	79,466	77,692
Government Grants	26,454	21,242
Other	164,659	(56,640)
	$ 71,244	(586,987)

(32) Financial costs

		2018	2017
Bank loan interest expense, etc.	$	212,003	506,347

(33) Recognition of other comprehensive profit and loss shares of affiliated enterprises by equity method

		2018	2017
Exchange differences on translation of foreign operations	$	(4,162)	(5,647)
Unrealized gains or losses on valuation of financial assets available for sales		-	110,843
Financial assets at fair value through other comprehensive income		(169,482)	-
	$	(173,644)	2016,196

(34) Financial instruments

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 parent 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. As of December 31, 2018 and 2017, 0% 43% and 38% of the balance of notes and accounts receivable (including related parties) of the consolidated company were composed of ten customers. In the case of credit risk concentration, the consolidated 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. (from January 1 to December 31, 2017 booked in held-to-maturity other financial assets), please refer to Note 6 (4) for details of relevant investments.

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 consolidated 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 within	6-12 months	1-2 years	2-5 years or more
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 (including current portion of long term borrowings payable)	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)
Other 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)
December 31, 2017						
Non-derivative financial liabilities						
Short term borrowings	$ 13,753,204	(13,830,599)	(11,921,615)	(1,908,984)	-	-
Notes and accounts payable (including related parties)	5,351,875	(5,351,875)	(5,351,875)	-	-	-
Long term borrowings (including current portion of long term borrowings payable)	5,646,872	(6,059,264)	(329,375)	(361,732)	(2,006,004)	(2,839,763)
Finance lease liabilities	39,649	(44,121)	(7,118)	(5,548)	(9,203)	(22,252)
Other forward foreign exchange contracts:						
Inflow	-	(3,479,287)	(3,479,287)	-	-	-
Outflow	16,394	3,498,202	3,498,202	-	-	-
	$ 24,807,994	(25,266,944)	(17,591,068)	(2,276,264)	(2,015,207)	(2,862,015)

The Company does not expect the cash flow analysis on maturity dates to occur significantly ahead of the schedule or the actual amount significantly different than expected.

3. Currency risk
   (1) Risk of Currency exposure
   The Company's is financial assets and liabilities exposed to significant foreign exchange rate risk are as follows:

	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

	2017.12.31		
	Foreign currency	**Exchange rate**	**NTD**
Financial assets			
Monetary items			
USD	$ 569,871	29.760	16,959,361
JPY	342,244	0.2642	90,421
SGD	65,749	21.710	1,427,411
EUR	6,707	35.570	238,568
RMB	24,481	4.565	111,756
Non-monetary items			
USD	20,700	29.760	Note
KRW	74,506,300	0.0281	Note
Financial liabilities			
Monetary items			
USD	37,989	29.760	1,130,553
JPY	966,843	0.2642	255,440
EUR	2,305	35.570	81,989
Non-monetary items			
JPY	50,000	0.2642	Note

Note: The forward foreign exchange contract held is measured at the fair value of the reporting date. For details, please refer to Note 6 (2).

(2) Sensitivity analysis

The Company's exchange rate risk is mainly 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, 2018 and 2017, when the NTD depreciated or appreciated by 1% against USD, JPY, RMB, SGD, and EUR, and all other factors remained unchanged, the pre-tax net profit for 2018 and 2017 will increase or decrease by NT$ 98,748 thousands and NT$ 173,595 thousands respectively. The analysis of the two periods was performed with the same basis.

(3) Exchange gains or losses for monetary items

Due to the wide variety of functional currencies of the consolidated company, the consolidation method is used to disclose the exchange gain or loss information of monetary items. The foreign currency exchange profit (loss) (including realized and unrealized) in 2018 and 2017 were respectively NT$(39,184) thousand and NT$(597,363) thousand.

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 consolidated company in 2018 and 2017 will decrease or increase by NT$ 2,219 thousands and NT $22,115 thousands respectively due to consolidated 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 consolidated profit and loss item is as follows:

	2018		2017	
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%	$ 35,871	8,853	34,260	-
Down by 5%	(35,871)	(8,853)	(34,260)	-

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:

Notes to the consolidated financial statements of Sino-American Silicon Products Inc. and its subsidiaries (continued)

	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**

	2017.12.31				
		Fair value			
	Carrying Amount	Level I	Level II	Level III	Total
Financial assets measured at fair value through profit or loss-current	$ 21,546	-	21,546	-	21,546
Financial assets in available-for-sale —non-current	$ 685,194	685,194	-	-	685,194
Held-to-maturity financial assets - non-current	$ 281,366	-	289,080	-	289,080
Financial assets measured at cost – non-current	$ 838,181	-	-	-	-
Loans and receivables					
Cash and cash equivalents	$ 20,342,780	-	-	-	-
Notes and accounts receivable (including related party)	8,829,543	-	-	-	-
Other financial assets (current and noncurrent)	577,461	-	-	-	-
Subtotal	$ 29,749,784	-	-	-	-
Financial liabilities at fair value through profit or loss- current	$ 5,152	-	5,152	-	5,152
Financial liabilities measured with amortized costs					
Short term borrowings	$ 13,753,204	-	-	-	-
Notes and accounts payable (including related parties)	5,351,875	-	-	-	-
Long-term borrowing (including long-term borrowings due within one year)	5,646,872	-	-	-	-
Finance lease payable (current and non-current)	39,649	-	39,649	-	39,649
Subtotal	$ 24,791,600	-	39,649	-	39,649

(2) Valuation technique of fair value of financial instruments that are not measured at fair value

The approach and assumption used by the parent company to estimate instrument not measured at fair value.

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

A. 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 considered 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 transactions are not frequent, there is indication that the market is not active.

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 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 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 booked (TaiSDAQ) companies' quotes. The estimate has adjusted the depreciation impact of the lack of market liquidity of the equity securities.

B. Derivative financial instruments

It is based on evaluation models accepted by most market users, such as discounting methods and option pricing models. Forward foreign exchange contracts are usually evaluated based on the current forward exchange rate.

(4) Reconciliation of Level 3 fair value

The Group's financial instruments that use reconciliation of Level 3 fair value are deemed as financial assets measured at fair value through other comprehensive income. The movement as follows:

	Financial assets measured at fair value through gain or loss	Financial assets at fair value through other comprehensive income
January 1, 2018	$ -	838,181
Effects of retrospective application of new accounting standards	-	(12,254)
Re-edited balance at January 1, 2018	-	825,927
New/returned share payment in this period	-	33,977
Recognized in the Revenue	(481)	-
Recognized in other comprehensive Revenue	-	(320,470)
Reclassification	65,178	(65,178)
Effect of changes in exchange rates	-	13,248
December 31, 2018	**$ 64,697**	**487,504**

(5) Quantitative information on the fair value measurement of significant unobservable inputs (Level 3)

The fair value measurement of the consolidated company classified as Level 3 are mainly equity investment, financial assets measured at fair value through other comprehensive gain or loss.

The significance of the consolidated 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 (2018.12.31 is 0.13-2.14) • Lack of market liquidity discount (2018.12.31 is 19.4%-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 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.

(35) Financial risk management

1. Overview

The financial instrument that the parent 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 parent company's risk measurement and management are disclosed in the notes. Please refer to the notes to the individual financial statements for the quantitative disclosure in detail.

2. Structure of risk management

The Board has sole responsibility for and oversight of the parent company's risk management framework and risk management policies and procedures. Internal auditors assist the Board of Directors to monitor and to carry out 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 parent 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 parent 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.

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. Internal auditors assist the Board of Directors of the Company to monitor. 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

Credit risks are the risks of financial loss incurred from customers or the counterparts of financial instruments fail to fulfill contractual obligation. They are mainly from the Company's accounts receivable from customers and securities investment.

(1) Accounts receivables and other receivables

The Company has set up credit policy and analyzes the credit rating of each respective customer before granting standard payment and shipping terms and conditions Purchase limit is set up for each customer. The limit is reviewed periodically. For customers that do not meeting the benchmark credit rating of the Company may only conduct business with the parent company with prepayment term.

(2) Investment

Credit risks of bank deposit, fixed Revenue investment and other financial instruments are monitored by the Company's Financial Department. As the counterparty the Company transacted with and parties to fulfill contractual obligations are banks with good credit standing and financial institutions with investment level ranking or above, corporation and government. As there are no significant for these parties to default, there is no significant credit risk.

(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, 2018 and 2017, the consolidated 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.

Loan from bank is an important source of liquidity to the Company. On December 31, 2018 and 2017, the long-term and short-term bank financing quotas unused of the consolidated company were NT$ 23,634,968 thousand and NT$ 15,541,095 thousand 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 is arising from the sales, purchases and loans transactions denominated in non-functional currency. The functional currency of the consolidated company is NTD. 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, the currency of the borrowings is the same as the currency of the cash flows generated by the operations of the consolidated company, mainly NTD, but also in USD.

For other monetary assets and liabilities denominated in foreign currencies, for any short-term imbalance occurring, the parent 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 holds equity securities of booked companies or those trade in TPEx and thus has exposure to the risk of interest incurred. Those equity investments are not held for trading but for strategic investment.

Please refer to Note 6 (35) for the risk of change.

(36) 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 consolidated 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:

	2018.12.31	**2017.12.31**
Total Liabilities	$ 56,071,450	45,565,622
Less: Cash and cash equivalent	(36,829,131)	(20,342,780)
Net liabilities	**$ 19,242,319**	**25,222,842**
Total Equity	**$ 47,913,865**	**43,776,911**
Debt capital ratio	**40.16%**	**57.62%**

The decrease in the debt-to-capital ratio as on December 31 2018 was due to the increase in total equity from the increase in cash and cash equivalents.

(37) Financing activities

The adjustment of liabilities from financing activities is as follows:

	Short term borrowings	**Long-term debt payable**	**Guarantee deposits received**	**Total liabilities from financing activities**
Balance of January 1, 2018	$ 13,753,204	5,646,872	910,098	20,310,174
Cash flow				
Cash from borrowing	48,938,400	1,026,000	-	49,964,400
Repayment of borrowings	(53,402,407)	(4,632,672)	-	(58,035,079)
Guarantee deposits received	-	-	17,858	17,858
Non-cash change				
Effect of changes in exchange rates	45,612	-	17,885	63,497
Reclassification to contract liabilities	-	-	(602,980)	(602,980)
Balance of December 31, 2018	**$ 9,334,809**	**2,040,200**	**342,861**	**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
Actron Technology Corporation (hereinafter referred to as Actron Technology)	The chairman of Sino-American Silicon Products Inc. is the same.
Solartech Energy Corp.	Sino-American Silicon Products Inc. is the main management of Solartech Energy (Note 2)
Sunshine PV. Corporation (hereinafter referred to as Sunshine PV.)	Related enterprise to URE
Ming Yang Corporation (hereinafter referred to as Ming Yang)	Sino-American Silicon Products Inc.'s management is the Chairman of the company (Note 1)
Song Long Electronics Corporation (hereinafter referred to Song Long Eletronics)	Sino-American Silicon Products Inc.'s management is the director of the company
URE	Sino-American Silicon Products Inc. is the main management of URE (Note 2)
Accu Solar Corporation	Affiliated enterprises of the consolidated company
TSCS	Affiliated enterprises of the consolidated company
Crystalwise Technology Inc.	Affiliated enterprises of the consolidated company
Cathy Sunrise	Affiliated enterprises of the consolidated company
Sunrise PV One Co., Ltd.	Subsidiaries of affiliated enterprises of the consolidated company
Cathy Sunrise One Co., Ltd.	Subsidiaries of affiliated enterprises of the consolidated company
Cathy Sunrise Two Co., Ltd.	Subsidiaries of affiliated enterprises of the consolidated company
Cathy Sunrise Electric Power One	Subsidiaries of affiliated enterprises of the consolidated company

Note 1: In July 2017, it was not a related party of the consolidated company.

Note 2: The former Solartech Energy was merged and cancelled in October 2018. The existing company was renamed URE.

(2) Significant transactions with related parties

1. Operating revenue

The amount of significant sales and engineering contract revenue of the consolidated company to the related parties is as follows:

		2018	2017
Affiliated companies	$	956,605	43,752
Other related parties		439,403	1,826,018
	$	1,396,008	1,869,770

The price of selling goods and engineering price of the consolidated company to the related party are based on the general market price, and adjusted by taking into account factors such as the sales area and the sales volume.

The agreed payment period of the consolidated company in 2018 and 2017 to the general customer is 0-210 days; to main related parties, O/A 30 days and advance payment to O/A 90 days EOM, and O/A 30 days and O/A 30 days EOM to 180 days after shipment.

The project Revenue of the consolidated company and affiliated companies was refunded in 2018 due to the withdrawal of the project. The amount of the project received and returned was NT$ 50,227 thousands yuan. As of December 31, 2018, the project has not yet been paid, booked under the item of related parties.

2. Purchase and outsourced processing

The consolidated company's purchase, outsource processing and engineering costs to the related parties is as follows:

		2018	2017
Affiliated companies	$	12,949	-
Other related parties		25,324	18,221
	$	38,273	18,221

The Company has used the general market price to purchase goods and outsource processing from the related party.

The consolidated company's payment conditions to general supplier in 2018 and 2017 are from O/A 0 days to O/A 150 days EOM; to related parties, advance payment to O/A 90 days EOM, and O/A 15 days EOM to O/A 60 days EOM.

For the purchase of raw materials, the advance payment of Sino-American Silicon Products. Inc. to other related parties is NT$ 1,179 thousands, which is accounted for under the prepaid materials.

3. Receivables from related parties

Receivables from related parties are as follows:

Account	Classification of related party		2018.12.31	2017.12.31
Receivables from related parties	Affiliated companies	$	42,133	-
Receivables from related parties	Other related parties		64,950	111,806
		$	107,083	111,806

In addition, 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 consolidated company, and the details of the advance sales receipts to the related parties (respectively booked in contract liabilities - current / non-current and advance payment received - current/non-current items) are as follows:

	2018.12.31	2017.12.31
Other related party-Solartech Energy	$ -	860,357
Other related party-URE	883,697	-
Other related party-Others	-	1,044
	$ 883,697	861,401

4. Receivables from related parties

The receivables from related parties were as follows:

Account	Classification of related party	2018.12.31	2017.12.31
Receivable from related parties	Affiliated companies	$ 319	6,123
Receivable from related parties	Other related parties	-	3,282
		$ 319	9,405

5. Transactions of property, plant and equipment

The aggregated purchase price of the property, plant and equipment obtained by the consolidated company from the related parties is as follows:

	2018		2017	
	Amount	Receivable from related parties	Amount	Receivable from related parties
Affiliated companies	$ 5,092	-	-	-
Other related parties	-	-	17,445	-
	$ 5,092	-	17,445	-

6. Corporate bonds

In October 2016, the consolidated company purchased the five-year private placement corporate bonds issued by its affiliated company, Crystalwise Technology, a total of 280 bonds with each face value of NT$ 1,000 totaling $ 280,000 thousand. Ther interest is paid once every six months. Both the interest rate and the coupon rate are 2%. Interest Revenue for 2018 and 2017 were NT$ 1,366 thousands and NT$ 1,366 thousands respectively. As of December 31, 2018 and 2017, the accumulated investment cost and interest receivable were NT$ 281,366 thousand and NT$ 281,366 thousand respectively, booked in financial assets measured at amortized cost - non-current and held to maturity financial assets - non-current items.

In January 2019, the consolidated company purchased the private equity corporate bonds of one year from the related company Crystalwise Technology for NT$ 250,000 thousand. For details, please refer to Note 11.

7. Payment on behalf of others

On December 31, 2018 and 2017, the consolidated 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:

	2018.12.31	**2017.12.31**
Affiliated companies	$ 6,832	1,765
Affiliated companies	(796)	(38)
Other related parties	-	36
	$ 6,036	1,763

8. Others

The consolidated company and the related parties signed the plant lease contract. The breakdown of the rental expenses and the payables to the related parties are as follows:

	2018	**2017**
Affiliated companies	$ 2,142	2,096
Other related parties	-	11,340
	$ 2,142	13,436

Account	**Classification of related party**	**2018.12.31**	**2017.12.31**
Receivable from related parties	Affiliated companies	$ -	265

(2) The consolidated company and the related parties have a factory lease contract, and the breakdown of the rental Revenue is as follows:

	2018	**2017**
Affiliated companies	$ 225	100

(3) Key management

The remuneration to key management include:

	2018	**2017**
Short-term employee benefits	$ 314,161	255,419
Post-employment benefits	1,590	1,191
Share-based payment	73,612	25,659
	$ 389,363	282,269

In 2018 and 2017, the consolidated company provided 4 vehicles with a total cost of NT$ 4,444 thousands and NT$ 4,845 thousands for key management personnel to use.

8. Pledged Assets

The carrying amount of the assets pledged by the Company as collateral is as follows:

Assets	Pledge or Mortgage underlying subject	2018.12.31	2017.12.31
Property, plant and equipment	Borrowings payable	$ 3,475,408	3,568,042
Time deposits (recognized in other financial assets－current)	Performance bond for Acceptances	22,393	24,495
Time deposits (recognized in other financial assets－non-current)	Providing a guarantee for the bank to open a lease for the Science Park Bureau	40,838	43,437
Time deposits (recognized in other financial assets－non-current)	Guarantee of gas consumption	6,700	6,700
Time deposits (recognized in other financial assets－non-current)	Performance bonds for Government grant provided to technology projects	13,597	11,320
Time deposits (recognized in other financial assets－non-current)	Bank loan reserve account margin	-	78,600
Time deposits (recognized in other financial assets－non-current)	Performance bond for duty paid after customs release	5,000	5,000
Time deposits (recognized in other financial assets－non-current)	Court guarantee	10,748	-
Refundable deposits (recognized in other financial assets－non-current)	Performance bond for purchase of material	167,125	158,715
Refundable deposits (recognized in other financial assets－non-current)	Court litigation	22,440	-
		$ 3,764,249	3,896,309

9. Significant commitments and contingencies

Except as stated in Note 6 (21), other significant contingent liabilities of the consolidated 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)

	2018.12.31	2017.12.31
USD	$ 1,236,606	1,449,306
EUR	$ 12,157	39,046
JPY	$ 2,145,137	2,075,963

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 2018 and December 31, 2017 as US$ 615,982 thousands and US$ 502,650 thousand respectively. The aforementioned purchase amount yet to be collected, except for interest, has included the amount requested by the suppliers. As Sino-American Silicon Products Inc. and Hemlock continue to trade, Sino-American Silicon Products Inc. believes that the possibility of the aforementioned interest payment is low and so does not estimate this contingent liability.

Hemlock. The subpoena and the complaint against Sino-American Silicon Products Inc. were delivered to Sino-American Silicon Products Inc. on May 12, 2015. However, the two parties reached an agreement in May 2016. Please refer to the relevant description (2) contingent liabilities.

The consolidated company's prepayments reversal impairment to silicon raw materials suppliers in 2018 and 2017 were NT$ 288,436 thousands and NT$ 35,982 thousands respectively. On December 31, 2018 and 2017, the consolidated company's accumulated impairment of advance payment to the silicon raw materials supplier were NT$ 669,997 thousands and NT$ 1,107,096 thousands respectively, net amount NT$ 695,583 thousand and NT$ 1,619,571 thousand, booked in prepaid materials and long-term prepaid materials.

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)

	2018.12.31	2017.12.31
USD	$ 91,640	239,996
EUR	$ 68,815	115,316
NTD	$ 54,845	54,845

3. On December 31, 2018 and 2017, the consolidated company has signed or ordered significant construction projects and plant equipment that have not yet been delivered for inspections of NT$ 687,219 thousands and NT$ 1,961,648 thousands respectively.
4. On December 31, 2018 and 2017, the total amount of promissory notes deposited by the consolidated company at the bank for acquiring bank financing were NT$ 11,549,325 thousands and NT$ 6,740,369 thousands respectively.
5. On December 31, 2018 and 2017, the consolidated company requested the bank to open a performance bond for the General Administration of Customs and the R&D plan, which amounted to NT$ 50,400 thousands and NT$ 81,841 thousands respectively.
6. On December 31, 2018 and 2017, the amount of the letter of credit that the consolidated company had opened without making seven years and one use was as follows:

(Expressed in thousands of foreign currency)

	2018.12.31	2017.12.31
USD	$ 3,191	3,353
Danish Krone	$ 3,750	-

7. The consolidated company and the polycrystalline solar cell manufacturer (referred to as the manufacturer) signed a cooperation contract. From July 1, 2015 to March 31, 2021, the manufacturer provided factory and equipment for Sino-American Silicon Products Inc. for operational use. According to the contract, Sino-American Silicon Products Inc. shall allocate part of the operating Revenue of the plant equipment to the manufacturer. During the contract period, the accumulated distribution of operating profit amounted to a certain amount, and the consolidated company has the right to acquire the ownership of the plant equipment for free or for a fee. As of December 31, 2018, the contract was terminated in advance.
8. The consolidated company has a long-term sales contract with certain customers and collects the advance sales receipts. The customer is required to fulfill the minimum order quantity.

(2) Contingent liabilities

The silicon supplier Hemlock and Sino-American Silicon Products. Inc. reached an agreement in May 2016 on the inter-party lawsuit, stipulating that under certain conditions, Hemlock ceased the proceedings against Sino-American Silicon Products. Inc. to April 30, 2019. The two parties signed two documents, STIPULATION OF DISCONTINUANCE and SETTLEMENT AGREEMENT. According to SETTLEMENT AGREEMENT, Sino-American Silicon Products. Inc. must purchase a certain amount of silicon raw materials from Hemlock and its affiliated enterprises. In February 2019, the two parties signed a supplementary Accommodation Letter to agree to amend part of the SETLEMENT AGREEMENT, and extend the period of STIPULATION OF DISCONTINUANCE termination of the proceedings against

Sino-American Silicon Products. Inc. to April 30, 2019. After that, Sino-American Silicon Products. Inc. had negotiated a contract with Hemlock. As of March 21, 2019, Sino-American Silicon Products. Inc. had not received any notice from the other party to restart the proceedings.

10. Losses due to major disaster: None.

11. Subsequent Events

The consolidated company resolved by the board of directors on January 11, 2019 to subscribe for the private equity of 250 million dollars unsecured ordinary corporate bonds issued by Crystalwise Technology. The corporate bond is issued for one year and expires in January 2020. The coupon rate is 2% per annum.

12. Others

The functions of employee benefits, depreciation and amortization expenses are summarized as follows:

By Function	2018			2017		
By Nature	Classified as operating cost	Classification of operating expenses	Total	Classified as operating cost	Classification of operating expenses	Total
Employee benefits expense						
Salaries	7,693,736	2,404,588	10,098,324	7,311,595	2,487,646	9,799,241
Labor and health insurance	1,215,231	272,420	1,487,651	1,046,643	339,913	1,386,556
Pension expenses	393,155	105,465	498,620	393,768	106,550	500,318
Other employee benefits expense	620,301	141,123	761,424	526,401	121,866	648,267
Depreciation expense	5,396,123	232,110	5,628,233	5,584,664	305,250	5,889,914
Amortizations	351,354	3,425	354,779	332,015	19,101	351,116

13. Other disclosures

(1) Information on significant transactions

In 2018, 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 consolidated 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, 2018 (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: Please refer to Attachment 6 for details.

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 7 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 8 for details.
9. Trading in derivative instruments: Please refer to Attachment 6 (2) for details.
10. B Business relationships and significant intercompany transactions: Please refer to Attachment 9 for details.

(2) Information on investees: Please refer to Attachment 10 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 11 (1) for details.
2. Investment quotas for Mainland China: Please refer to Attachment 11 (2) for details.

14. Segment information

(1) Operating segment information

Reconciliation for segment Revenue (loss):

	2018			
	Semiconductor Department	**Solar energy Department**	**Adjustment and elimination**	**Total**
Revenues				
Net external revenue	$ 59,044,094	10,194,851	-	69,238,945
Revenue from internal customers	19,416	677,097	(696,513)	-
Total revenues	**$ 59,063,510**	**10,871,948**	**(696,513)**	**69,238,945**
Interest expenses	**$ 108,013**	**103,990**	**-**	**212,003**
Depreciation and amortization	**$ 4,460,291**	**1,522,721**	**-**	**5,983,012**
Reportable Segment	**$ 13,616,234**	**(4,744,345)**	**-**	8,871,889
Share of the subsidiaries and affiliated companies accounted for under equity method.				(236,409)
				$ 8,635,480
Assets of reportable segments	**$ 89,664,721**	**12,455,852**	**(177,154)**	101,943,419
Investment accounted for using equity method				2,041,896
				$ 103,985,31
Liabilities of the reportable segments	**$ 46,494,941**	**9,753,663**	**(177,154)**	**56,071,450**

	2017			
	Semiconductor Department	Solar energy Department	Adjustment and elimination	Total
Revenues				
Net external revenue	$ 46,106,917	13,264,281	-	59,371,198
Revenue from internal customers	105,684	31,555	(137,239)	-
Total revenues	$ 46,212,601	13,295,836	(137,239)	59,371,198
Interest expenses	$ 398,185	108,162	-	506,347
Depreciation and amortization	$ 5,040,036	1,200,994	-	6,241,030
Reportable Segment	$ 5,278,207	(1,506,731)	-	3,771,476
Share of the subsidiaries and affiliated companies accounted for using equity method.				(252,848)
				$ 3,518,628
Assets of reportable segments	$ 69,913,715	17,829,790	(95,689)	87,647,816
Investment accounted for using equity method				1,694,717
				$ 89,342,533
Liabilities of the reportable segments	$ 36,177,931	9,481,058	(93,367)	45,565,622

(2) Information by product:

Revenue from external customers:

	2017
Semiconductor wafer	45,540,327
Solar wafer	2,524,614
Solar cell	5,054,173
solar module	327,950
Solar ingot	1,409,413
Semiconductor ingot	496,690
Other	4,018,031
	59,371,198

For details of the Revenue of the customer contract in 2018, please refer to Note 6 (27).

(3) Geographical information:

Information of geographical area of the Company is as follows. The revenues are classified in term of where the customers are located, while the noncurrent assets are classified in term of where the assets are located.

1. Revenue from external customers

Area	2017
Taiwan	14,231,289
Japan	8,125,958
U.S.A.	7,236,574
Mainland China	5,728,043
Korea	7,022,898
Other countries	17,026,436
	59,371,198

For details of the Revenue of the customer contract in 2018, please refer to Note 6 (27).

2. Non-current assets:

Area	2018.12.31	2017.12.31
U.S.A.	$ 6,548,067	16,877,379
Taiwan	10,331,375	15,187,910
Japan	6,333,308	7,506,185
Philippines	2,307,955	2,435,894
Denmark	1,373,938	1,429,624
Other countries	14,228,420	1,008,221
	$ 41,123,063	**44,445,213**

(4) Major customers information

Key customers with more than 10% of the Company's operating revenues

	2018	2017
C Group company	**$ 9,494,244**	**6,503,622**

Sino-American Silicon Products Inc. and subsidiaries

Loans to other parties

For the year ended December 31, 2018

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	928,650 (USD 30,000)	921,450 (USD 30,000)	268,572 (USD 8,744)	4.5%	2	-	Working capital	-		-	10,752,686	10,752,686
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	Loan receivable – related party	Yes	500,000	500,000	150,000	2.5%	2	-	Working capital	-		-	10,752,686	10,752,686
0	Sino-American Silicon Products Inc.	Sunrise PV Five	Loan receivable – related party	Yes	300,000	300,000	162,000	2.5%	2	-	Working capital	-		-	10,752,686	10,752,686
0	Sino-American Silicon Products Inc.	Sunrise PV Electric	Loan receivable – related party	Yes	200,000	200,000	102,000	2.5%	2	-	Working capital	-		-	10,752,686	10,752,686
0	Sino-American Silicon Products Inc.	Sunrise PV Three	Loan receivable – related party	Yes	500,000	300,000	106,000	2.5%	2	-	Working capital	-		-	10,752,686	10,752,686
0	Sino-American Silicon Products Inc.	Aleo Solar	Loan receivable – related party	Yes	434,880 (EUR 12,000)	281,600 (EUR 8,000)	52,800 (EUR 1,500)	2.0%	2	-	Working capital	-		-	10,752,686	10,752,686
0	Sino-American Silicon Products Inc.	Aleo Sunrise	Loan receivable – related party	Yes	434,880 (EUR 12,000)	-	-	2.0%	2	-	Working capital	-		-	10,752,686	10,752,686
1	SSTI	Sulu	Loan receivable – related party	Yes	215,005 (USD 7,000)	215,005 (USD 7,000)	215,005 (USD 7,000)	4.0%	2	-	Working capital	-		-	389,344	389,344
1	SSTI	AMLED	Loan receivable – related party	Yes	329,671 (USD 10,650)	119,789 (USD 3,900)	119,789 (USD 3,900)	4.0%	2	-	Working capital	-		-	389,344	389,344

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	236,840 (USD 8,000)	190,433 (USD 6,200)	187,054 (USD 6,090)	4.0%	2	-	Working capital	-		-	199,313	199,313
3	Sulu	AMLED	Loan receivable – related party	Yes	111,642 (USD 3,824)	-	-	4.0%	2	-	Working capital	-		-	179,181	179,181
4	Aleo Solar	Aleo Sunrise	Loan receivable – related party	Yes	289,920 (EUR 8,000)	281,600 (EUR 8,000)	281,600 (EUR 8,000)	2.0%	2	-	Working capital	-		-	239,786	239,786 Note 4
5	SAS Sunrise Pte. Ltd.	Sulu	Loan receivable – related party	Yes	245,720 (USD 8,000)	-	-	4.0%	2	-	Working capital	-		-	214,059	214,059
5	SAS Sunrise Pte. Ltd.	AMLED	Loan receivable – related party	Yes	213,776 (USD 6,960)	213,776 (USD 6,960)	213,776 (USD 6,960)	4.0%	2	-	Working capital	-		-	214,059	214,059
6	GlobalWafers	Taisil	Loan receivable – related party	Yes	2,500,000	-	-	1.5%	2	-	Working capital	-		-	17,255,782	17,255,782
7	GWJ	GlobalWafers	Loan receivable – related party	Yes	4,173,000	4,173,000	4,173,000	0.47091 %-0.53091 %	1	6,564,463	Business transactions	-		-	6,564,463	5,430,209
7	GWJ	MEMC Japan	Loan receivable – related party	Yes	278,200	278,200	-	0.56091 %	2	-	Working capital	-		-	2,715,105	5,430,209
8	MEMC SpA	GWS	Loan receivable – related party	Yes	2,826,720	2,745,600	2,145,431	3.559%	2	-	Working capital	-		-	11,348,657	11,348,657
9	Taisil	GlobalWafers	Loan receivable – related party	Yes	5,700,000	5,700,000	5,700,000	1.5%	2	-	Working capital	-		-	6,434,620	6,434,620
10	GTI	Topsil A/S	Loan receivable – related party	Yes	87,585	-	-	6%	2	-	Working capital	-		-	3,492,437	3,492,437

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	GTI	MEMC LLC	Loan receivable – related party	Yes	671,485	-	-	3.62%	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 worthof 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 worthof GlobalWafers; 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 individual loan is limited to 40% of the net worthof GlobalWafers.

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 worthof 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 2 times of the net worthof the company that lends loan.

(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 worthof 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 worthof GlobalWafers.

(3) For loan of funds of Aleo Solar, the total loan is limited to 100% of the net worthof the company that lends loan.

(4) For loan of funds of SSTI, SAS Sunrise Inc., SAS Sunrise Pte Ltd., Suluto 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 worthof 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 worthof the company that lends loan.

Note 4: Due to the change of the plan, the loan of funds exceeds quota. Improvement plans have been made in accordance with regulations.

Note 5: Transactions with consolidated parties as mentioned above were eliminated when preparing the consolidated reports.

Sino-American Silicon Products Inc. and subsidiaries
Guarantees and endorsements for other parties
For the year ended December 31, 2018

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, 9 and 10)	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, 9 and 10)	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	26,881,716	247,640 (USD 8,000) (Note 4)	245,720 (USD 8,000)	162,790 (USD 5,300)	-	0.91%	26,881,716	Y	N	N
0	Sino-American Silicon Products Inc.	SAS Sunrise Pte. Ltd.	2	26,881,716	619,100 (USD 20,000) (Note 5)	-	-	-	- %	26,881,716	Y	N	N
0	Sino-American Silicon Products Inc.	Sulu	2	- (Note 7)	1,423,930 (USD 46,000) (Note 6)	1,412,890 (USD 46,000)	1,412,890 (USD 46,000) (Note 6)	-	5.26%	- (Note 7)	Y (Note 8)	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	2	26,881,716	200,000	200,000	1,150	-	0.74%	26,881,716	Y	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World and its 100% owned subsidiaries	2	26,881,716	1,500,000	500,000	-	-	1.86%	26,881,716	Y	N	N
0	Sino-American Silicon Products Inc.	Sunrise PV World Co.	2	26,881,716	100,000	100,000	-	-	0.37%	26,881,716	Y	N	N
1	GlobalWafers	Topsil A/S	2	43,139,455	120,250	117,500	17,625	-	0.27%	129,418,365	N	N	N
1	GlobalWafers	GWJ	2	43,139,455	275,400	-	-	-	- %	129,418,365	N	N	N
1	GlobalWafers	MEMC LLC	2	43,139,455	464,325	-	-	-	- %	129,418,365	N	N	N
1	GlobalWafers	MEMC Korea	2	43,139,455	773,875	-	-	-	- %	129,418,365	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, 9 and 10)	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, 9 and 10)	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)										
1	GlobalWafers	GWS	2	43,139,455	1,857,300	1,842,900	614,300	-	4.27%	129,418,365	N	N	N
1	GlobalWafers	Taisil	2	43,139,455	200,000	-	-	-	- %	129,418,365	N	N	N
1	GlobalWafers	Taisil	2	43,139,455	1,857,300	-	-	-	- %	129,418,365	N	N	N
2	GTI	MEMC LLC	2	43,655,460	462,450	460,725	98,013	-	5.28%	43,655,460	N	N	N
3	Sunrise PV World Co.	Sunrise PV Four	2	986,932	170	170	170	-	0.07%	986,932	N	N	N
3	Sunrise PV World Co.	Sunrise PV Three	2	986,932	421	421	421	-	0.17%	986,932	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 constrctors 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: The amount of endorsements/guarantees provided by the endorsement guarantor company for a singleenterprise is limited to 10% of the net worthof the company providing the endorsements/guarantees, but for the subsidiary company, limited to one time of the net worthof the company providing the endorsements/guarantees. The total amount of accumulated endorsements/guarantees shall not exceed the net worthof the Company. The total amount of the Company's endorsements/guarantees and that for a single enterprise shall not exceed five times the net worthof the company providing endorsements/guarantees. The aforesaid net worthis 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.

Note 4: This amount is USD 8,000 thousands individual quota for SAS Sunrise Inc..

Note 5: This amount is USD 20,000 thousands joint quota for SAS Sunrise Pte.Ltd. and Sulu.

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 USD 46,211 thousands, the amount of sales at the time of endorsements/guarantees.

Note 8: The consolidated company controls the financial and operating strategies of the company through effective agreements with other investors of Sulu, so Sulu is considered as a subsidiary.

Note 9: 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 worthof the most recent financial statements of GlobalWafers.

(2) The amount of endorsements/guarantees of GlobalWafers for a singleenterprise shall not exceed 10% of the net worthof the most recent financial statements of GlobalWafers. For subsidiaries, 1 time of the net worthof GlobalWafers.

(3) Taisil's performance bond for duty paid after customs release is NT$ 5,000 thousands.

Note 10: 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 worthof the most recent financial statements of Sunrise PV World.

(2) The amount of endorsements/guarantees of Sunrise PV World for a singleenterprise shall not exceed 10% of the net worthof the most recent financial statements of GlobalWafers. For subsidiaries, 4 times of the net worthof GlobalWafers.

(3) The total amount of Sunrise PV World's endorsements/guarantees and that for a single enterprise shall not exceed five times the net worthof 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. and subsidiaries

Securities held as of December 31, 2018 (excluding investment in subsidiaries, associates and joint ventures)

December 31, 2018

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				% of highest capital contribution in the period	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	280	281,366	- %	285,466	- %	
Sino-American Silicon Products Inc.	Stocks of URE	Sino-American Silicon Products Inc. is the main management of URE	Financial assets at fair value through other comprehensive income	34,492	270,073	1.37%	270,073	1.37%	
Sino-American Silicon Products Inc.	Stock of Actron Technology	Chairman of the parent company is also the Chairman of Sino-American Silicon Products Inc.	Financial assets at fair value through other comprehensive income	3,210	319,427	4.29%	319,427	4.29%	
Sino-American Silicon Products Inc.	Stock of Powertec Energy Corporation	-	Financial assets at fair value through other comprehensive income	30,410	130,764	2.31%	130,764	2.31%	
Sino-American Silicon Products Inc.	Stock of Giga Epitaxy Technology Corp.	-	Financial assets at fair value through other comprehensive income	395	4,458	1.52%	4,458	1.52%	
Sino-American Silicon Products Inc.	Stock of Big Sun	-	Financial assets at fair value through other comprehensive income	7,500	-	0.41%	-	0.41%	
Sino-American Silicon Products Inc.	Stock of Phoenix Silicon International Corporation	-	Financial assets at fair value through other comprehensive income	1,956	76,284	1.48%	76,284	1.48%	
SSTI	Stock of SILFAB SPA	-	Financial assets at fair value through other comprehensive income	300	364,025	15.00%	364,025	15.20%	
GlobalWafers	Stock of Phoenix Silicon International Corporation	-	Financial assets at fair value through other comprehensive income	1,324	51,636	1.00%	51,636	1.00%	
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 measured at fair value through gain or loss	221	-	13.81%	-	13.81%	

Name of holder	Category and name of security	Relationship with the Company	Account title	Ending balance				% of highest capital contribution in the period	Remarks
				Shares/Units (thousands)	Carrying value	Percentage of ownership (%)	Fair value		
Sino-American Silicon Products Inc.	Stock of Styrene Monomer	-	Financial assets measured at fair value through gain or loss	3,869	87,053	0.73%	87,053	0.73%	
Sino-American Silicon Products Inc.	Stock of 21-Century Silicon Inc.	-	Financial assets measured at fair value through gain or loss	1,000	-	- %	-	- %	
Sino-American Silicon Products Inc.	Stock of Sunshine PV Corp.	Related enterprise to URE	Financial assets measured at fair value through gain or loss	3,399	-	4.98%	-	4.98%	
SSTI	Stock of Clean Venture 21 Corporation	-	Financial assets measured at fair value through gain or loss	10	-	7.20%	-	7.20%	
GlobalWafers	Stock of Styrene Monomer	-	Financial assets measured at fair value through gain or loss	4,000	90,000	0.76%	90,000	0.76%	
GlobalWafers	China Minfa Advantage Venture Capital Limited Partnership	-	Financial assets measured at fair value through gain or loss	-	64,697	3.85%	64,697	3.85%	

Sino-American Silicon Products Inc. and subsidiaries

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, 2018

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 Taiwan Special Chemicals	Investment accounted for using equity method	Xin Ma Investment Consulting Co., Ltd.	-	-	-	90,000	990,000	-	-	-	-	90,000	918,163 (Note)

Note: Including investment gain or loss recognized this quarter.

Sino-American Silicon Products Inc. and subsidiaries

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, 2018

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			
GlobalWafers	Property, plant and equipment	January, 2018 and May	625,136	Already paid in full amount	Sino-American Silicon Products Inc.	Parent company and subsidiary	-	-	-	-	Accounted for at fair value	For operational use	None

Sino-American Silicon Products Inc. and subsidiaries

Disposal 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, 2018

Attachment 6

Unit: NT$ Thousand

Name of company	Type of property	Transaction date	Acquisition date	Book value	Transaction amount	Amount actually receivable	Gain from disposal	Counter-party	Nature of relationship	Purpose of disposal	Price reference	Other terms
Sino-American Silicon Products Inc.	Property, plant and equipment	January, 2018 and May	April 2006 – September 2017	597,336	625,594	Has been fully recovered	28,258	GlobalWafers	Parent company and subsidiary	For operational use	Accounted for at fair value	None
MEMC Ipoh	Plant	February 2018	February 2008	158,283	309,009	Has been fully recovered	150,726	Kamaya Electric (M) Sdn. Bhd.	Non-related parties	Capacity configuration	Accounted for at fair value	None

Sino-American Silicon Products Inc. and subsidiaries

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, 2018

Attachment 7

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.	Solartech Energy Corp.	The parent company is the management of Solartech Energy Corp.	Sales	(194,923)	(2)%	Net 45 days	-		-	- %	
Sino-American Silicon Products Inc.	Aleo Solar	Subsidiaries directly held by the parent company.	Sales	(447,303)	(5)%	Net 90 days	-		110,062	14%	Note
Aleo Solar	Aleo Solar Distribuzion Italia S.r.l	Subsidiaries indirectly held by the parent company.	Sales	(264,258)	(16)%	Net 60 days	-		72,644	51%	Note
Aleo Solar	Aleo Sunrise	Subsidiaries indirectly held by the parent company.	Purchase	145,247	14%	Net 14 days	-		(108,143)	(44)%	Note
Sunrise PV World Co.	Sunrise PV One	Subsidiary and affiliated enterprise of Sino-American Silicon Products Inc.	Sales	(935,265)	(94)%	15 days after the contract is agreed	-		42,849	85%	
GlobalWafers	Sino-American Silicon Products Inc.	Subsidiaries directly held by the parent company.	Purchase	669,431	4%	O/A 30 days EOM	-		(161,758)	(5)%	Note
GlobalWafers	GTI	Subsidiaries indirectly held by the parent company.	Purchase	1,944,060	12%	O/A 60 days	-		(313,206)	(9)%	Note
GlobalWafers	Kunshan Sino	Subsidiaries indirectly held by the parent company.	Purchase	2,661,905	16%	O/A 60 days	-		(547,518)	(16)%	Note
GlobalWafers	GWJ	Subsidiaries indirectly held by the parent company.	Purchase	6,564,463	40%	O/A 60-90 days	-		(1,714,488)	(51)%	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	528,318	3%	O/A 30-60 days	-		(45,031)	(1)%	Note
GlobalWafers	GWS	Subsidiaries indirectly held by the parent company.	Purchase	372,841	2%	O/A 60 days	-		(70,979)	(2)%	Note
GlobalWafers	Taisil	Subsidiaries indirectly held by the parent company.	Purchase	125,611	1%	O/A 60 days	-		(46,433)	(1)%	Note
Taisil	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	451,866	3%	O/A 45-60 days	-		(72,564)	(2)%	Note
GWS	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,456,325	11%	O/A 60 days	-		(215,973)	(6)%	Note
MEMC Korea	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	825,874	6%	O/A 60 days	-		(315,552)	(8)%	Note
MEMC SpA	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	644,521	5%	O/A 60 days	-		(184,188)	(5)%	Note
GTI	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	3,539,263	26%	O/A 45 days	-		(325,569)	(9)%	Note
Kunshan Sino	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,197,780	9%	O/A 30-135 days	-		(101,895)	(3)%	Note
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	1,610,451	12%	O/A 60-90 days	-		(457,509)	(12)%	Note
Actron Technology Corporation	GlobalWafers	Chairman of the parent company is also the Chairman of Sino-American Silicon Products Inc.	Purchase	244,481	2%	O/A 60 days EOM	-		(64,950)	(2)%	
Topsil A/S	GlobalWafers	Subsidiaries indirectly held by the parent company.	Purchase	348,946	3%	O/A 30-60 days	-		(88,894)	(2)%	Note
GWS	MEMC LLC	Subsidiaries indirectly held by the parent company.	Sales	(754,906)	(3)%	O/A 60 days	-		110,273	3%	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	MEMC LLC	Subsidiaries indirectly held by the parent company.	Purchase	840,682	4%	O/A 60 days	-		(187,532)	(5)%	Note
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	Purchase	1,894,541	10%	O/A 60 days	-		(309,702)	(9)%	Note
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	Sales	(789,994)	(3)%	O/A 60 days	-		120,333	3%	Note
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	Purchase	3,344,615	18%	O/A 60 days	-		(861,178)	(25)%	Note
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	Sales	(3,211,255)	(14)%	O/A 60 days	-		578,286	16%	Note
GWS	MEMC Korea	Subsidiaries indirectly held by the parent company.	Purchase	1,924,133	10%	O/A 60 days	-		(309,612)	(9)%	Note
GWS	MEMC Korea	Subsidiaries indirectly held by the parent company.	Sales	(148,090)	(1)%	O/A 60 days	-		3,940	- %	Note
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	Purchase	4,093,919	22%	O/A 60 days	-		(728,119)	(21)%	Note
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	Sales	(1,414,201)	(6)%	O/A 60 days	-		252,803	7%	Note
GWS	Taisil	Subsidiaries indirectly held by the parent company.	Purchase	5,147,816	28%	O/A 60 days	-		(861,178)	(25)%	Note
GWS	Taisil	Subsidiaries indirectly held by the parent company.	Sales	(1,381,626)	(6)%	O/A 60 days	-		228,430	6%	Note

Note: Transactions with consolidated parties as mentioned above were eliminated when preparing the consolidated reports.

Sino-American Silicon Products Inc. and subsidiaries

Receivables from related parties with amounts exceeding the lower than NT$ 100 million or 20% of the capital stock

December 31, 2018

Attachment 8

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.	Aleo Solar	Subsidiaries directly held by the parent company.	110,062	3.46%	-		82,429	-
Sino-American Silicon Products Inc.	Sulu	Subsidiaries indirectly held by the parent company.	269,169	Note 2	-		-	-
Sino-American Silicon Products Inc.	GlobalWafers	Subsidiaries directly held by the parent company.	161,758	6.7%	-		105,859	-
Sino-American Silicon Products Inc.	Sunrise PV World Co.	Subsidiaries directly held by the parent company.	150,154	Note 2	-		-	-
Sino-American Silicon Products Inc.	Sunrise PV Five	Subsidiaries indirectly held by the parent company.	162,166	Note 2	-		-	-
Sino-American Silicon Products Inc.	Sunrise PV Three	Subsidiaries indirectly held by the parent company.	106,109	Note 2	-		-	-
Sino-American Silicon Products Inc.	Sunrise PV Electric	Subsidiaries indirectly held by the parent company.	102,105	Note 2	-		-	-
SSTI	AMLED	Subsidiaries indirectly held by the parent company.	123,556	Note 2	-		-	-
SSTI	Sulu	Subsidiaries indirectly held by the parent company.	215,264	Note 2	-		-	-
SAS Sunrise Inc.	Sulu	Subsidiaries indirectly held by the parent company.	191,872	Note 2	-		-	-
Aleo Solar	Aleo Sunrise	Subsidiaries indirectly held by the parent company.	281,600	Note 2	-		-	-
SAS Sunrise Pte. Ltd.	AMLED	Subsidiaries indirectly held by the parent company.	275,211	Note 2	-		-	-
GlobalWafers	GTI	Subsidiaries indirectly held by the parent company.	325,569	10.53%	-		325,569	-

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		
GlobalWafers	GWJ	Subsidiaries indirectly held by the parent company.	457,509	3.86%	-		310,014	-
GlobalWafers	Taisil	Subsidiaries indirectly held by the parent company.	101,895	12.79%	-		101,895	-
GlobalWafers	GWS	Subsidiaries indirectly held by the parent company.	215,973	13.49%	-		215,973	-
GlobalWafers	MEMC Korea	Subsidiaries indirectly held by the parent company.	315,552	5.23%	-		-	-
GlobalWafers	MEMC SpA	Subsidiaries indirectly held by the parent company.	184,188	7.00%	-		167,207	-
Taisil	GlobalWafers	Subsidiaries indirectly held by the parent company.	5,700,000	Note 2	-		-	-
GTI	GlobalWafers	Subsidiaries indirectly held by the parent company.	313,206	7.05%	-		313,206	-
Kunshan Sino	GlobalWafers	Subsidiaries indirectly held by the parent company.	547,518	5.52%	-		316,460	-
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	1,714,488	4.09%	-		972,326	-
GWJ	GlobalWafers	Subsidiaries indirectly held by the parent company.	4,173,000	Note 2	-		-	-
GWS	MEMC Sdn Bhd	Subsidiaries indirectly held by the parent company.	309,612	6.12%	-		309,612	-
GWS	MEMC Japan	Subsidiaries indirectly held by the parent company.	728,119	5.99%	-		726,851	-
GWS	MEMC SpA	Subsidiaries indirectly held by the parent company.	578,286	6.83%	-		578,286	-
GWS	MEMC LLC	Subsidiaries indirectly held by the parent company.	110,273	2.31%	-		110,273	-
GWS	Taisil	Subsidiaries indirectly held by the parent company.	228,430	12.04%	-		228,430	-
MEMC Sdn Bhd	GWS	Subsidiaries indirectly held by the parent company.	120,333	6.16%	-		120,333	-

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		
MEMC SpA	GWS	Subsidiaries indirectly held by the parent company.	2,145,431	Note 2	-		-	-
MEMC SpA	GWS	Subsidiaries indirectly held by the parent company.	861,178	5.72%	-		722,673	-
MEMC Korea	GWS	Subsidiaries indirectly held by the parent company.	309,702	8.74%	-		309,702	-
MEMC Japan	GWS	Subsidiaries indirectly held by the parent company.	252,803	5.96%	-		252,803	-
Taisil	GWS	Subsidiaries indirectly held by the parent company.	861,178	7.26%	-		-	-
MEMC LLC	GWS	Subsidiaries indirectly held by the parent company.	187,532	5.26%	-		187,532	-

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 consolidated standalone have been written off when preparing the consolidated financial statements.

Sino-American Silicon Products Inc. and subsidiaries
Business relationships and significant intercompany transactions
For the year ended December 31, 2018

Attachment 9

Unit: NT$ Thousand

No. (Note 1)	Name of counterparty	Name of counter party	Nature of relationship (Note 2)	Intercompany transactions			
				Account name	Amount	Trading terms	Percentage of the consolidated net revenue or total assets (Notes 3 and 4)
1	GlobalWafers	GTI	3	Purchase	1,944,060	O/A 60 days	2.81%
1	GlobalWafers	Kunshan Sino	3	Purchase	2,661,905	O/A 60 days	3.84%
1	GlobalWafers	GWJ	3	Purchase	6,564,463	O/A 60-90 days	9.48%
1	GlobalWafers	GWJ	3	Accounts payable	1,714,488	O/A 60-90 days	1.65%
1	GlobalWafers	GTI	3	Sales	3,539,263	O/A 45 days	5.11%
1	GlobalWafers	Kunshan Sino	3	Sales	1,197,780	O/A 30-135 days	1.73%
1	GlobalWafers	GWJ	3	Sales	1,610,451	O/A 60-90 days	2.33%
1	GlobalWafers	GWS	3	Sales	1,456,325	O/A 60 days	2.10%
1	GlobalWafers	MEMC Korea	3	Sales	825,874	O/A 60 days	1.19%
2	GWS	MEMC LLC	3	Sales	754,906	O/A 60 days	1.09%
2	GWS	MEMC LLC	3	Purchase	840,682	O/A 60 days	1.21%
2	GWS	MEMC Sdn Bhd	3	Sales	789,994	O/A 60 days	1.14%
2	GWS	MEMC Sdn Bhd	3	Purchase	1,894,541	O/A 60 days	2.74%
2	GWS	MEMC SpA	3	Purchase	3,344,615	O/A 60 days	4.83%
2	GWS	MEMC SpA	3	Sales	3,211,255	O/A 60 days	4.64%
2	GWS	MEMC Korea	3	Purchase	1,924,133	O/A 60 days	2.78%
2	GWS	MEMC Japan	3	Sales	1,414,201	O/A 60 days	2.04%
2	GWS	MEMC Japan	3	Purchase	4,093,919	O/A 60 days	5.91%
2	GWS	Taisil	3	Purchase	5,147,816	O/A 60 days	7.43%
2	GWS	Taisil	3	Sales	1,381,626	O/A 60 days	2.00%
3	GWJ	GlobalWafers	3	Loan receivable – related party	4,173,000	-	4.01%
4	Taisil	GlobalWafers	3	Loan receivable – related party	5,700,000	-	5.48%
5	MEMC SpA	GWS	3	Loan receivable – related party	2,145,431	-	2.06%

Note 1: The business transactions between the parent company and its subsidiaries should be indicated in the number column respectively. The method of filling in the numbers is as follows:

1. The parent company fills in 0.
2. Subsidiaries are numbered sequentially by the Arabic number 1 according to the company.

Note 2: There are three types of relationship with the counterparty, and the type of mark can be used (if it is the same transaction between the parent company or among subsidiaries, there is no need to repeat the disclosure. Such as: the parent company's transaction to the subsidiary, if the parent company has been exposed, then the part of the subsidiary does not need to be repeatedly disclosed; if a subsidiary's transaction to another subsidiary is disclosed, then another subsidiary does not need to disclose it repeatedly:

1. Parent company to subsidiary
2. Subsidiary to parent company.
3. Subsidiaries to subsidiaries.

Note 3: For calculation of the transaction amount's ratio in the consolidated total revenue or total assets, in the case of assets and liabilities, it is calculated by the closing balance ratio in the consolidated total assets; in the case of gain or loss item, it is calculated by the accumulated amount ratio in the consolidated total operating revenue.

Note 4: Other transactions are not up to 1% of the consolidated total revenue or total assets and will not be disclosed.

Sino-American Silicon Products Inc. and subsidiaries

Information on investees (excluding information on investees in Mainland China)

For the year ended December 31, 2018

Attachment 10

Unit: NT$ Thousand

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2018			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2018	December 31, 2017	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%	973,360	100.00%	33,705	33,705	Subsidiary Note 5
Sino-American Silicon Products Inc.	GlobalWafers	Taiwan	Semiconductor silicon wafer materials and components manufacturing and trade	8,955,952	8,864,946	222,727	51.17%	22,074,512	51.17%	13,630,674	6,932,303	Subsidiary
Sino-American Silicon Products Inc.	Crystalwise Technology Inc.	Taiwan	Optical wafer and substrate manufacturing and trade	2,010,843	2,010,843	65,923	40.11%	415,391	40.11%	(451,676)	(183,103)	Affiliated companies Note 2
Sino-American Silicon Products Inc.	Sino-American Materials Co., Ltd.	Taiwan	EVA film for solar modules manufacturing and sale	-	90,000	-	- %	-	- %	(484)	(435)	-
Sino-American Silicon Products Inc.	Accu Solar Corporation	Taiwan	Solar energy system provider	112,193	112,193	7,452	24.70%	65,648	24.70%	(29,981)	(7,528)	Affiliated companies

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2018			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2018	December 31, 2017	Shares (thousands)	Percentage of Ownership	Carrying value				
Sino-American Silicon Products Inc.	Aleo Solar	Prenzlau	Solar cell manufacturing and sale and wholesale of electronic materials	558,139 (EUR 13,500)	558,139 (EUR 13,500)	Note 1	100.00%	239,786	100.00%	(113,212)	(113,212)	Subsidiary Note 2
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%	498,283	100.00%	(118,642)	(118,642)	Subsidiary
Sino-American Silicon Products Inc.	Sunrise PV World Co.	Taiwan	Power generating business	300,000	300,000	30,000	100.00%	246,733	100.00%	(52,097)	(52,097)	Subsidiary
Sino-American Silicon Products Inc.	Cathy Sunrise	Taiwan	Power generating business	450,000	450,000	45,000	30.00%	464,252	30.00%	47,108	11,616	Affiliated companies
Sino-American Silicon Products Inc.	TSCS	Taiwan	Semiconductor special gas and chemical material manufacturer	990,000	-	90,000	30.93%	918,163	30.93%	(504,689)	(71,833)	Affiliated companies Note 2
Sunrise PV World Co.	Sunrise PV Electric	Taiwan	Power generating business	42,000	30,000	4,200	100.00%	43,875	100.00%	2,264	-	Sub-subsidiary Note 8
Sunrise PV World Co.	Sunrise PV Two	Taiwan	Power generating business	15,000	15,000	1,500	100.00%	14,898	100.00%	(88)	-	Sub-subsidiary Note 8
Sunrise PV World Co.	Sunrise PV Three	Taiwan	Power generating business	15,000	15,000	1,500	100.00%	16,342	100.00%	1,441	-	Sub-subsidiary Note 8
Sunrise PV World Co.	Sunrise PV Four	Taiwan	Power generating business	100,000	100,000	10,000	100.00%	100,403	100.00%	443	-	Sub-subsidiary Note 8
Sunrise PV World Co.	Sunrise PV Five	Taiwan	Power generating business	65,000	65,000	6,500	100.00%	74,871	100.00%	9,746	-	Sub-subsidiary Note 8
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%	535,148	100.00%	(104,384)	-	Sub-subsidiary Note 8

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2018			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2018	December 31, 2017	Shares (thousands)	Percentage of Ownership	Carrying value				
SAS Sunrise Pte.Ltd.	AMLED	Philippines	Reinvestments in various businesses	-	-	-	- %	-	- %	-	-	Sub-subsidiary Note 6 and 8
SAS Sunrise Pte.Ltd.	Sulu	Philippines	Power generating business	440,667 (USD 13,435)	440,667 (USD 13,435)	420,000	40.00%	324,580	40.00%	(109,669)	-	Sub-subsidiary Note 8
AMLED	Sulu	Philippines	Power generating business	297,229 (USD 9,065)	297,229 (USD 9,065)	472,500	45.00%	194,941	45.00%	(109,669)	-	Sub-subsidiary Note 8
Aleo Solar	Aleo Solar Distribuzione Italia S.r.l	Italy	Solar cell manufacturing and sale and wholesale of electronic materials	4,078 (EUR 100)	4,078 (EUR 100)	Note 1	100.00%	1,594	100.00%	(5,207)	-	Sub-subsidiary Note 8
Aleo Solar	Aleo Sunrise	Germany	Manufacturing of solar cell as well as sale and wholesale of electronic materials	91,250 (EUR 2,500)	91,250 (EUR 2,500)	Note 1	100.00%	(55,251)	100.00%	147,324	-	Sub-subsidiary Note 8
GlobalWafers	GWI	Cayman	Reinvestments in various businesses	2,241,668 (USD 73,423)	2,241,668 (USD 73,423)	90,000	100.00%	5,677,436	100.00%	1,903,803	-	Sub-subsidiary Note 8
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%	1,376,601	100.00%	341,260	-	Sub-subsidiary Note 8
GlobalWafers	GWafers	Japan	Reinvestments in various businesses	Note 4	5,448,015 (JPY 13,827,513)	-	- %	-	100.00%	-	-	Sub-subsidiary Note 1 and 8
GlobalWafers	GWJ	Japan	Semiconductor silicon wafer manufacturing and trading	5,448,015	5,448,015	128	100.00%	13,558,073	100.00%	2,107,707	-	Sub-subsidiary Note 4 and 8
GlobalWafers	GWafers Singapore	Singapore	Reinvestments in various businesses	11,966,930	11,966,930	364,000	67.20%	19,959,635	100.00%	7,395,394	-	Sub-subsidiary Note 8

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2018			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2018	December 31, 2017	Shares (thousands)	Percentage of Ownership	Carrying value				
GlobalWafers	Topsil A/S	Denmark	Semiconductor silicon wafer manufacturing and trading	Note 3	Note 3	1,000	100.00%	1,687,613	100.00%	(40,596)	-	Sub-subsidiary Note 8
GlobalWafers	Whole Global Investment Corporation	Taiwan	Reinvestments in various businesses	200,000	200,000	312	24.39%	178,442	24.39%	59,258	14,439	Affiliated companies
GlobalWafers	Taisil	Taiwan	Semiconductor silicon wafer manufacturing and sales	14,504,663	14,502,885	9,999	99.99%	16,071,561	99.99%	1,889,479	-	Sub-subsidiary Note 8
GWI	GTI	Texas	Manufacturing of epitaxy, silicon wafer as well as OEM and trading of epitaxy	-	2,241,668	-	- %	-	100.00%	418,874	-	Sub-subsidiary Note 7 and 8
GWI	GWafers Singapore	Singapore	Reinvestments in various businesses	5,411,947	-	177,674	32.80%	5,677,436	32.80%	7,395,394	-	Sub-subsidiary Note 7 and 8
GWafers	GWJ	Japan	Semiconductor silicon wafer manufacturing and trading	Note 4	5,484,300 (JPY 13,142,798)	-	- %	-	100.00%	-	-	Sub-subsidiary Note 7 and 8
GWJ	MEMC Japan	Japan	Semiconductor silicon wafer manufacturing and sales	373,413 (JPY 100,000)	373,413 (JPY 100,000)	-	100.00%	1,448,078	100.00%	157,805	-	Sub-subsidiary Note 7 and 8
Topsil A/S	Topsil PL	Poland	Semiconductor silicon wafer manufacturing and trading	Note 3	Note 3	1	100.00%	(123,976)	100.00%	(70,472)	-	Sub-subsidiary Note 7 and 8

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2018			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2018	December 31, 2017	Shares (thousands)	Percentage of Ownership	Carrying value				
GWafers Singapore	GWS	Singapore	Investment, marketing and trading business	17,846,803 (USD 540,649)	12,434,855 (USD 362,975)	177,674	100.00%	27,037,489	100.00%	7,362,796	-	Sub-subsidiary Note 7 and 8
GWS	GWBV	The Netherlands	Reinvestments in various businesses	9,589,374 (USD 266,974)	4,177,427 (USD 89,300)	0.1	100.00%	29,179,287	100.00%	3,589,426	-	Sub-subsidiary Note 7 and 8
GWS	SSTPL	Singapore	Reinvestments in various businesses	-	-	0.001	100.00%	-	100.00%	-	-	Sub-subsidiary Note 7 and 8
GWBV	MEMC SpA	Italy	Semiconductor silicon wafer manufacturing and sales	6,732,641 (USD 201,788)	6,732,641 (USD 201,788)	65,000	100.00%	11,348,657	100.00%	1,680,298	-	Sub-subsidiary Note 7 and 8
MEMC SpA	MEMC SarL	France	Trading business	1,316 (USD 40)	1,316 (USD 40)	0.5	100.00%	82	100.00%	689	-	Sub-subsidiary Note 7 and 8
MEMC SpA	MEMC GmbH	Germany	Trading business	4,622 (USD 141)	4,622 (USD 141)	0.002	100.00%	5,677	100.00%	556	-	Sub-subsidiary Note 7 and 8
MEMC SpA	MEMC BV	The Netherlands	Reinvestments in various businesses	2,430,141 (USD 73,918)	2,430,141 (USD 73,918)	0.2	100.00%	3,422,692	100.00%	691,209	-	Sub-subsidiary Note 7 and 8
MEMC BV	MEMC Korea	Korea	Semiconductor silicon wafer manufacturing and sales	2,427,650 (USD 73,842)	2,427,650 (USD 73,842)	6,880	40.00%	3,415,898	40.00%	1,726,189	-	Sub-subsidiary Note 7 and 8
GWBV	MEMC Korea	Korea	Semiconductor silicon wafer manufacturing and sales	3,641,474 (USD 110,763)	3,641,474 (USD 110,763)	10,320	60.00%	5,123,846	60.00%	1,726,189	-	Sub-subsidiary Note 7 and 8
GWBV	MEMC LLC	U.S.A.	Semiconductor silicon wafer R&D, manufacturing and sales	-	5,289,887 (USD 173,839)	-	- %	-	- %	193,960	-	Sub-subsidiary Note 7 and 8

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2018			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Remarks
				December 31, 2018	December 31, 2017	Shares (thousands)	Percentage of Ownership	Carrying value				
GWBV	GTI	U.S.A.	Epitaxial silicon wafer production and trade of epitaxy foundry business	8,776,143 (USD 288,120)	-	0.001	100.00%	8,731,092	100.00%	803,066	-	Sub-subsidiary Note 7 and 8
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%	919,602	100.00%	99,469	-	Sub-subsidiary Note 7 and 8
GWBV	MEMC Ipoh	Malaysia	Semiconductor silicon wafer manufacturing and sales	146,624 (USD 3,020)	743,440 (USD 22,613)	669,374	100.00%	55,797	100.00%	143,384	-	Sub-subsidiary Note 7 and 8
GTI	MEMC LLC	U.S.A.	Semiconductor silicon wafer R&D, manufacturing and sales	3,364,196 (USD 110,446)	-	1	100.00%	4,092,008	100.00%	193,960	-	Sub-subsidiary Note 7 and 8

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 consolidated company acquired Topsil A/S and Topsil PL with a total investment amount of NT$ 1,964,069 thousand (DKK 407,600 thousands).

Note 4: GWafers and GWJ merged in January 2018, and the existing company was GWafers, which was later renamed GWJ.

Note 5: Not including earnings transferred to capital increase.

Note 6: The consolidated company does not hold the interests of the AMLED owners, but the consolidated company can control the financial and operating strategies of the company and obtain all the benefits of its operations and net assets in accordance with the terms of the agreements entered into by the standalone, so AMLED is regarded as a subsidiary.

Note 7: All of them are subsidiaries indirectly held by GlobalWafers. GWafers Singapore was transferred to GlobalWafers and GWJ for 67.2% and 32.8% respectively on July 1, 2018. GTI was transferred to GWBV investment and MEMC LLC was transferred to GTI investment.

Note 8: The profit and loss of the investee company is included in its investment company. To avoid confusion, it will not be expressed here.

Note 9: The above transactions relating to the consolidated standalone have been written off when preparing the consolidated financial statements.

Sino-American Silicon Products Inc. and subsidiaries

Information on investment in mainland China

For the year ended December 31, 2018

Attachment 11

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	Highest percentage of ownership during the year	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 (USD 21,729)	321,712	100.00%	100.00%	321,712	1,313,144	-
SunEdison Shanghai	Trading business	7,527 (RMB 1,500)	(Note 2)	(Note 2)	-	-	(Note 2)	706	100.00%	100.00%	706	9,849	-
Shanghai GROWFAST Semiconductor Technology Co. Ltd.	Sales and marketing business	9,756 (RMB 2,000)	(Note 3)	-	-	-	-	6,946	60.00%	60.00%	4,168	20,840	-

(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)	25,893,667 (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 worthof GlobalWafers on December 31, 2018.
Note 7: Retained earnings Transferred to Capital was included.