Stock Code:6488

GlobalWafers Co., Ltd. and Subsidiaries

Consolidated Financial Statements

With Independent Auditors' Report
For the Years Ended December 31, 2019 and 2018

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

Table of contents

Representation Letter

The entities that are required to be included in the combined financial statements of GlobalWafers Co., Ltd. as of and for the year ended December 31, 2019 under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports, and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with International Financial Reporting Standards No. 10 by the Financial Supervisory Commission, "Consolidated Financial Statements." In addition, the information required to be disclosed in the combined financial statements are included in the consolidated financial statements. Consequently, GlobalWafers Co., Ltd. and Subsidiaries do not prepare a separate set of combined financial statements.

Company name: GlobalWafers Co., Ltd.
Chairman: Doris Hsu
Date: March 17, 2020

Independent Auditors' Report

To the Board of Directors of GlobalWafers Co., Ltd.:

Opinion

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

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and with the International Financial Reporting Standards ("IFRSs"), International Accounting Standards ("IASs"), Interpretations developed by the International Financial Reporting Interpretations Committee ("IFRIC"), and the former Standing Interpretations Committee ("SIC") endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Certification of Financial Statements by Certified Public Accountants and the auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the Certified Public Accountants Code of Professional Ethics in Republic of China ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis of our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our 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

   Please refer to note 4(15) "Revenue recognition" for accounting policy and note 6(22) "Revenue from contracts with customers" of the consolidated financial statements for further information.

Description of key audit matter:

The Group’s revenues are derived from the sales of semiconductor materials and components. Revenue recognition is also dependent on whether the specified sales terms in each individual contract are met. In consideration of the high volume of sales transactions generated from world-wide operations, revenue recognition is one of the key areas our audit focused on.

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. Impairment of goodwill

Please refer to the note 4(13) “Impairment of non-financial assets” for accounting policy, note 5 “Significant accounting assumptions and judgments, and major sources of estimation uncertainty” for impairment assessment, and note 6(9) “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 necessary. 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 sensitivity analysis based on key factors; assessing whether the accounting policies for goodwill impairment and other relevant information have been appropriately disclosed.

Other Matter

GlobalWafers Co., Ltd. has additionally prepared its parent-company-only financial statements as of and for the years ended December 31, 2019 and 2018, on which we have issued an unqualified opinion.

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

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and 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 17, 2020

Notes to Readers

The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with the accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such consolidated financial statements are those generally accepted and applied in the Republic of China.

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

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

GlobalWafers Co., Ltd. and subsidiaries

Consolidated Balance Sheets

December 31, 2019 and 2018

(Expressed in Thousands of New Taiwan Dollars)

		December 31, 2019		December 31, 2018	
	Assets	**Amount**	**%**	**Amount**	**%**
	Current assets:				
1100	Cash and cash equivalents (note 6(1))	$ 32,821,512	34	35,214,323	39
1110	Financial assets at fair value through profit or loss－current (note 6(2))	1,883,576	2	236,495	-
1170	Notes and accounts receivable, net (note 6(4))	8,089,619	8	9,155,024	10
1180	Accounts receivable due from related parties, net (note 7)	50,348	-	71,299	-
130X	Inventories (note 6(5))	6,848,823	7	7,039,817	8
1476	Other financial assets－current	896,531	1	769,898	1
1479	Other current assets (note 6(10))	902,336	1	713,659	2
		51,492,745	53	53,200,515	60
	Non-current assets:				
1510	Financial assets at fair value through profit or loss－non-current (note 6(2))	95,163	-	-	-
1517	Financial assets at fair value through other comprehensive income－non-current (note 6(3))	-	-	51,636	-
1550	Investments accounted for using equity method (note 6(6))	571,929	1	178,442	-
1600	Property, plant and equipment (notes 6(7), 7 and 8)	34,697,367	36	30,887,035	34
1755	Right-of-use assets (note 6(8))	771,057	1	-	-
1780	Intangible assets (note 6(9))	3,227,583	3	3,649,397	4
1840	Deferred tax assets (note 6(18))	1,855,040	2	1,386,577	2
1980	Other financial assets－non-current (notes 8)	3,098,123	3	268,598	-
1990	Other non-current assets (note 6(10))	776,746	1	199,921	-
		45,093,008	47	36,621,606	40
	Total assets	$ 96,585,753	100	89,822,121	100

		December 31, 2019		December 31, 2018	
	Liabilities and Equity	**Amount**	**%**	**Amount**	**%**
	Current liabilities:				
2100	Short-term borrowings (notes 6(11) and 8)	$ 9,886,000	10	5,042,000	6
2120	Financial liabilities at fair value through profit or loss－current (note 6(2))	216,632	-	119	-
2130	Contract liabilities－current (note 6(22))	4,035,411	4	4,498,487	5
2170	Notes and accounts payable	3,606,374	4	4,699,304	5
2180	Accounts payable to related parties (note 7)	231,107	-	171,141	-
2201	Payroll and bonus payable	2,473,035	3	2,123,838	2
2230	Current tax liabilities (note 6(18))	2,672,322	3	2,127,809	2
2399	Other current liabilities (notes 6(13), (14) and (15))	3,789,770	4	5,759,743	7
		26,910,651	28	24,422,441	27
	Non-Current liabilities:				
2527	Contract liabilities－non-current (note 6(22))	16,164,687	16	14,609,104	16
2540	Long-term borrowings (notes 6(12) and 8)	-	-	430,000	-
2570	Deferred tax liabilities(note 6(18))	4,745,579	5	3,664,011	5
2580	Non-current lease liabilities (note 6(13))	628,050	1	-	-
2670	Other non-current liabilities (notes 6(14) and (15))	113,146	-	367,423	-
2640	Net defined benefit liabilities (note 6(17))	2,950,390	3	3,173,029	4
		24,601,852	25	22,243,567	25
	Total liabilities	51,512,503	53	46,666,008	52
	Equity (note 6(19))**:**				
	Equity attributable to shareholders of GlobalWafers Co., Ltd.**:**				
3110	Ordinary shares	4,372,500	5	4,372,500	5
3200	Capital surplus	24,776,630	26	24,772,608	28
	Retained earnings:				
3310	Legal reserve	2,686,883	3	1,341,111	2
3320	Special reserve	1,133,596	1	1,133,596	1
3350	Unappropriated retained earnings	14,965,441	15	13,457,718	15
		18,785,920	19	15,932,425	18
3400	Other equity interest	(2,291,256)	(2)	(1,361,299)	(2)
3500	Treasury shares	(576,779)	(1)	(576,779)	(1)
	Total equity attributable to shareholders of GlobalWafers Co., Ltd.	45,067,015	47	43,139,455	48
36XX	Non-controlling interests	6,235	-	16,658	-
	Total equity	45,073,250	47	43,156,113	48
	Total liabilities and equity	$ 96,585,753	100	89,822,121	100

See accompanying notes to consolidated financial statements.

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

GlobalWafers Co., Ltd. and subsidiaries

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2019 and 2018

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

		2019		2018	
		Amount	%	Amount	%
4000	**Operating revenue** (notes 6(22) and 7)	$ 58,094,331	100	59,063,510	100
5000	**Operating costs** (notes 6(5), (23) and 7)	35,247,610	61	36,764,666	62
	Gross profit from operations	22,846,721	39	22,298,844	38
	Operating expenses (notes 6(23) and 7)**:**				
6100	Selling expenses	1,193,223	2	1,259,718	2
6200	Administrative expenses	2,040,734	3	1,810,251	3
6300	Research and development expenses	1,710,801	3	1,650,559	3
6450	Expected credit losses (note 6(4))	4,742	-	265	-
	Total operating expenses	4,949,500	8	4,720,793	8
	Net operating income	17,897,221	31	17,578,051	30
	Non-operating income and expenses:				
7010	Interest income	723,336	1	464,012	1
7020	Other gains and losses, net (notes 6(24) and 7)	5,022	-	319,317	-
7050	Interest expense	(71,714)	-	(108,013)	-
		656,644	1	675,316	1
	Income before income tax	18,553,865	32	18,253,367	31
7950	Income tax expense (note 6(18))	4,918,209	9	4,619,596	8
	Net income	13,635,656	23	13,633,771	23
8300	**Other comprehensive income:**				
8310	**Items that may not be reclassified subsequently to profit or loss**:				
8311	Gains (losses) on remeasurements of defined benefit plans (note 6(17))	179,553	-	(251,429)	-
8316	Unrealized gains (losses) from investments in equity instruments measured at fair value through other comprehensive income	27,542	-	16,435	-
8349	Income tax related to components of other comprehensive income that will not be reclassified to profit or loss (note 6(18))	120,951	-	(68,152)	-
		86,144	-	(166,842)	-
8360	**Items that may be reclassified subsequently to profit or loss:**				
8361	Exchange differences on translation of foreign operations	(1,503,580)	(2)	854,780	1
8370	Share of other comprehensive income of associates and joint ventures accounted for using equity method (note 6(6))	275,843	-	(149,269)	-
8399	Income tax related to components of other comprehensive income that will be reclassified to profit or loss (note 6(18))	(300,404)	(1)	107,421	-
		(927,333)	(1)	598,090	1
8300	**Other comprehensive income (after tax)**	(841,189)	(1)	431,248	1
	Total comprehensive income	$ 12,794,467	22	14,065,019	24
	Net income attributable to:				
	Shareholders of GlobalWafers Co., Ltd	$ 13,644,095	23	13,630,673	23
	Non-controlling interests	(8,439)	-	3,098	-
		$ 13,635,656	23	13,633,771	23
	Total comprehensive income attributable to:				
	Shareholders of GlobalWafers Co., Ltd	$ 12,804,463	22	14,055,257	24
	Non-controlling interests	(9,996)	-	9,762	-
		$ 12,794,467	22	14,065,019	24
	Earnings per share (NT dollars) (note 6(21))				
	Basic earnings per share	$	31.35		31.18
	Diluted earnings per share	$	31.21		31.04

See accompanying notes to consolidated financial statements.

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

GlobalWafers Co., Ltd. and subsidiaries

Consolidated Statements of Changes in Equity

For the years ended December 31, 2019 and 2018

(Expressed in Thousands of New Taiwan Dollars)

	Equity attributable to shareholders of GlobalWafers Co., Ltd.													
			Retained earnings				Other equity interest							
								Gains (losses)						
	Ordinary shares	Capital surplus	Legal reserve	Special reserve	Unappropriated retained earnings	Total retained earnings	Exchange differences on translation of foreign financial statements	from equity instrument measured at fair value through other comprehensive income	Unrealized gains (losses) on available-for-sale financial assets	Total other equity interest	Treasury shares	Total	Non-controlling interests	Total equity
Balance at January 1, 2018	$ 4,372,500	24,772,805	813,639	350,635	5,693,255	6,857,529	(2,069,569)	-	112,663	(1,956,906)	-	34,045,928	8,478	34,054,406
Effects of retrospective application of new accounting standards	-	-	-	-	-	-	-	100,409	(112,663)	(12,254)	-	(12,254)	-	(12,254)
Balance at January 1, 2018 after adjustments	4,372,500	24,772,805	813,639	350,635	5,693,255	6,857,529	(2,069,569)	100,409	-	(1,969,160)	-	34,033,674	8,478	34,042,152
Net income for the year	-	-	-	-	13,630,673	13,630,673	-	-	-	-	-	13,630,673	3,098	13,633,771
Other comprehensive income for the year	-	-	-	-	(183,277)	(183,277)	740,695	(132,834)	-	607,861	-	424,584	6,664	431,248
Comprehensive income for the year	-	-	-	-	13,447,396	13,447,396	740,695	(132,834)	-	607,861	-	14,055,257	9,762	14,065,019
Appropriation and distribution of retained earnings:														
Legal reserve	-	-	527,472	-	(527,472)	-	-	-	-	-	-	-	-	-
Special reserve	-	-	-	782,961	(782,961)	-	-	-	-	-	-	-	-	-
Cash dividends on ordinary shares	-	-	-	-	(4,372,500)	(4,372,500)	-	-	-	-	-	(4,372,500)	-	(4,372,500)
Increase in treasury stock	-	-	-	-	-	-	-	-	-	-	(576,779)	(576,779)	-	(576,779)
Difference between consideration and the carrying amount of subsidiaries acquired or disposed	-	(197)	-	-	-	-	-	-	-	-	-	(197)	(1,582)	(1,779)
Balance at December 31, 2018	4,372,500	24,772,608	1,341,111	1,133,596	13,457,718	15,932,425	(1,328,874)	(32,425)	-	(1,361,299)	(576,779)	43,139,455	16,658	43,156,113
Net income for the year	-	-	-	-	13,644,095	13,644,095	-	-	-	-	-	13,644,095	(8,439)	13,635,656
Other comprehensive income for the year	-	-	-	-	58,602	58,602	(1,201,619)	303,385	-	(898,234)	-	(839,632)	(1,557)	(841,189)
Comprehensive income for the year	-	-	-	-	13,702,697	13,702,697	(1,201,619)	303,385	-	(898,234)	-	12,804,463	(9,996)	12,794,467
Appropriation and distribution of retained earnings:														
Legal reserve	-	-	1,345,772	-	(1,345,772)	-	-	-	-	-	-	-	-	-
Cash dividends on ordinary shares	-	-	-	-	(10,880,925)	(10,880,925)	-	-	-	-	-	(10,880,925)	-	(10,880,925)
Disposal of investments in equity instruments designated at fair value through other comprehensive income	-	-	-	-	31,723	31,723	-	(31,723)	-	(31,723)	-	-	-	-
Difference between consideration and the carrying amount of investment in associates acquired or disposed	-	4,063	-	-	-	-	-	-	-	-	-	4,063	-	4,063
Difference between consideration and the carrying amount of subsidiaries acquired or disposed	-	(41)	-	-	-	-	-	-	-	-	-	(41)	(427)	(468)
Balance at December 31, 2019	$ 4,372,500	24,776,630	2,686,883	1,133,596	14,965,441	18,785,920	(2,530,493)	239,237	-	(2,291,256)	(576,779)	45,067,015	6,235	45,073,250

See accompanying notes to consolidated financial statements.

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

GlobalWafers Co., Ltd. and subsidiaries

Consolidated Statements of Cash Flows

For the years ended December 31, 2019 and 2018

(Expressed in Thousands of New Taiwan Dollars)

		2019	2018
Cash flows from operating activities:			
Income before income tax	$	18,553,865	18,253,367
Adjustments:			
Adjustments to reconcile profit (loss):			
Depreciation expenses		4,380,511	4,460,291
Amortization expenses		364,830	354,779
Expected credit losses		4,742	265
Net loss (gain) on financial assets or liabilities at fair value through profit or loss		286,218	(55,950)
Interest expense		71,714	108,013
Interest income		(723,336)	(464,012)
Dividend income		(4,137)	(1,077)
Shares of profit of associates accounted for using equity method		(20,331)	(14,439)
Loss on disposal of intangible assets		1,141	-
Loss (gain) on disposal of property, plant and equipment		7,992	(124,083)
Provision for (reversal of) inventory valuation		123,286	(62,627)
Total adjustments		4,492,630	4,201,160
Changes in operating assets and liabilities:			
Notes and accounts receivable (including related parties)		1,081,878	(1,356,799)
Inventories		74,794	359,447
Prepayments for purchase of materials		(499,072)	339,011
Other current assets		(293,365)	(275,810)
Other financial assets		100,841	(516,113)
Total changes in operating assets		465,076	(1,450,264)
Contract liabilities		(1,978,993)	14,839,499
Notes and accounts payable (including related parties)		(1,032,964)	600,953
Provisions		(1,544)	(89,888)
Net defined benefit liabilities		(3,253)	37,537
Other operating liabilities		(475,528)	949,627
Total changes in operating liabilities		(3,492,282)	16,337,728
Total changes in operating assets and liabilities		(3,027,206)	14,887,464
Total adjustments		1,465,424	19,088,624
Cash inflow generated from operations		20,019,289	37,341,991
Interest received		747,584	428,181
Dividends received		4,137	1,077
Interest paid		(67,369)	(129,754)
Income taxes paid		(3,314,743)	(1,462,773)
Net cash flows from operating activities		17,388,898	36,178,722

(Continued)

See accompanying notes to consolidated financial statements.

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

GlobalWafers Co., Ltd. and subsidiaries

Consolidated Statements of Cash Flows(Continued)

For the years ended December 31, 2019 and 2018

(Expressed in Thousands of New Taiwan Dollars)

	2019	2018
Cash flows from investing activities:		
Proceeds from capital reduction of financial assets at fair value through other comprehensive income	-	8,732
Proceeds from disposal of financial assets at fair value through other comprehensive income	79,178	-
Acquisition of financial assets at fair value through other comprehensive income	-	(71,470)
Proceeds from disposal of financial assets at fair value through profit or loss	95,901	-
Acquisition of financial assets at fair value through profit or loss	(1,907,850)	(98,853)
Acquisition of investments accounted for using equity method	(109,760)	-
Cash dividends from investments accounted for using equity method	16,510	5,350
Acquisition of property, plant and equipment	(7,602,947)	(6,696,362)
Proceeds from disposal of property, plant and equipment	75,718	414,284
Decrease (increase) in other financial assets	(3,081,247)	70,154
Net cash flows used in investing activities	(12,434,497)	(6,368,165)
Cash flows from financing activities:		
Increase (decrease) in short-term borrowings	4,844,000	(5,082,365)
Increase in long-term borrowings	-	430,000
Repayments of long-term borrowings	(430,000)	(4,276,333)
Increase (decrease) in guarantee deposits received	(145,941)	17,858
Payment of lease liabilities	(171,013)	-
Cash dividends paid	(10,880,925)	(4,372,500)
Cost of increase in treasury stock	-	(482,609)
Change in non-controlling interests	(468)	(1,779)
Net cash flows used in financing activities	(6,784,347)	(13,767,728)
Effect of exchange rate changes on cash and cash equivalents	(562,865)	377,132
Net increase (decrease) in cash and cash equivalents	(2,392,811)	16,419,961
Cash and cash equivalents at beginning of period	35,214,323	18,794,362
Cash and cash equivalents at end of period	$ 32,821,512	35,214,323

See accompanying notes to consolidated financial statements.

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

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

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

1. Company history

GlobalWafers Co., Ltd. (the "Company") had been a semiconductor operating unit of Sino-American Silicon Products Inc. ("SAS") and the Company, along with its assets and liabilities, was spun off from SAS on October 1, 2011. The Company was incorporated in October 18, 2011, and authorized by the Hsinchu Science Park Bureau (HSPB). Its registered office is located at No. 8, Industrial East Road 2, Science-Based Park, Hsinchu, Taiwan (R.O.C.). As of December 31, 2019, the consolidated financial statements comprise the Company and its subsidiaries (together referred to as the "Group"). The Group engages mainly in the research, development, production, design, and sales of semiconductor ingots and wafers, and is also engaged in the technology and management consulting service for related products.

The Company acquired ownership of 100% outstanding shares of SunEdison Semiconductor Limited ("SunEdison") on December 2, 2016. SunEdison is a semiconductor wafer fabrication and supplier, and has been leading silicon wafer designs since its inception. SunEdison's R&D and manufacturing strongholds spread over United States, Europe and Asia, and also dedicated to develop the next generation High-performance semiconductor wafers. The Group expands its sales network and upgrades its research and development capability through this acquisition.

The Company's common shares have been listed on Taipei Exchange ("TPEx") since September 25, 2015, and were delisted from the Emerging Market at the same date.

2. Approval date and procedures of the consolidated financial statements:

These consolidated financial statements were authorized for issue by the board of directors on March 17, 2020.

3. New standards, amendments and interpretations adopted:

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

The following new standards, interpretations and amendments have been endorsed by the FSC and are effective for annual periods beginning on or after January 1, 2019.

New, Revised or Amended Standards and Interpretations	International Accounting Standards Board
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

(Continued)

New, Revised or Amended Standards and Interpretations	International Accounting Standards Board
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:

(i) IFRS 16 "Leases"

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

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

1) Definition of a lease

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

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

2) As a lessee

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

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

(Continued)

- Leases classified as operating leases under IAS 17

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

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

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

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

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

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

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

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

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

- Leases previously classified as finance leases

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

3) As a lessor

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

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

4) Impacts on financial statements

On transition to IFRS 16, the Group recognized additional right-of-use assets and lease liabilities both of $920,732 thousands. When measuring lease liabilities, the Group discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted-average rate applied is 1.19%.

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

		January 1, 2019
Operating lease commitment at December 31, 2018 as disclosed in the Group' s consolidated financial statements	$	859,630
Recognition exemption for:		
short-term leases and leases of low-value assets		(6,518)
Extension and termination options reasonably certain to be exercised		82,613
	$	**935,725**
Discounted using the incremental borrowing rate at January 1, 2019	$	920,732
Finance lease liabilities recognized as at December 31, 2018		28,392
Lease liabilities recognized at January 1, 2019	**$**	**949,124**

(ii) IFRIC 23 "Uncertainty over Income Tax Treatments"

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

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

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

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

The following new standards, interpretations and amendments have been endorsed by the FSC and are effective for annual periods beginning on or after January 1, 2020 in accordance with Rule No. 1080323028 issued by the FSC on July 29, 2019:

New, Revised or Amended Standards and Interpretations	Effective date per IASB
Amendments to IFRS 3 "Definition of a Business"	January 1, 2020
Amendments to IFRS 9, IAS39 and IFRS7 "Interest Rate Benchmark Reform"	January 1, 2020
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020

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

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

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

New, Revised or Amended Standards and Interpretations	Effective date per IASB
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets Between an Investor and Its Associate or Joint Venture"	Effective date to be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2021
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	January 1, 2022

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

4. Summary of significant accounting policies:

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

(1) Statement of compliance

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

(Continued)

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

(2) Basis of preparation

A. Basis of measurement

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

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

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

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

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

B. Functional and presentation currency

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

(3) Basis of consolidation

A. Principles of preparation of the consolidated financial statements

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

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

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

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

(Continued)

B. List of subsidiaries in the consolidated financial statements

Name of Investor	Name of Subsidiary	Business	Percentage of Ownership December 31, 2019	Percentage of Ownership December 31, 2018	Note
The Company	Global Semiconductor Inc. (GSI)	Investment activities	100%	100%	
The Company	GlobalWafers Inc. (GWI)	Investment activities	100%	100%	
The Company	GlobalWafers Japan Co., Ltd. (GWJ)	Manufacturing and trading of silicon wafers	100%	100%	
The Company	GWafers Singapore Pte. Ltd. (GWafers Singapore)	Investment activities	67.2%	67.2%	
The Company	Topsil GlobalWafers A/S (Topsil A/S)	Manufacturing and trading of silicon wafers	100%	100%	
The Company	Taisil Electronic Materials Corp. (Taisil)	Manufacturing and trading of silicon wafers	99.99%	99.99%	
GSI	Kunshan Sino Silicon Technology Co., Ltd. (SST)	Processing and trading of ingots and wafers	100%	100%	
GWI	GWafers Singapore	Investment activities	32.8%	32.8%	
GWJ	MEMC Japan Ltd. (MEMC Japan)	Manufacturing and trading of silicon wafers	100%	100%	
SST	Shanghai GrowFast Semiconductor Technology Co., Ltd.	Sale and marketing	60%	60%	
Topsil A/S	Topsil Semiconductor sp z o.o. (Topsil PL)	Manufacturing and trading of silicon wafers	100%	100%	
GWafers Singapore	GlobalWafers Singapore Pte. Ltd. (Formerly known as SunEdison Semiconductor Limited, GWS)	Investment, marketing and trading activities	100%	100%	
GWS	GlobalWafers B.V. (Formerly known as SunEdison Semiconductor B.V., GWBV)	Investment activities	100%	100%	
GWBV	MEMC Electronic Materials, SpA (MEMC SpA)	Manufacturing and trading of silicon wafers	100%	100%	

(Continued)

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

Name of Investor	Name of Subsidiary	Business	Percentage of Ownership December 31, 2019	Percentage of Ownership December 31, 2018	Note
MEMC SpA	MEMC Electronic Materials France SarL(MEMC SarL)	Trading	100%	100%	
MEMC SpA	MEMC Electronic Materials GmbH (MEMC GmbH)	Trading	100%	100%	
MEMC SpA	MEMC Holding B.V. (MEMC BV)	Investment activities	-	100%	note(1)
GWBV、MEMC BV	MEMC Korea Company (MEMC Korea)	Manufacturing and trading of silicon wafers	-	100%	note(2)
GWBV	MEMC Korea	Manufacturing and trading of silicon wafers	100%	-	note(2)
GWBV	MEMC Electronic Materials, Sdn Bhd (MEMC Sdn Bhd)	Research and development, manufacturing and trading of silicon wafers	100%	100%	
GWBV	SunEdison Semiconductor Technology (Shanghai) Ltd. (SunEdison Shanghai)	Trading	100%	100%	
GWBV	GTI	Manufacturing of epitaxial wafers and silicon wafers	100%	100%	
GTI	MEMC LLC	Research and development and manufacturing and trading of silicon wafers	100%	100%	
GWBV	MEMC Ipoh Sdn Bnd (MEMC Ipoh)	Manufacturing and trading of silicon wafers	100%	100%	

Note: The Group’s organizational restructuring was as follows:

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

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

C. Subsidiaries excluded from the consolidated financial statements: None.

(4) Foreign currencies

A. Foreign currency transactions

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

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

Exchange differences are generally recognized in profit or loss, except for an equity investment in equity securities designated as at fair value through other comprehensive income, which are recognized in other comprehensive income.

B. Foreign operations

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

When the settlement of a monetary receivable from or payable to a foreign operation is neither planned nor likely to occur in the foreseeable future, exchange differences arising from such a monetary item that are considered to form part of the net investment in the foreign operation are recognized in other comprehensive income.

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

An asset is classified as current under one of the following criteria, and all other assets are classified as non-current:

A. It is expected to be realized, or intended to be sold or consumed, in the normal operating cycle;

B. It is held primarily for the purpose of trading;

C. It is expected to be realized within twelve months after the reporting period; or

D. The asset is cash or cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

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

A. It is expected to be settled in the normal operating cycle;

B. It is held primarily for the purpose of trading;

(Continued)

C. It is due to be settled within twelve months after the reporting period; or

D. The Group does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting period. Terms of a liability that could, at the option of the counterparty, result in its settlement by issuing equity instruments do not affect its classification.

(6) Cash and cash equivalents

Cash comprises cash on hand and demand deposits. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value. Time deposits which meet the above definition and are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes should be recognized as cash equivalents.

(7) Financial instruments

A. Financial instruments

Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Group becomes a party to the contractual provisions of the instrument. A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

(a) Financial assets

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

On initial recognition, a financial asset is classified as measured at amortized cost, fair value through other comprehensive income – equity investment, or FVTPL. Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

(b) Financial assets measured at amortized cost

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

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

These assets are subsequently measured at amortized cost, which is the amount at which the financial asset is measured at initial recognition, plus/minus, the cumulative amortization using the effective interest method, adjusted for any loss allowance. Interest income, foreign exchange gains and losses, as well as impairment, are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

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

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

Equity investments at FVTOCI are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in other comprehensive income and are never reclassified to profit or loss.

Dividend income is recognized in profit or loss on the date on which the Group's right to receive payment is established.

(d) Impairment of financial assets

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

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

- debt securities that are determined to have low credit risk at the reporting date；and
- other debt securities and bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition.

Loss allowance for trade receivables and contract assets are always measured at an amount equal to lifetime ECL.

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

Lifetime ECL are the ECLs that result from all possible default events over the expected life of a financial instrument.

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

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

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

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

The gross carrying amount of a financial asset is written off when the Group has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof. For corporate customers, the Group individually makes an assessment with respect to the timing and amount of write-off based on whether there is a reasonable expectation of recovery. The Group expects no significant recovery from the amount written off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group’ s procedures for recovery of amounts due.

(e) Derecognition of financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognized in its statement of balance sheet, but retains either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

B. Financial liabilities and equity instruments

(a) Classification of debt or equity

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

(b) Equity instrument

An equity instrument is any contract that evidences residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued are recognized as the amount of consideration received, less the direct cost of issuing.

(c) Treasury shares

When shares recognized as equity are repurchased, the amount of the consideration paid, which includes directly attributable costs, is recognized as a deduction from equity. Repurchased shares are classified as treasury shares. When treasury shares are sold or reissued subsequently, the amount received is recognized as an increase in equity, and the resulting surplus or deficit on the transaction is recognized in capital surplus or retained earnings (if the capital surplus is not sufficient to be written down).

(d) Financial liabilities

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognized in profit or loss.

Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

(e) Derecognition of financial liabilities

The Group derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expire. The Group also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

On derecognition of a financial liability, the difference between the carrying amount of a financial liability extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

(f) Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount presented in the statement of balance sheet when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

C. Derivative financial instruments and hedge accounting

The Group holds derivative financial instruments to hedge its foreign currency and interest rate exposures. Embedded derivatives are separated from the host contract and accounted for separately if the host contract is not a financial asset and certain criteria are met.

Derivatives are initially measured at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are generally recognized in profit or loss.

(8) Inventories

Inventories are measured at the lower of cost or net realizable value. The cost of inventories is based on the weighted-average-cost method and includes expenditure incurred in acquiring the inventories, production or conversion cost, and other costs incurred in bringing them to their present location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on operating capacity.

Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses necessary to make the sale.

(9) Investment in associates

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

Investments in associates are accounted for using the equity method and are recognized initially at cost. The cost of the investment includes transaction costs. The carrying amount of the investment in associates includes goodwill arising from the acquisition, less any accumulated impairment losses.

The consolidated financial statements include the Group’s share of the profit or loss and other comprehensive income of those associates, after adjustments to align their accounting policies with those of the Group, from the date on which significant influence commences until the date on which significant influence ceases. The Group recognizes any changes of its proportionate share in the investee within capital surplus, when an associate’s equity changes due to reasons other than profit and loss or comprehensive income, which did not result in changes in actual significant influence.

Gains and losses resulting from transactions between the Group and an associate are recognized only to the extent of unrelated Group’s interests in the associate.

When the Group’s share of losses of an associate equals or exceeds its interests in an associate, it discontinues recognizing its share of further losses. After the recognized interest is reduced to zero, additional losses are provided for, and a liability is recognized, only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

The Group discontinues the use of the equity method and measures the retained interest at fair value from the date when its investment ceases to be an associate. The difference between the fair value of retained interest and proceeds from disposing, and the carrying amount of the investment at the date the equity method was discontinued is recognized in profit or loss. The Group accounts for all the amounts previously recognized in other comprehensive income in relation to that investment on the same basis as would have been required if the associates had directly disposed of the related assets or liabilities. If a gain or loss previously recognized in other comprehensive income would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) when the equity method is discontinued. If the Group’s ownership interest in an associate is reduced while it continues to apply the equity method, the Group reclassifies the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that reduction in ownership interest to profit or loss.

(Continued)

When the Group subscribes to additional shares in an associate at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment will differ from the amount of the Group's proportionate interest in the net assets of the associate. The Group records such a difference as an adjustment to investments, with the corresponding amount charged or credited to capital surplus. The aforesaid adjustment should first be adjusted under additional paid in capital. If the additional paid in capital resulting from changes in ownership interest is not sufficient, the remaining difference is debited to retained earnings. If the Group's ownership interest is reduced due to the additional subscription to the shares of the associate by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate will be reclassified to profit or loss on the same basis as would be required if the associate had directly disposed of the related assets or liabilities.

(10) Property, plant and equipment

A. Recognition and measurement

Items of property, plant and equipment are measured at cost, which includes capitalized borrowing costs, less accumulated depreciation and any accumulated impairment losses.

If significant parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Any gain or loss on disposal of an item of property, plant and equipment is recognized in profit or loss.

B. Subsequent cost

Subsequent expenditure is capitalized only if it is probable that the future economic benefits associated with the expenditure will flow to the Group.

C. Depreciation

Depreciation is calculated on the cost of an asset less its residual value and is recognized in profit or loss on a straight line basis over the estimated useful lives of each component of an item of property, plant and equipment.

Land is not depreciated.

The estimated useful lives of property, plant and equipment for current and comparative periods are as follows:

(a) Buildings: 2 to 40 years

(b) Machinery and equipment: 1 to 15 years

(c) Other equipment and leased assets: 1 to 12 years

(d) Buildings constitute mainly buildings, mechanical and electrical power equipment, and related engineering, wastewater treatment and sewage system, etc. Each such part is depreciated based on its useful life of 25 to 40 years, 25 years, and 4 to 15 years, respectively.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(11) Lessee

Applicable from January 1, 2019

A. Identifying a lease

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether:

(a) the contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified; and

(b) the customer has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and

(c) the customer has the right to direct the use of the asset throughout the period of use only if either:

- the customer has the right to direct how and for what purpose the asset is used throughout the period of use; or
- the relevant decisions about how and for what purpose the asset is used are predetermined and:
  - the customer has the right to operate the asset throughout the period of use, without the supplier having the right to change those operating instructions; or
  - the customer designed the asset in a way that predetermines how and for what purpose it will be used throughout the period of use.

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices. However, for the leases of land and buildings in which it is a lessee, the Group has elected not to separate non-lease components and account for the lease and non-lease components as a single lease component.

B. As a leasee

The Group recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be reliably determined, the Group’ s incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement of the lease liability comprise the following:

(a) fixed payments, including in-substance fixed payments;

(b) variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;

(c) amounts expected to be payable under a residual value guarantee; and

(d) payments for purchase or termination options that are reasonably certain to be exercised.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when:

(a) there is a change in future lease payments arising from the change in an index or rate; or

(b) there is a change in the Group’ s estimate of the amount expected to be payable under a residual value guarantee; or

(c) there is a change in the lease term resulting from a change of its assessment on whether it will exercise an option to purchase the underlying asset, or

(d) there is a change of its assessment on whether it will exercise a extension or termination option; or

(e) there are any lease modifications

(Continued)

When the lease liability is remeasured, other than lease modifications, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or in profit and loss if the carrying amount of the right-of-use asset has been reduced to zero.

When the lease liability is remeasured to reflect the partial or full termination of the lease for lease modifications that decrease the scope of the lease, the Group accounts for the remeasurement of the lease liability by decreasing the carrying amount of the right-of-use asset to reflect the partial or full termination of the lease, and recognize in profit or loss any gain or loss relating to the partial or full termination of the lease.

The Group has elected not to recognize right-of-use assets and lease liabilities for short-term leases with 12 months or less and leases of low-value assets, including other equipment. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

C. As a lessor

When the Group acts as a lessor, it determines at lease commencement whether each lease is a finance lease or an operating lease. To classify each lease, the Group makes an overall assessment of whether the lease transfers to the lessee substantially all of the risks and rewards of ownership incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then the lease is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

If an arrangement contains lease and non-lease components, the Group applies IFRS15 to allocate the consideration in the contract.

Applicable before January 1, 2019

Leases in which the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. On initial recognition, the lease asset is measured at an amount equal to the lower of its fair value or the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to the asset.

Minimum lease payments made under finance leases are apportioned between the finance cost and the reduction of the outstanding liability. The finance cost is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Other leases are operating leases and are not recognized in the Group’s consolidated statements of balance sheets.

Payments made under an operating lease (excluding insurance and maintenance expenses) are recognized in profit or loss on a straight-line basis over the term of the lease.

Expenditures for obtaining land use rights are recognized as acquisition cost. Based on the shorter of the contract period or the estimated useful life, the cost of land use rights is amortized over 50 or 99 years.

(12) Intangible assets

A. Recognition and measurement

Goodwill arising on the acquisition of subsidiaries is measured at cost, less accumulated impairment losses.

Expenditure on research activities is recognized in profit or loss as incurred.

Development expenditure is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to, and has sufficient resources to, complete development and to use or sell the asset. Otherwise, it is recognized in profit or loss as incurred. Subsequent to initial recognition, development expenditure is measured at cost, less accumulated amortization and any accumulated impairment losses.

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

B. Subsequent expenditure

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in profit or loss as incurred.

C. Amortization

Amortization is calculated over the cost of the asset, less its residual value, and is recognized in profit or loss on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use.

(a) Patents and trademarks: 4 to 6 years

(b) Development costs: 10 years

Amortization methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(13) Impairment of non-financial assets

At each reporting date, the Group reviews the carrying amounts of its non-financial assets (other than inventories and deferred tax assets) to determine whether there is any indication of impairment. If any such indication exists, then the asset’s recoverable amount is estimated. Goodwill is tested annually for impairment.

For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or cash-generating units ("CGUs"). Goodwill arising from a business combination is allocated to CGUs or groups of CGUs that are expected to benefit from the synergies of the combination.

The recoverable amount of an asset or a cash-generating unit ("CGU") is the greater of its value in use and its fair value less costs to sell. Value in use is based on the estimated future cash flows, discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or a CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount.

Impairment losses are recognized in profit or loss. They are allocated first to reduce the carrying amount of any goodwill allocated to the CGU, and then to reduce the carrying amounts of the other assets in the CGU on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. For other assets, an impairment loss is reversed only to the extent that the asset’s carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(14) Provisions

A provision is recognized if, as a result of a past event, the Group has a present obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as interest expense.

A. Site restoration

In accordance with the Group’s published environmental policy and applicable legal requirements, a provision for site restoration in respect of contaminated land and the related expense are recognized when the land is contaminated. A provision for site restoration of lease land and the related expense are recognized over the term of the lease.

B. Onerous contracts

A provision for onerous contracts is recognized when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract or the expected net cost of continuing with the contract. Before a provision is established, the Group recognizes any impairment loss on the assets associated with that contract.

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(15) Revenue recognition

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

The accounting policies for the Group’s main types of revenue are explained below.

A. Sale of goods

The Group engages mainly in the research, development, production, design, and sales of semiconductor ingots and wafers. The Group recognizes revenue when control of the products has been transferred, being when the products are delivered to the customer, the customer has full discretion over the channel and price to sell the products, and there is no unfulfilled obligation that could affect the customer’s acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.

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

B. Services

The Group provides services to its customers. Revenue from services rendered is recognized in profit or loss in proportion to the stage of completion of the transaction at the reporting date.

Revenue recognition for fixed-price contracts is based on the ratio of services actually provided to total services as of the reporting date, which is determined by the percentage of labor performed to the total amount of labor to be performed.

If the situation changes, the estimates of revenue, cost, and degree of completion will be revised, and the increase or decrease in the period when the management is aware of the change in the situation will be reflected in profit or loss.

(16) Employee benefits

A. Defined contribution plans

Obligations for contributions to defined contribution pension plans are expensed as the related service is provided.

B. Defined benefit plans

The Group’s net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

(Continued)

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income, and accumulated in retained earnings within equity. The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability (asset). Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

C. Short-term employee benefits

Short-term employee benefit are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

(17) Share-based payment

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in liabilities, over the period during which the employees become unconditionally entitled to payment. The liability is remeasured at each reporting date and at settlement date based on the fair value of the share appreciation rights. Any changes in the liability are recognized in profit or loss.

Please refer to note 6(20) for grant date of a share-based payment award.

(18) Income tax

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

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The Group has determined that interest and penalties related to income taxes, including uncertain tax treatment, do not meet the definition of income taxes, and therefore accounted for them under IAS37.

Current taxes comprise the expected tax payables or receivables on the taxable profits (losses) for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current tax payables or receivables are the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date.

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

A. temporary differences on the initial recognition of assets and liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profits (losses) at the time of the transaction;

B. temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that the Group is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future; and

C. taxable temporary differences arising on the initial recognition of goodwill.

Deferred taxes are measured at tax rates that are expected to be applied to temporary differences when they reserve, using tax rates enacted or substantively enacted at the reporting date, and reflect uncertainty related to income taxes, if any.

Deferred tax assets and liabilities are offset if the following criteria are met:

A. the Group has a legally enforceable right to set off current tax assets against current tax liabilities; and

B. the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either:

   (a) the same taxable entity; or

   (b) different taxable entities which intend to settle current tax assets and liabilities on a net basis, or to realize the assets and liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Deferred tax assets are recognized for the carry forward of unused tax losses, unused tax credits, and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefits will be realized; such reductions are reversed when the probability of future taxable profits improves.

(19) Earnings per share

The Group discloses the Company's basic and diluted earnings per share attributable to ordinary shareholders of the Company. Basic earnings per share is calculated as the profit attributable to ordinary shareholders of the Company divided by the weighted-average number of ordinary shares outstanding. Diluted earnings per share is calculated as the profit attributable to ordinary shareholders of the Company divided by the weighted-average number of ordinary shares outstanding after adjustment for the effects of all potentially dilutive ordinary shares, such as employee remuneration that could be settled in the form of stock.

(20) Operating segment

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

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

The preparation of the consolidated financial statements in conformity with the IFRSs endorsed by the FSC requires management to make judgments, estimations and assumptions that affect the application of the accounting policies and the reported amount of assets, liabilities, income and expenses. Actual results may differ from these estimates.

The management continues to monitor the accounting estimates and assumptions. The management recognizes any changes in the accounting estimates during the period and the impact of those changes in the following period.

There is no critical judgment made in applying accounting policies.

The accounting policies which involved the estimation and assumption uncertainty that may cause adjustments in the subsequent period are as below:

Impairment of goodwill

The assessment of the impairment of goodwill requires the Group to make subjective judgment to identify CGUs, allocate the goodwill to relevant CGUs, and estimate the recoverable amounts of the relevant CGUs. Please refer to note 6(9) for further description of the assessment of goodwill impairment.

The Group's accounting policies include measuring financial and non-financial assets and liabilities at fair value through profit or loss.

The Group's financial instrument valuation group conducts independent verification on fair value by using data sources that are independent, reliable, and representative of exercise prices. This financial instrument valuation group also periodically adjusts valuation models, conducts back testing, renews input data for valuation models, and makes all other necessary fair value adjustments to assure the rationality of fair value.

(Continued)

The Group strives to use the observable market inputs when measuring assets and liabilities. The hierarchy of the fair value categorized by the valuation techniques used is as follows:

Level 1: quoted prices (unadjusted) in active markets for identified assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3: inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).

For any transfer within the fair value hierarchy, the Group recognizes the transfer on the reporting date. For the assumption used in fair value measurement, please refer to note 6(25) of the financial instruments.

6. Explanation of significant accounts:

(1) Cash and cash equivalents

	December 31, 2019	December 31, 2018
Cash on hand	$ 12,686	11,975
Demand deposits	18,417,342	9,126,231
Time deposits	13,646,957	26,001,645
Repurchase agreement	744,527	74,472
	$ 32,821,512	**35,214,323**

Please refer to note 6(25) for the interest rate risk and sensitivity analysis of the financial assets and liabilities of the Group.

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

	December 31, 2019	December 31, 2018
Mandatorily measured at fair value through profit or loss:		
Forward exchange contracts	$ 6,920	81,798
Stocks listed on domestic markets	-	90,000
Overseas securities held	1,876,656	-
Privately offered funds	95,163	64,697
	$ 1,978,739	**236,495**
Financial liabilities designated as at fair value through profit or loss:		
Forward exchange contract	**$ 216,632**	**119**

The Group uses derivative instruments to hedge certain currency risk arising from the Group's operating activities. The Group held the following derivative instruments not used for hedging and accounted them as mandatorily measured at fair value through profit or loss and held-for-trading financial liabilities as of December 31, 2019 and 2018:

	December 31, 2019			
	Contract amount (in thousands)		Currency	Maturity date
Forward exchange contracts sold	USD	21,050	USD to EUR	January 24, 20 February 26, 2020
Forward exchange contracts sold	USD	2,838	USD to KRW	January 23, 2020
Forward exchange contracts purchased	JPY	19,000,000	JPY to NTD	January 14, 20 June 29, 2020
Forward exchange contracts purchased	JPY	50,000	JPY to EUR	February 26, 2020
Forward exchange contracts purchased	EUR	3,508	EUR to KRW	January 23, 2020
Forward exchange contracts purchased	JPY	1,632,949	JPY to KRW	January 23, 2020

	December 31, 2018			
	Contract amount (in thousands)		Currency	Maturity date
Forward exchange contracts sold	USD	17,850	USD to EUR	January 24, 20 February 26, 2019
Forward exchange contracts sold	USD	10,197	USD to KRW	January 24, 2019
Forward exchange contracts purchased	JPY	50,000	JPY to EUR	February 26, 2019
Forward exchange contracts purchased	EUR	18	EUR to KRW	January 24, 2019
Forward exchange contracts purchased	JPY	100,412	JPY to KRW	January 24, 2019
Forward exchange contracts purchased	JPY	17,000,000	JPY to NTD	January 15, 20 June 14, 2019

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

	December 31, 2019	December 31, 2018
Equity investment in domestic entities	$ -	51,636

The Group designated the equity investments shown above as at fair value through other comprehensive income because these equity securities represent those investments that the Group intends to hold for long term strategic purposes.

In July 2019, due to changes in investing strategy, the Group disposed of financial assets measured at fair value through other comprehensive income. The fair value at the time of disposal was $79,178 thousand, and the cumulative disposal gain was calculated at $31,723 thousand. Therefore, the accumulated disposal gain has been transferred from other equity to retained earnings.

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

For the years ended December 31, 2019 and 2018, the dividend income of $2,118 thousand and $1,077 thousand, respectively, related to equity investments at fair value through other comprehensive income held on December 31, 2019 and 2018, was recognized.

For market risk, please refer to note 6(26).

The financial assets mentioned above were not pledged as collateral.

(4) Notes and accounts receivable, net

	December 31, 2019	December 31, 2018	January 1, 2018
Notes receivable	$ 168,881	187,522	145,568
Accounts receivable	7,928,927	8,936,122	7,701,962
Accounts receivable-fair value through other comprehensive income	7,487	42,578	-
Less: Allowance for doubtful accounts	(15,676)	(11,198)	(36,149)
Allowance for sales discounts and returns	-	-	(15,364)
	$ 8,089,619	9,155,024	7,796,017

The movements in the allowance for doubtful accounts related to notes and accounts receivable were as follows:

	2019	2018
Balance on January 1 per IAS39	$ -	36,149
Adjustment on initial application of IFRS 9	-	-
Balance on January 1 per IFRS 9	11,198	36,149
Impairment losses recognized	4,742	265
Amounts written off	-	(24,857)
Foreign exchange losses	(264)	(359)
Balance on December 31	$ 15,676	11,198

The Group has assessed a portion of its accounts receivables that was held within a business model whose objective is achieved by selling financial assets; therefore, such accounts receivables were measured at fair value through other comprehensive income.

The Group applied the simplified approach to provide for its expected credit losses, i.e. the use of lifetime expected loss provision for all receivables. To measure the expected credit losses, accounts receivable have been grouped based on shared credit risk characteristics and the days past due, as well as incorporated forward looking information. The loss allowance provision was determined as follows:

	December 31, 2019		
	Gross carrying amount	Weighted-average loss rate	Loss allowance provision
Current	$ 7,823,157	0%	-
1 to 30 days past due	241,061	0%	-
31 to 60 days past due	17,797	0~15%	325
61 to 90 days past due	1,385	30%	416
91 to 120 days past due	13,626	50%	6,806
121 to 150 days past due	-	70%	-
151 to 180 days past due	1,402	90%	1,262
More than 181 days past due	6,867	100%	6,867
	$ 8,105,295		15,676

	December 31, 2018		
	Gross carrying amount	**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	0%~15%	3,507
61 to 90 days past due	464	25%	120
91 to 120 days past due	231	50%	115
121 to 150 days past due	408	70%	286
151 to 180 days past due	-	90%	-
More than 181 days past due	7,170	100%	7,170
	$ 9,166,222		11,198

The Group factored its accounts receivable to manage credit risks as of each reporting date as follows:

The Group entered into an agreement with banks to factor certain of its accounts receivable without recourse. According to the agreement, within the factoring line, the Group does not have to ensure the ability of debtors to pay when transferring the rights and obligations. The Group derecognized the above accounts receivables because it has transferred substantially all of the risks and rewards of their ownership, and it does not have any continuing involvement in them.

As of the reporting dates, details of accounts receivable factoring were as follows:

(Unit: Foreign currency/JPY in thousands)

December 31, 2019						
Purchaser	**Amounts derecognized**	**Factoring Line**	**Advanced Amount**		**Range of Interest Rate**	**Collateral**
Mitsubishi UFJ, etc.	$ 329,440	-	329,440	-	1.175% 1.475%	None

December 31, 2018						
Purchaser	**Amounts derecognized**	**Factoring Line**	**Advanced Amount**		**Range of Interest Rate**	**Collateral**
Mitsubishi UFJ, etc.	$ 502,978	-	502,978	-	1.175% 1.4758%	None

The factoring agreements above include a factoring line that is intended for revolving use.

The notes and accounts receivable mentioned above were not pledged as collateral.

(5) Inventories

		December 31, 2019	December 31, 2018
Finished goods	$	1,789,646	1,634,008
Work in progress		2,046,973	2,108,640
Raw materials		3,012,204	3,297,169
	$	6,848,823	7,039,817

Components of operating costs were as follows:

		2019	2018
Cost of sales	$	35,028,273	36,797,767
Provision of (reversal of) inventory valuation		123,286	(62,627)
Unallocated fixed manufacturing expense		96,051	29,526
	$	35,247,610	36,764,666

The inventories mentioned above were not pledged as collateral.

(6) Investments accounted for using equity method

A summary of financial information for investments accounted for using the equity method at the reporting date is as follows:

		December 31, 2019	December 31, 2018
Associates	$	571,929	178,442

A. Associates

The associates of the Group accounted for using the equity method are individually insignificant and the summarized financial information included in the consolidated financial statements of the Group was follows:

		December 31, 2019	December 31, 2018
The carrying amount of investments in the individually insignificant associates	$	571,929	178,442

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

		2019	2018
Amount of individually insignificant associates' interests attributable to the Group:			
Net income	$	20,331	14,439
Other comprehensive income (loss)		275,843	(149,269)
Total	$	296,174	(134,830)

B. The Group acquired equity interests of Hongwang Investment Co., Ltd. for $109,760 thousand in 2019, which was recognized as additions to investments accounted for using the equity method. The difference of $4,063 thousand between the investment cost and the equity is recognized in additional paid-in capital. Ownership increased from 24.39% to 30.98% as a result of the acquisition. For the years ended December 31, 2019 and 2018, the cash dividends of the invested companies were $16,510 thousand and $5,350 thousand, respectively, which were recognized as deductions of investments accounted for using the equity method.

C. Collateral

The investments accounted for using equity method mentioned above were not pledged as collateral as of December 31, 2019 and 2018.

(7) Property, plant and equipment

A. The movements of cost and depreciation of the property, plant and equipment of the Group were as follows:

		Land	Buildings	Machinery and equipment	Other equipment	Construction in progress and equipment awaiting inspection	Total
Cost:							
Balance at January 1, 2019	$	2,895,527	16,304,829	49,256,978	2,983,431	3,210,212	74,650,977
Additions		-	9,690	122,357	397,443	8,464,905	8,994,395
Disposals		-	(7,359)	(431,343)	(32,329)	(8,140)	(479,171)
Reclassification		3,238	517,573	1,182,861	209,966	(2,603,076)	(689,438)
Transfer and others		-	-	-	55,300	-	55,300
Effect of changes in exchange rates		(57,232)	(307,934)	(900,600)	(79,417)	(265,369)	(1,610,552)
Balance at December 31, 2019	$	2,841,533	16,516,799	49,230,253	3,534,394	8,798,532	80,921,511

(Continued)

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

	Land	Buildings	Machinery and equipment	Other equipment	Construction in progress and equipment awaiting inspection	Total
Balance at January 1, 2018	$ 2,841,992	14,824,909	45,590,942	2,767,642	1,836,277	67,861,762
Additions	-	555,660	127,017	533,833	5,670,246	6,886,756
Disposals	(49,905)	(29,004)	(1,472,140)	(454,817)	(2,352)	(2,008,218)
Reclassification	-	302,847	3,216,516	50,937	(3,570,300)	-
Transfer and others	-	68,307	452,284	9,734	(725,585)	(195,260)
Effect of changes in exchange rates	103,440	582,110	1,342,359	76,102	1,926	2,105,937
Balance at December 31, 2018	$ 2,895,527	16,304,829	49,256,978	2,983,431	3,210,212	74,650,977
Depreciation :						
Balance at January 1, 2019	$ -	7,673,088	34,511,907	1,578,947	-	43,763,942
Depreciation for the year	-	700,663	3,225,880	288,448	-	4,214,991
Disposals	-	(7,111)	(368,237)	(20,113)	-	(395,461)
Reclassification	-	177	(685,321)	(4,294)	-	(689,438)
Transfer and others	-	-	-	14,476	-	14,476
Effect of changes in exchange rates	-	(105,791)	(516,714)	(61,861)	-	(684,366)
Balance at December 31, 2019	$ -	8,261,026	36,167,515	1,795,603	-	46,224,144
Balance at January 1, 2018	$ -	6,699,911	31,302,259	1,657,288	-	39,659,458
Depreciation for the year	-	674,984	3,440,624	344,683	-	4,460,291
Disposals	-	(22,547)	(1,422,198)	(431,163)	-	(1,875,908)
Transfer and others	-	(10,356)	(92,305)	(28,754)	-	(131,415)
Effect of changes in exchange rates	-	331,096	1,283,527	36,893	-	1,651,516
Balance at December 31, 2018	$ -	7,673,088	34,511,907	1,578,947	-	43,763,942
Carrying amounts:						
Balance at December 31, 2019	$ 2,841,533	8,255,773	13,062,738	1,738,791	8,798,532	34,697,367
Balance at January 1, 2018	$ 2,841,992	8,124,998	14,288,683	1,110,354	1,836,277	28,202,304
Balance at December 31, 2018	$ 2,895,527	8,631,741	14,745,071	1,404,484	3,210,212	30,887,035

B. Collateral

Property, plant and equipment was pledged as collateral for long-term borrowings, short-term borrowings and credit lines. Please refer to note 8.

(8) Right-of-use assets

The Group leases many assets including land, buildings, machinery and other equipment. The carrying amounts about leases were presented below:

	Land	Buildings	Machinery	Other equipment	Total
Carrying amounts:					
Balance at December 31, 2019	$ 537,586	117,948	27,257	88,266	771,057

	2019
Depreciation expense of right-of-use assets	
Land	$ 39,907
Buildings	30,095
Machinery	11,316
Other equipment	84,202
	$ 165,520

The Group leases buildings, machinery and equipment classified as property, plant and equipment under the finance lease for the year ended December 31, 2018. Please refer to note 6(14). The Group leases offices, warehouses and factory facilities under an operating lease. Please refer to note 6(16).

(9) Intangible assets

The cost and amortization of the intangible assets of the Group were as follows:

	Goodwill	Patents and trademarks	Development costs	Total
Cost:				
Balance at January 1, 2019	$ 2,488,317	1,704,483	160,515	4,353,315
Disposals	-	-	(50,711)	(50,711)
Effect of changes in exchange rates	(67,261)	(1,738)	(5,133)	(74,132)
Balance at December 31, 2019	$ 2,421,056	1,702,745	104,671	4,228,472
Balance at 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 at December 31, 2018	$ 2,488,317	1,704,483	160,515	4,353,315

(Continued)

	Goodwill	Patents and trademarks	Development costs	Total
Amortization:				
Balance at January 1, 2019	$ -	666,222	37,696	703,918
Amortization for the year	-	332,113	15,767	347,880
Disposals	-	-	(49,570)	(49,570)
Effect of changes in exchange rates	-	(1,154)	(185)	(1,339)
Balance at December 31, 2019	$ -	997,181	3,708	1,000,889
Balance as of January 1, 2018	$ -	333,694	22,895	356,589
Amortization for the year	-	331,763	16,576	348,339
Effect of changes in exchange rates	-	765	(1,775)	(1,010)
Balance at December 31, 2018	$ -	666,222	37,696	703,918
Carrying amounts:				
Balance at December 31, 2019	$ 2,421,056	705,564	100,963	3,227,583
Balance at January 1, 2018	$ 2,429,026	1,368,531	141,577	3,939,134
Balance at December 31, 2018	$ 2,488,317	1,038,261	122,819	3,649,397

During the years ended December 31, 2019 and 2018, the amortization expenses of intangibles assets recognized under operating expenses in the statements of comprehensive income amounted to $347,880 thousand, and $348,339 thousand, respectively.

For the purpose of impairment testing, goodwill was allocated to the semiconductor business. The Group’ s goodwill has been tested for impairment at least once at the end of each annual reporting period and the recoverable amount is determined based on discounted cash flows.

Based on the result of the Group’ s assessment, there is no indication of goodwill impairment.

The intangible assets mentioned above were not pledged as collateral.

(10) Other assets－current and non-current

	December 31, 2019	December 31, 2018
Prepayment for materials	$ 657,872	158,800
Refundable tax and overpaid tax	572,485	338,927
Others	448,725	415,853
	$ 1,679,082	913,580

(11) Short-term borrowings

	December 31, 2019	December 31, 2018
Unsecured borrowings	$ 9,886,000	5,042,000
Unused credit lines	$ 17,505,079	17,939,562
Range of interest rates at year end	0.70%~0.76%	0.76%~0.89%

For assets pledged as collateral for borrowings, please refer to note 8.

(12) Long-term borrowings

The details were as follows:

	December 31, 2018			
	Currency	**Rate**	**Maturity**	**Amount**
Secured bank loans	NTD	1.28%	February 2033	$ 430,000

In the first quarter of 2019, the Group repaid its long-term borrowings of $430,000 thousand due to its operating strategy. For assets pledged as collateral for borrowings, please refer to note 8.

(13) Lease liabilities

The carrying amounts of lease liabilities of the Group was as follows:

	December 31, 2019
Current	$ 159,976
Non-current	$ 628,050

For the maturity analysis, please refer to note 6(25) “Financial instruments”.

The amounts recognized in profit or loss were as follows:

	For the year ended December 31, 2019
Interest on lease liabilities	$ 10,394
Expenses relating to short-term leases	$ 12,674
Expenses relating to leases of low-value assets, excluding short-term leases of low-value assets	$ 3,059

The amounts recognized in the statement of cash flows was as follows:

	For the year ended December 31, 2019
Total cash outflow for leases	$ 197,140

Land leases' additional rent payments that are based on changes in local price indices and the public facilities construction costs re-invested annually in each park will be adjusted after being assessed.

(14) Finance lease liabilities

The Group acquired portion of its property, plant and equipment through finance lease. Related finance lease liabilities were recognized as other current liabilities and non-current liabilities as follows:

	December 31, 2018		
	Future minimum lease payments	Interest	Present value of minimum lease payments
Less than one year	$ 9,102	(1,315)	7,787
Between one and five years	21,995	(1,390)	20,605
	$ 31,097	(2,705)	28,392

(15) Provision

	Site restoration	Onerous contracts	Total
Balance at January 1, 2019	$ 64,651	-	64,651
Provisions used during the year	(11,232)	-	(11,232)
Provisions made during the year	9,688	-	9,688
Effect of changes in exchange rates	(1,102)	-	(1,102)
Balance at December 31, 2019	$ 62,005	-	62,005
Current	$ 10,307	-	10,307
Non-current	51,698	-	51,698
Total	$ 62,005	-	62,005

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

	Site restoration	Onerous contracts	Total
Balance at January 1, 2018	$ 62,895	86,376	149,271
Provisions used during the year	(6,255)	(89,253)	(95,508)
Provisions made during the year	5,620	-	5,620
Effect of changes in exchange rates	2,391	2,877	5,268
Balance at December 31, 2018	**$ 64,651**	**-**	**64,651**
Current	$ 10,074	-	10,074
Non-current	54,577	-	54,577
Total	**$ 64,651**	**-**	**64,651**

A. Site restoration

Under the lease contract, if the Group does not intend to extend its leasehold, the Group needs to restore the plants. The Group estimates the provision based on the lease terms and in accordance with the Group's published environmental policy and applicable legal requirements. A provision for site restoration is made in respect of environmental cleanup costs.

B. Onerous contracts

The Group entered into several non-cancellable long-term material supply agreements with the suppliers of silicon materials. The Group agrees to purchase the required quantity of raw materials on schedule based on the contractual price during the commitment periods and makes a non-refundable prepayment to the suppliers. The suppliers need to deliver the required quantity of raw materials to the Group according to the contract. Provisions for the onerous contracts were made based on contractual terms and were recognized as cost of sales.

(16) Operating Lease

A. Lessee

Non-cancellable operating lease rentals payable were as follows:

	December 31, 2018
Less than one year	$ 165,420
Between one and five years	557,574
More than five years	441,658
	$ 1,164,652

For the year 2018, rental costs from operating leases of $0$204,331 thousand were recognized as expenses in profit or loss.

The Group entered into operating lease agreements with Covalent Materials Corporation for the rental of land, buildings, and other equipment in Oguni, Taino and Tokuyama. All the lease agreements covered the period from November 30, 2011 to March 31, 2035. The aggregate future rental payment is $30,155 thousand each year.

The Group entered into a land lease agreement with the Hsinchu Science Park Administration for the plant located in the Hsinchu Science Park. The land lease agreement has a lease term covering a period from October 1, 2000 to December 31, 2037. According to the lease agreement, rent is subject to adjustment based on the current land value which is announced by the government. The annual rental is approximately $37,603 thousand.

B. Long-term rental prepayment

In 2018, the Group entered into operating lease agreements for land-use-right, with the lease terms of 50 years and 99 years, respectively, and the rental amounts of $225 thousand were recognized in profit or loss.

As of December 31, 2018, the unamortized amount of prepayment was $7,538 thousand.

(17) Employee benefits

A. Defined benefit plans

Reconciliation of defined benefit obligation at present value and plan asset at fair value was as follows:

		December 31, 2019	December 31, 2018
Total present value of obligations	$	(8,413,828)	(8,137,636)
Fair value of plan assets		5,463,438	4,964,607
Recognized liabilities for defined benefit obligations	**$**	**(2,950,390)**	**(3,173,029)**

The plans entitle a retired employee to receive a pension benefit based on years of service prior to retirement.

(a) Composition of plan assets

The Group allocates pension funds in accordance with the Regulations for Revenues, Expenditures, Safeguard and Utilization of the Labor Retirement Fund, and such funds are managed by the Bureau of Labor Funds, Ministry of Labor. With regard to the utilization of the funds, minimum earnings shall be no less than the earnings attainable from two-year time deposits with interest rates offered by local banks.

The Group’s Bank of Taiwan labor pension reserve account balance amounted to $222,990 thousand, as of December 31, 2019. For information on the utilization of the labor pension fund assets, including the asset allocation and yield of the fund, please refer to the website of the Bureau of Labor Funds, Ministry of Labor.

Under the employee defined benefit plans of a Group subsidiary in Korea, plan assets comprised of time deposits bearing annual interest rates ranging from 1.74%~2.20%.

In Italy, the Group’s subsidiary contributes an amount to the National Social Security Pension Fund (INPS) for the employee defined benefit plan.

Under the employee defined benefit plans of the entities located in the United States, plan assets are comprised of trust funds with different grades of risks and returns. Plan asset portfolio consists of a variety of financial instruments including cash, equity securities, and income funds.

(b) Movements in present value of the defined benefit obligations

The movements in present value of the defined benefit obligations of the Group were as follows:

	2019	2018
Defined benefit obligation at January 1	$ 8,137,636	8,129,147
Current service costs and interest cost	488,583	462,600
Re-measurements for defined benefit obligations		
—Actuarial gains and losses arising from experience adjustments	10,819	(11,623)
—Actuarial gains and losses resulting from changes in demographic assumptions	371,907	(173,162)
—Actuarial gains and losses resulting from changes in financial assumptions	77,575	72,204
Benefits paid	(487,484)	(565,993)
Effect of changes in exchange rates	(185,208)	224,463
Defined benefit obligation at December 31	**$ 8,413,828**	**8,137,636**

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

(c) Movements in fair value of defined benefit plan assets

The movements in fair value of the defined benefit plan assets of the Group were as follows:

	2019	2018
Fair value of plan assets at January 1	$ 4,964,607	5,245,084
Interest revenue	160,130	144,541
Re-measurements for defined benefit obligations		
—Return on plan asset (excluding interest revenue)	639,854	(364,010)
Contributions made	174,528	216,692
Benefits paid	(330,306)	(408,228)
Effects of changes in exchange rates	(145,375)	130,528
Fair value of plan assets at December 31	**$ 5,463,438**	**4,964,607**

(d) Expenses recognized in profit or loss

The expenses recognized in profit or loss for the Group were as follows:

	2019	2018
Current service costs	$ 471,742	445,314
Net interest of net liabilities for defined benefit obligation	(143,289)	(127,255)
	$ 328,453	**318,059**
Operating cost	$ 282,386	269,889
Selling expenses	27,782	13,621
Administration expenses	8,827	19,209
Research and development expenses	9,458	15,340
	$ 328,453	**318,059**

(e) Actuarial assumptions

The principal actuarial assumptions at the reporting date were as follows:

	December 31, 2019	December 31, 2018
Discount rate	0.32%~3.04%	0.26%~4.05%
Future salary increase rate	1.33%~9.96%	1.33%~9.96%

The estimated amount of contribution to be made by the Group to the defined benefit plans for the one-year period after the reporting date is $635,737 thousand.

The weighted-average durations of the defined benefit obligation are 4 years to 17.87 years.

(f) Sensitivity analysis

When the actuarial assumptions had changed 0.25% as of the December 31, 2019 and 2018, the impact on the present value of the defined benefit obligation would be as follows:

	Influences to defined benefit obligations	
Actuarial assumptions	**Increased 0.25%**	**Decreased 0.25%**
December 31, 2019		
Discount rate	$ (203,338)	211,847
Future salary increase rate	$ 92,917	(86,530)
December 31, 2018		
Discount rate	$ (182,883)	191,790
Future salary increase rate	$ 80,114	(76,135)

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, assuming other assumptions remain constant, would have affected the defined benefit obligation by the amounts shown above. The method used in the sensitivity analysis is consistent with the calculation of pension liabilities in previous periods. There was no change in the method and assumptions used in the preparation of sensitivity analysis for 2019 and 2018.

B. Defined contribution plans

The Company contributes at the rate of 6% of each employee’s monthly wages to the labor pension personal account at the Bureau of Labor Insurance in accordance with the provisions of the Labor Pension Act. Under this defined contribution plan, the Company’s contribution to the Bureau of Labor Insurance requires no additional legal or constructive obligations thereafter.

The total periodic pension costs of other subsidiaries were recognized as current expenses in accordance with the local regulations of their respective jurisdictions where they are domiciled.

The Company’s pension costs incurred from contributions to the defined contribution plan were $59,900 thousand and $56,531 thousand for the years 2019 and 2018, respectively. Such contributions were made to the Bureau of the Labor Insurance.

The Group recognized the pension costs of $97,203 thousand and $80,721 thousand for the years 2019 and 2018, respectively.

(Continued)

(18) Income tax

A. Income tax expense

The components of income tax expenses in 2019 and 2018 were as follows:

	2019	2018
Current tax expense	$ 4,111,092	2,632,784
Deferred tax expense	807,117	1,986,812
	$ 4,918,209	**4,619,596**

The amounts of income tax (benefit) recognized in other comprehensive income in 2019 and 2018 were as follows:

	2019	2018
Items that will not be reclassified subsequently to profit or loss:		
Remeasurement from defined benefit obligations	**$ 120,951**	**(68,152)**
Items that may be reclassified subsequently to profit or loss		
Exchange differences on translation of foreign financial statements	**$ (300,404)**	**107,421**

Reconciliations of income tax and income before income tax for 2019 and 2018 are as follows:

	2019	2018
Income before income tax	$ 18,553,865	18,253,367
Income tax using the Company’s domestic tax rate	3,710,773	3,650,673
Effect of tax rates in foreign jurisdiction	404,599	306,838
Shares of profit of foreign subsidiaries accounted for using equity method	1,697,507	2,022,449
Adjustment in tax rate	-	158,193
Tax effect of permanent differences	(28,736)	(82,459)
Tax preference of Returning Overseas Funds to Taiwan	(390,785)	-
Investment tax credits	(144,840)	(198,951)
Changes in unrecognized temporary differences and others	(330,309)	(1,237,147)
	$ 4,918,209	**4,619,596**

B. Deferred tax assets and liabilities

(a) The deferred tax assets have not been recognized in respect of the following items:

	December 31, 2019	December 31, 2018
Tax effect of deductible temporary differences	$ 356,631	528,642

Deferred tax assets have not been recognized in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilize the benefits therefrom.

	December 31, 2019	December 31, 2018
Aggregate amount of temporary differences related to investments in subsidiaries	$ (997,762)	(673,788)

The Group is able to control the timing of the reversal of the temporary differences associated with investments in subsidiaries as at December 31, 2019 and 2018. Also, the management considers it is probable that the temporary differences will not reverse in the foreseeable future. Hence, such temporary differences were not recognized as deferred tax liabilities.

(b) Recognized deferred tax assets and liabilities

	January 1, 2019	Recognized in profit or loss	Recognized in other comprehen -sive income	Effect of changes in exchange rates	December 31, 2019
Assets:					
Allowance for inventory valuation	$ 119,329	48,556	-	(4,688)	163,197
Defined benefit obligations	395,594	(44,377)	101,353	(3,912)	448,658
Loss carryforwards	27,483	83,084	-	(3,767)	106,800
Unrealized exchange losses	113,126	15,928	-	(1,322)	127,732
Equity-method investments	56,638	(11,370)	15,621	-	60,889
Depreciation life differences of property, plant and equipment	166,495	107	-	(3,035)	163,567
Expected credit loss of accounts receivable	99,021	(1,661)	-	(5,741)	91,619
Others	408,891	295,814	-	(12,127)	692,578
	$ 1,386,577	386,081	116,974	(34,592)	1,855,040

(Continued)

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

	January 1, 2019	Recognized in profit or loss	Recognized in other comprehen -sive income	Effect of changes in exchange rates	December 31, 2019
Liabilities:					
Equity method investments	$ (2,487,625)	(710,856)	265,915	-	(2,932,566)
Depreciation life differences of property, plant and equipment	(729,816)	(148,850)	-	26,633	(852,033)
Fair value adjustment for the net assets acquired in business combinations	(435,519)	15,224	-	9,963	(410,332)
Others	(11,051)	(348,716)	(203,436)	12,555	(550,648)
	$ (3,664,011)	(1,193,198)	62,479	49,151	(4,745,579)

	January 1, 2018	Recognized in profit or loss	Recognized in other comprehen -sive income	Effect of changes in exchange rates	December 31, 2018
Assets:					
Allowance for inventory valuation	$ 136,295	(16,806)	-	(160)	119,329
Defined benefit obligation	332,307	6,762	43,731	12,794	395,594
Loss carryforwards	321,384	(283,975)	-	(9,926)	27,483
Unrealized exchange losses	84,745	27,082	-	1,299	113,126
Equity method investments	384,372	16,828	(344,562)	-	56,638
Depreciation life differences of property, plant and equipment	265,569	(97,796)	-	(1,278)	166,495
Allowance for doubtful accounts	9,987	87,534	-	1,500	99,021
Others	302,468	99,777	-	6,646	408,891
	$ 1,837,127	(160,594)	(300,831)	10,875	1,386,577
Liabilities:					
Equity method investments	$ (1,073,050)	(1,676,137)	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 combination	(436,625)	14,842	-	(13,736)	(435,519)
Others	(9,059)	(1,746)	-	(246)	(11,051)
	$ (2,066,271)	(1,826,218)	261,562	(33,084)	(3,664,011)

(Continued)

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

C. Assessment of tax filings

As of December 31, 2019, income tax returns of the Company for the years through 2016 were assessed by the tax authority.

(19) Capital and other equity

A. Common stock

As of December 31, 2019 and 2018, the authorized common stock of the Company amounted to $6,000,000 thousand, which was divided into 600,000 thousand shares, with a par value of $10 per share, of which $200,000 thousand was reserved for employee stock options, convertible preferred stock, and convertible corporate bonds. The issued and outstanding shares of common stock amounted to $4,372,500 thousand.

The Company increased capital in GDRs of $680,000 thousand, and issued 68,000 thousand shares of common stock on the Luxembourg on April 26, 2017. The price issued per share was US$6.9. The total issuance amount is US$469,200 thousand. The cash increase was approved by the Financial Supervisory Commission and the record date of capital increase was on April 26, 2017. All shares issued were paid and registered. The total amount issued was equivalent to $14,141,688 thousand on the day' s closing exchange rates. The total premium amounting to $13,355,424 thousand was recognized on capital surplus after deducting the related issuance cost of $106,264 thousand.

B. Capital surplus

The balances of capital surplus were as follows:

	December 31, 2019	December 31, 2018
Additional paid-in capital	$ 24,711,963	24,711,963
Employee stock options	60,727	60,727
Difference between the consideration and the carrying amount of subsidiaries' share acquired or disposed	3,940	(82)
	$ 24,776,630	24,772,608

According to the R.O.C Company Act, capital surplus can only be used to offset a deficit, and only the realized capital surplus can be used to increase the common stock or be distributed as cash dividends. The aforementioned realized capital surplus includes capital surplus arising from premium on issuance of capital stock and the fair value of donated assets received. According to the Regulations Governing the Offering and Issuance of Securities by Securities Issuers, to increase common stock by transferring paid-in capital in excess of par value should not exceed 10% of the total common stock outstanding.

C. Retained earnings

According to the Company's articles of incorporation, after-tax earnings shall be distributed in the following order:

(a) Offset the cumulative deficits;

(b) 10% of the current-period earning should be set aside for legal reserve, until the accumulated legal reserve equals the Company's issued capital;

(c) Set aside special reserve in accordance with relevant laws or regulations or as requested by the authorities;

(d) After deducting items (a), (b), and (c) above from the earnings, the remaining undistributed earnings of current and previous years, if any, will be proposed for distribution by the board of directors and resolved in the stockholders' meeting.

After considering both the long-term development of the business and the goal of stable growth of earnings per share, the distribution of dividends to shareholders should not be less than 50% of the distributable earnings, which is calculated using the net income of the current year, minus, legal reserve and special reserve. Distribution of cash dividends should not be less than 50% of the total dividends.

(a) Legal reserve

When a company incurs no loss, it may, pursuant to a resolution by a shareholders' meeting, distribute its legal reserve by issuing new shares or by distributing cash, and only the portion of legal reserve which exceeds 25% of capital stock may be distributed.

(b) Special reserve

In accordance with Regulatory Permit No. 1010012865 as issued by the FSC on April 6, 2012, a special reserve is appropriated from retained earnings based on the aforementioned requirement. Under such regulation, the Company is also required to set aside an additional special reserve, as part of the distribution of its annual earnings, equal to the difference between the amount of the above-mentioned special reserve and the net debit balance of other components of the stockholders' equity. The only distributable special reserve is the portion that exceeds the net debit balance of the other components of the shareholders' equity. The carrying amounts of special reserve both were $0$1,133,596 thousand as of December 31, 2019 and 2018, respectively.

(c) Earnings distribution

The distributions of dividends per share for the years 2018 and 2017 which were approved by the stockholders during their meetings on June 25, 2019 and June 25, 2018, respectively, were as follows:

	2018	2017
Dividends distributed to ordinary shareholders:		
Cash (dividends per share were $25 and $10, respectively)	$ 10,880,925	4,372,500

The above-mentioned earnings distribution is consistent with the resolution approved by the board of directors. The information is available on the Market Observation Post System website.

The board of directors proposed the 2019 annual earnings distribution on March 17, 2019 with cash dividends per share of $25. The above earrings distribution will be resolved by shareholders’ meeting.

After the resolution of the relevant meeting of the Company, the information can be accessed from the Market Observation Post System website.

D. Treasury shares

In 2018, in accordance with the requirements under section 28(2) of the Securities and Exchange Act, the Company repurchased 2,013 thousand shares at an amount of $576,779 thousand as treasury shares, in order to transfer the shares to its employees. As of December 31, 2019, a total of 2,013 thousand shares has yet to be transferred.

In accordance with the Securities and Exchange Act requirements as stated above, the number of shares repurchased should not exceed 10 percent of all shares outstanding. Also, the value of the repurchased shares should not exceed the sum of the Company’s retained earnings, share premium, and realized capital reserves. In accordance with the requirements of Securities and Exchange Act, treasury shares held by the Company should not be pledged, and do not hold any shareholder rights before their transfer.

E. Other equity

	Exchange differences on translation of foreign financial statements	Gains (losses) from equity instruments measured at fair value through other comprehensive income	Total
January 1, 2019	$ (1,328,874)	(32,425)	(1,361,299)
Foreign exchange differences (net of tax)	(1,201,619)	-	(1,201,619)
Unrealized losses from financial assets measured at fair value through other comprehensive income	-	27,542	27,542
Disposition of equity instruments measured at fair value through other comprehensive income	-	(31,723)	(31,723)
Unrealized losses from financial assets measured at fair value through other comprehensive income of associates accounted for using equity method		275,843	275,843
December 31, 2019	$ (2,530,493)	239,237	(2,291,256)

	Exchange differences on translation of foreign financial statements	Gains (losses) from equity instruments measured at fair value through other comprehensive income	Unrealized gains (losses) on available-for-sale financial assets	Total
January 1, 2018	(2,069,569)	-	112,663	(1,956,906)
Effects of retrospective application of new standards	-	100,409	(112,663)	(12,254)
January 1, 2018 after adjusted	(2,069,569)	100,409	-	(1,969,160)
Foreign exchange differences (net of tax)	740,695	-	-	740,695
Unrealized losses from financial assets measured at fair value through other comprehensive income	-	16,435	-	16,435
Unrealized losses from financial assets measured at fair value through other comprehensive income of associates accounted for using equity method	-	(149,269)	-	(149,269)
December 31, 2018	$ (1,328,874)	(32,425)	-	(1,361,299)

(Continued)

(20) Share-based payment

The Group signed a cash-settled share-based payment contract with its certain employees. According to the agreement, the vesting period is 4 years, and the employees have to fulfill their required service condition, which requires that at each vesting date, (February 28, 2019 to 2022), the employees are still employed by the Group. At each vesting date, the employee have the right to 25% of the awards. Furthermore, the value of cash award is determined by the stock price of the Company at each vesting date and the performance of each employee.

As of December 31, 2019 and 2018, the stock prices of the Group were $382.5 and $280.5, respectively. For the years 2019 and 2018, the amount of $92,739 thousand and $70,125 thousand, respectively, was recognized by the Group as compensation costs.

(21) Earnings per Share (“EPS”)

A. Basic earnings per share

	2019	2018
Net income attributable to the shareholders of the Company	$ 13,644,095	13,630,673
Weighted-average number of ordinary shares outstanding during the year (in thousands of shares)	435,237	437,183
Basic earnings per share (dollars)	$ 31.35	31.18

B. Diluted earnings per share

	2019	2018
Net income attributable to the shareholders of the Company	$ 13,644,095	13,630,673
Weighted-average number of ordinary shares outstanding during the year (in thousands of shares)	435,237	437,183
Effect of the employee remuneration issued by stock (in thousands of shares)	1,982	1,937
	437,219	439,120
Diluted earnings per share (dollars)	$ 31.21	31.04

(22) Revenue from contracts with customers

A. Details of revenues

	2019	2018
Primary geographical markets:		
Taiwan	$ 12,572,918	13,449,010
Northeast Asia (Japan and Korea)	17,852,401	17,263,975
Asia－others	9,100,112	9,676,930
America	8,410,577	8,340,541
Europe	7,165,985	6,971,277
Other areas	2,992,338	3,361,777
	$ 58,094,331	59,063,510
Major product categories:		
Semiconductor wafers	$ 57,721,510	58,447,151
Semiconductor ingot	275,284	492,114
Others	97,537	124,245
	$ 58,094,331	59,063,510

B. Contract balances

	December 31, 2019	December 31, 2018	January 1, 2018
Contract liabilities	$ 20,200,098	19,107,591	6,736,612

For details on accounts receivables and allowance for impairment, please refer to note 6(4).

The major change in the balance of contract liabilities is the advance consideration received from customers for the contracts, in which revenue is recognized when products are delivered to customers. The amount of revenue recognized for the years ended December 31, 2019 and 2018, which was included in the contract liability balance at the beginning of the period, was $2,146,960 thousand and $1,364,593 thousand, respectively.

The contract liabilities primarily relate to the advance consideration received from customers for the wafers sales contracts, in which revenue is recognized when products are delivered to customers.

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

(23) Remuneration to employees and directors

In accordance with the articles of incorporation the Company should contribute form 3% to 15% of the profit as employee compensation and no higher than 3% as directors' remuneration when there is profit for the year. However, if the Company has accumulated deficits, the profit should be reserved to offset the deficit. The amount of remuneration of each director and of compensation for employees entitled to receive the abovementioned employee compensation is approved by the board of directors. The recipients of shares and cash may include the employees of the Company's affiliated companies who meet certain conditions. A resolution for employee remuneration in the form of shares has to be approved first in the board of directors’ meeting, wherein at least half of the votes are needed, or two thirds of the members are present during the meeting.

For the years ended December 31, 2019 and 2018, the Company accrued and recognized its employee remuneration amounting to $622,810 thousand and $504,801 thousand and directors' amounting to $49,200 thousand and $50,060 thousand, respectively. These amounts were calculated by using the Company’s pre-tax net profit for the period before deducting the amounts of the remuneration to employees and directors, multiplied by the distribution of ratio of the remuneration to employees and directors based on the Company’s articles of incorporation, and expensed under operating costs or expenses. If there would be any changes in accounting estimates the changes shall be accounted for as profit or lost in the following year. If, however, the shareholders determine that the employee remuneration is to be distributed through stock dividends, the calculation, based on the shares, shall be calculated using the stock price on the day before the board of directors. The amounts as stated in the consolidated financial statements are identical to those of the actual distributions for 2019 and 2018.

(24) Other gains and losses

	2019	2018
Foreign exchange gains (losses)	$ (188,739)	5,484
Gains (losses) on disposal of property, plant and equipment	(7,992)	124,083
Unrealized gains (losses) on financial assets (liabilities) measured at fair value through profit or loss	(286,218)	55,950
Realized gains (losses) on financial assets (liabilities) measured at fair value through profit or loss	372,399	67,566
Others	115,572	66,234
	$ 5,022	319,317

(Continued)

(25) Financial instruments

A. Credit risk

(a) Credit risk exposure

The carrying amount of financial assets represents the maximum amount exposed to credit risk.

(b) Concentration of credit risk

The main customers of the Group are from the silicon wafer and related industries. The Group generally sets credit limits to its customers according to their credit evaluations. Therefore, the credit risk of the Group is mainly influenced by the silicon wafer industry. As of December 31, 2019 and 2018, 55% and 46%, respectively, of the Group's accounts receivable (including related parties) were from the top 10 customers. Although there is a potential for concentration of credit risk, the Group routinely assesses the collectability of the accounts receivable and makes a corresponding allowance for doubtful accounts.

(c) Receivables securities

For credit risk exposure on notes and accounts receivables, please refer to note 6(4).

B. Liquidity risk

The following table shows the contractual maturities of financial liabilities, including estimated interest payments and excluding the impact of netting agreements.

	Carrying amount	Contractual cash flows	Within 6 months	6 to 12 months	1-2 years	2-5 years	Over 5 years
December 31, 2019							
Non-derivative financial liabilities							
Short-term borrowings	$ 9,886,000	(9,892,576)	(9,892,576)	-	-	-	-
Notes and accounts payable (including related parties)	3,837,481	(3,837,481)	(3,837,481)	-	-	-	-
Lease liabilities	785,026	(844,933)	(81,995)	(87,402)	(91,874)	(172,103)	(411,559)
Derivative financial instruments							
Forward exchange contracts							
Outflows	209,712	(6,745,031)	(6,745,031)	-	-	-	-
Inflows	-	6,535,319	6,535,319	-	-	-	-
	$ 14,718,219	**(14,784,702)**	**(14,021,764)**	**(87,402)**	**(91,874)**	**(172,103)**	**(411,559)**

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

		Carrying amount	Contractual cash flows	Within 6 months	6 to 12 months	1-2 years	2-5 years	Over 5 years
December 31, 2018								
Non-derivative financial liabilities								
Short-term borrowings	$	5,042,000	(5,044,991)	(5,044,991)	-	-	-	-
Notes and accounts payable (including related parties)		4,870,445	(4,870,445)	(4,870,445)	-	-	-	-
Finance lease obligations		28,392	(31,097)	(4,551)	(4,551)	(9,102)	(12,893)	-
Long-term borrowings (including current portion of long-term borrowings payable)		430,000	(475,178)	(2,752)	(2,752)	(5,504)	(464,170)	-
Derivative financial instruments								
Forward exchange contracts								
Outflows		-	(5,559,495)	(5,559,495)	-	-	-	-
Inflows		81,679	5,638,200	5,638,200	-	-	-	-
	$	10,452,516	(10,343,006)	(9,844,034)	(7,303)	(14,606)	(477,063)	-

The Group does not expect the cash flows included in the maturity analysis to occur significantly earlier or at significantly different amounts.

C. Currency risk

(a) Exposure to foreign currency risk

The Group’ s significant exposure to foreign currency risk was as follows:

	December 31, 2019		
	Foreign currency	Exchange rate	NTD
Financial assets			
Monetary Items			
USD	$ 415,496	29.980	12,456,570
JPY	257,676	0.2760	71,119
EUR	14,647	33.59	491,993
Non-Monetary Items			
USD	22,238	29.980	Note
JPY	2,632,949	0.2760	Note
EUR	3,508	33.59	Note

(Continued)

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

		December 31, 2019		
	Foreign currency		Exchange rate	NTD
Financial liabilities				
Monetary Items				
USD		26,945	29.98	807,811
JPY		2,408,522	0.276	664,750
EUR		17,837	33.59	599,145
Non-Monetary Items				
EUR		1,650	29.98	Note
EUR		18,050,000	0.276	Note

		December 31, 2018		
	Foreign currency		Exchange rate	NTD
Financial assets				
Monetary Items				
USD	$	356,191	30.715	10,940,407
JPY		946,270	0.2782	263,252
EUR		17,064	35.20	600,653
Non-Monetary Items				
USD		24,747	30.715	Note
JPY		17,150,412	0.2782	Note
Financial liabilities				
Monetary Items				
USD		35,022	30.715	1,075,701
JPY		1,027,562	0.2782	285,868
Non-Monetary Items				
USD		3,300	30.715	Note
EUR		18	35.200	Note

Note: The fair value of forward exchange contracts was measured at the reporting date. For related information, please refer to note 6(2).

(Continued)

(b) Sensitivity analysis

The Group's exposure to foreign currency risk arises from the translation of the foreign currency exchange gains and losses on cash and cash equivalents, accounts receivable, loans and borrowings, and accounts payable, that are denominated in foreign currency. A weakening (strengthening) of 1% of the NTD against the USD, JPY and EUR as of December 31, 2019 and 2018, would have increased (decreased) the net income before income tax by $109,480 thousand and $104,427 thousand, respectively. The analysis is based on foreign currency exchange rate variances that the Group considered to be reasonably possible at the reporting date. The analysis assumes that all other variables remain constant and ignores any impact of forecasted sales and purchases. The analysis was performed on the same basis for comparative years.

(c) Foreign exchange gain and loss on monetary items

Since the Group has many kinds of functional currency, the information on foreign exchange gain (loss) on monetary items is disclosed by total amount. For years 2019 and 2018, foreign exchange gain (loss) (including realized and unrealized portions) amounted to $(188,739) thousand and $5,484 thousand, respectively.

D. Interest rate analysis

Please refer to the notes on liquidity risk management and interest rate exposure of the Group's financial liabilities.

The following sensitivity analysis is based on the exposure to interest rates. Regarding liabilities with variable interest rates, the analysis is based on the assumption that the amount of liabilities outstanding at the reporting date was outstanding throughout the year.

If the interest rate had increased or decreased by 0.25%, the Group's net income would have increased or decreased by $21,360 thousand and $9,165 thousand, for the years ended December 31, 2019 and 2018, respectively, assuming all other variable factors remain constant. This is mainly due to the Group's bank deposits and borrowings with variable rates.

E. Other price risk

For the years ended December 31, 2019 and 2018, the sensitivity analyses for the changes in the securities price at the reporting date were performed using the same basis for the profit and loss as illustrated below:

	For the years ended December 31,			
	2019		2018	
Prices of securities at the reporting date	Other comprehensive income after tax	Net income	Other comprehensive income after tax	Net income
Increasing 5%	$ -	93,833	2,582	4,500
Decreasing 5%	-	(93,833)	(2,582)	(4,500)

(Continued)

F. Fair value of financial instruments

(a) Fair value hierarchy

The fair value of financial assets and liabilities at fair value through profit or loss and financial assets at fair value through other comprehensive income is measured on a recurring basis. The carrying amount and fair value of the Group's financial assets and liabilities, including the information on fair value hierarchy were as follows; however, except as described in the following paragraphs, for financial instruments not measured at fair value whose carrying amount is reasonably close to the fair value, and lease liabilities, disclosure of fair value information is not required:

	December 31, 2019				
	Carrying amount	**Fair value**			
		Level 1	**Level 2**	**Level 3**	**Total**
Financial assets at fair value through profit or loss					
Forward exchange contract	$ 6,920	-	6,920	-	6,920
Privately offered fund	95,163	-	-	95,163	95,163
Overseas securities held	1,876,656	1,876,656	-	-	1,876,656
	$ 1,978,739	**1,876,656**	**6,920**	**95,163**	**1,978,739**
Financial assets measured at amortized cost					
Cash and cash equivalents	$ 32,821,512	-	-	-	-
Notes and accounts receivable (including related parties)	8,139,967	-	-	-	-
Other financial assets－current and non-current	3,994,654	-	-	-	-
	$ 44,956,133	**-**	**-**	**-**	**-**
Financial liabilities at fair value through profit or loss	**$ 216,632**	**-**	**216,632**	**-**	**216,632**
Financial liabilities measured at amortized cost					
Short-term borrowings	$ 9,886,000	-	-	-	-
Notes and accounts payable (including related parties)	3,837,481	-	-	-	-
Lease liabilities-current and non-current	785,026	-	-	-	-
	$ 14,508,507	**-**	**-**	**-**	**-**

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

	December 31, 2018				
	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial assets at fair value through profit or loss					
Forward exchange contract	$ 81,798	-	81,798	-	81,798
Stock listed on domestic market	90,000	90,000	-	-	90,000
Privately offered fund	64,697	-	-	64,697	64,697
	$ 236,495	90,000	81,798	64,697	236,495
Financial assets at fair value through other comprehensive income					
Stock listed on domestic market	$ 51,636	51,636	-	-	51,636
Financial assets measured at amortized cost					
Cash and cash equivalents	$ 35,214,323	-	-	-	-
Notes and accounts receivable (including related parties)	9,226,323	-	-	-	-
Other financial assets－current and non-current	1,038,496	-	-	-	-
	$ 45,479,142	-	-	-	-
Financial liabilities at fair value through profit or loss	$ 119	-	119	-	119
Financial liabilities measured at amortized cost					
Short-term borrowings	$ 5,042,000	-	-	-	-
Notes and accounts payable (including related parties)	4,870,445	-	-	-	-
Finance lease liabilities-current and non-current	28,392	-	28,392	-	28,392
Long-term borrowings (including current portion of long-term borrowings payable)	430,000	-	-	-	-
	$ 10,370,837	-	28,392	-	28,392

(b) Valuation techniques for financial instruments measured at fair value

i. Non-derivative financial instruments

A financial instrument is regarded as being quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm’s-length basis. Whether transactions are taking place ‘regularly’ is a matter of judgment and depends on the facts and circumstances of the market for the instrument.

(Continued)

Quoted market prices may not be indicative of the fair value of an instrument if the activity in the market is infrequent, the market is not well-established, only small volumes are traded, or bid-ask spreads are very wide. Determining whether a market is active involves judgment.

Measurements of fair value of financial instruments in an active market are based on a valuation technique or quoted price from a competitor. Fair value measured by a valuation technique can be extrapolated from similar financial instruments, the discounted cash flow method, or other valuation technique, including a model using observable market data at the reporting date.

ii. Derivative financial instruments

Measurement of the fair value of derivative instruments are based on the valuation techniques generally accepted by market participants, such as the discounted cash flow or option pricing models. The fair value of forward currency is usually determined based by the forward currency exchange rate.

(c) Reconciliation of Level 3 fair value

	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss
January 1, 2019	$ -	64,697
Addition in investment	-	31,195
Recognized in profit or loss	-	(729)
December 31, 2019	**$ -**	**95,163**
January 1, 2018	$ 49,896	-
Addition in investment	15,282	-
Reclassification	(65,178)	65,178
Recognized in profit or loss	-	(481)
December 31, 2018	**$ -**	**64,697**

(d) 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.

(e) As of December 31, 2019 and 2018, there were no transfer at fair value level.

(26) Financial risk management

A. Overview

The Group has exposures to the following risks from its financial instruments:

(a) Credit risk

(b) Liquidity risk

(c) Market risk

The following likewise discusses the Group's objectives, policies and processes for measuring and managing the above-mentioned risks. For more disclosures about the quantitative effects of these risk exposures, please refer to the respective notes in the accompanying consolidated financial statements.

B. Structure of risk management

The board of directors has overall responsibility for the establishment and oversight of the risk management framework. The board is responsible for developing and monitoring company's risk management policies. Internal auditors assist the board of directors to monitor and review the risk management control and internal procedures regularly and report them to the board of directors.

The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Group's audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group audit committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the audit committee.

C. Credit risk

The Group's potential credit risk is derived primarily from cash and accounts receivable. The Group maintains its cash in various creditworthy financial institutions. Credit risk exposure to each financial institution is controlled by the Group. As a result, the Group believes that there is no concentration of credit risk for cash.

For the year ended December 31, 2019, the Company only provided endorsements for its 100%-owned subsidiaries.

D. Liquidity risk

There is no liquidity risk of being unable to raise capital to settle contract obligations since the Group has sufficient capital and working capital to fulfill contract obligations.

E. Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices, which will affect the Group’s income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

(a) Currency risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in currencies other than the respective functional currencies of the Group’s entities, primarily the New Taiwan Dollar (NTD), but also include the Chinese Yen (CNY), US Dollar (USD), Euro (EUR) and Japanese Yen (JPY). These transactions are denominated in NTD, USD, EUR and JPY.

Interest is denominated in the currency used in borrowings. Generally, borrowings are denominated in currencies that match the cash flows generated by the underlying operations of the Group, primarily NTD, but also include USD.

In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when it is necessary to address short-term imbalances.

(b) Interest rate risk

The Group holds variable-rate assets and liabilities, which cause the exposure to interest rate risk in cash flows.

(27) Capital management

The board of directors’ policy is to maintain a strong capital base in order to maintain investor, creditor and market confidence and to sustain future development of the business. Capital consists of share capital, capital surplus, retained earnings and non-controlling interests of the Group. The board of directors monitors the return on capital as well as the level of dividends to ordinary stockholders.

The Group' s debt-to-equity ratios at the end of the reporting periods were as follows:

	December 31, 2019	December 31, 2018
Total liabilities	$ 51,512,503	46,666,008
Less: cash and cash equivalents	(32,821,512)	(35,214,323)
Net debt	**$ 18,690,991**	**11,451,685**
Total equity	**$ 45,073,250**	**43,156,113**
Debt-to-equity ratio	**41.47%**	**26.54%**

Due to an increase in borrowings and a decrease in cash and cash equivalents, the debt-to-equity ratio increased.

(28) Investing and financing activities not affecting current cash flow

A. For acquiring right-of-use assets by lease, please refer to note 6(8).

B. Reconciliations of liabilities arising from financing activities were as follows:

	January 1, 2019	Cash flows	Foreign exchange movement and others	December 31, 2019
Long-term borrowings	$ 430,000	(430,000)	-	-
Short-term borrowings	5,042,000	4,844,000	-	9,886,000
Lease liabilities	949,124	(171,013)	9,915	788,026
Guarantee deposit received	342,861	(145,941)	(4,187)	192,733
Total liabilities from financing activities	**$ 6,763,985**	**4,097,046**	**5,728**	**10,866,759**

	January 1, 2018	Cash flows	Foreign exchange movement and others	December 31, 2018
Long-term borrowings	$ 4,276,333	(3,846,333)	-	430,000
Short-term borrowings	10,124,326	(5,082,365)	39	5,042,000
Guarantee deposit received	910,098	17,858	(585,095)	342,861
Total liabilities from financing activities	**$ 15,310,757**	**(8,910,840)**	**(585,056)**	**5,814,861**

(Continued)

7. Related-party transactions:

(1) Parent company and ultimate controlling company

Sino-American Silicon Product Inc. (“SAS”) is both the parent company and the ultimate controlling party of the Group. As of December 31, 2019, it owns 51.17 percent of all shares outstanding of the Company and has issued the consolidated financial statements available for public use.

(2) Names and relationship with related parties

The followings are entities that have had transactions with related party during the periods covered in the consolidated financial statements.

Name of related party	Relationship with the Group
Sino-American Silicon Product Inc. (“SAS”)	The parent company
Sunrise PV World Co. (SPW)	The subsidiary of the parent company
Sunshine PV Corp	Associate of the parent company
Crystalwise Technology Inc.	Associate of the parent company

(3) Key management personnel compensation

Key management personnel compensation comprised of:

	For the years ended December 31,	
	2019	**2018**
Short-term employee benefits	$ 231,756	232,442
Post-employment benefits	705	707
Share-based payments	-	14,732
	$ 232,461	**247,881**

The Group provided a car costing $1,500 thousand, and two cars costing $2,240 thousand, for key management use in 2019 and 2018, respectively.

(4) Significant transactions with related parties

A. Sales

The amounts of significant sales by the Group related parties were as follows:

	For the years ended December 31,	
	2019	**2018**
Parent company	$ 4,378	19,416
Other related parties	229,341	244,580
	$ 233,719	**263,996**

(Continued)

The sales price for sales to the related parties was determined by market value and adjusted according to the sales area and sales volume.

The credit terms for third parties were 0 to 120 days after month-end both in 2019 and 2018, while those for related parties were 30 to 90 days after month-end both in 2019 and 2018.

B. Purchases and process outsourcing

The amounts of purchases and process outsourcing by the Group from related parties were as follows:

	For the years ended December 31, 2019	2018
Parent company	$ 877,825	677,097
Other related parties	79	163
	$ 877,904	677,260

The prices of purchases and process outsourcing were determined by market rates.

The payment terms to third parties were 0 to 120 days after month-end both in 2019 and 2018, while those to related parties were 30 days after month-end both in 2019 and 2018.

C. Receivables from related parties

The receivables from related parties were as follows:

Items	Categories	December 31, 2019	December 31, 2018
Receivable from related parties	Parent company	$ 634	972
Receivable from related parties	Other related parties	48,111	64,950
		$ 48,745	65,922

D. Payables to related parties

The payables to related parties were as follows:

Items	Categories	December 31, 2019	December 31, 2018
Payable to related parties	Parent company	$ 220,875	161,758
Payable to related parties	Other related parties	83	-
		$ 220,958	161,758

(Continued)

E. Payment on behalf of others

The receivables from related parties and payables to related parties generated from material purchases, insurance and utilities payments and manpower support of related parties as of December 31, 2019 and 2018 were as follows:

	December 31, 2019	December 31, 2018
Parent company	$ 103	98
Parent company	(810)	(572)
Other related parties	(957)	(74)
	$ (1,664)	(548)

F. Transactions of property, plant and equipment

(a) Purchase amounts of property, plant and equipment from related parties were summarized as follows:

	For the years ended December 31,	
	2019	2018
Parent company	$ 27,388	628,158
Other related parties	-	5,092
	$ 27,388	633,250

As of December 31, 2019 and 2018, the payables from the above transactions had been fully paid.

(b) Disposal amounts of property, plant and equipment to related parties was summarized as follows:

	For the years ended December 31,	
	2019	2018
Parent company	$ -	50

As of December 31, 2018, the receivable from the above transactions had been fully received.

G. Others

(a) The Group provides other services for related parties, including service support, machine usage, human resources and plant lease, etc. Details of related other income and receivables from related parties were as follows:

	For the years ended December 31, 2019	2018
Parent company	$ 11,589	52,683
Other related parties	210	422
	$ 11,799	53,105

Items	Categories	December 31, 2019	December 31, 2018
Receivable from related parties	Parent company	$ 1,371	5,016
Receivable from related parties	Other related parties	129	263
		$ 1,500	5,279

(b) The related parties charged the Group for their services, including administrative assistance, technical service, legal work appointment, and plant lease. Details of related other expenses and payables to related parties were as follows:

	For the years ended December 31, 2019	2018
Parent company	$ 38,553	44,035

Items	Categories	December 31, 2019	December 31, 2018
Payables to related parties	Parent company	$ 8,382	8,737

8. Pledged assets:

The carrying values of pledged assets were as follows:

Pledged assets	Purpose of pledge	December 31, 2019	December 31, 2018
Time deposits (recognized in other financial assets - current)	Guarantees of acceptances bill	$ 39,977	22,393
Property, plant and equipment	Borrowings payable	3,155,429	2,923,408
Time deposits (recognized in other financial assets－non-current)	Guarantee for gas consumption from CPC Corporation	6,700	6,700
Refundable deposits (recognized in other financial assets－non-current)	Guarantee for the land lease contract with the Hsinchu Science Industral Park Bureau	40,671	32,939
Refundable deposits (recognized in other financial assets-non-current))	Deposits of material purchase	-	167,125
Time deposits (recognized in other financial assets－non-current))	Guarantee payment for import VAT	5,000	5,000
Time deposits (recognized in other financial assets－non-current))	Government grant	1,655	-
Time deposits (recognized in other financial assets－non-current))	Court guarantee	10,748	10,748
Time deposits (recognized in other financial assets－non-current)	Tax-Refunded Restricted Deposits for Returning Overseas Funds to Taiwan	2,998,120	-
		$ 6,258,300	3,168,313

9. Significant commitments and contingencies:

(1) Significant unrecognized contractual commitments

A. The purchase amounts for future delivery from suppliers under the existing agreements were as follows:

(Unit: currency in thousands)

	December 31, 2019	December 31, 2018
USD	$ 35,306	30,856
EUR	$ 3,779	8,968
JPY	$ -	2,145,137

(Continued)

B. The Group's outstanding standby letters of credit were as follows:

(Unit: currency in thousands)

	December 31, 2019	December 31, 2018
USD	$ 3,263	3,191
DKK	$ -	3,750

C. As of December 31, 2019 and 2018, the significant outstanding commitments for construction and purchase of property, plant and equipment amounted to $5,406,980 thousand and $9,051,153 thousand, respectively.

D. As of December 31, 2019 and 2018, a guarantee letter for the Customs Administration and Research and Development which was the Group requested a bank to issue amounted $9,000 thousand and $22,200 thousand, respectively.

E. The Group had a long-term sales contract with some customers and received the advance payment. The customer is required to order minimum quantity according to the contract. As of December 31, 2019 and 2018, a guarantee letter for the customer which was the Group requested a bank to issue amounted $111,871 thousand and $117,233 thousand, respectively.

F. The Company has made an application of the Management, Utilization, and Taxation of Repatriated Offshore Funds Act to the tax authorities on November 28, 2019 and February 21, 2020. The application was approved and the fund was repatriated. Up to 5% of the funds could be withdrawn and freely utilized. The remaining 95% can only be withdrawn for the investments approved by the Ministry of Economic Affairs, R.O.C. upon the elapse of five full years after the date of depositing the fund into a segregated foreign exchange deposit account The Company has made an application to utilize the fund for capital investment. The fund is planned to utilize for factory extension, purchase of factory's facilities and other related capital expenditure.

(2) Contingent liabilities: None

10. Losses due to major disaster: None

11. Subsequent Events:

The Company's board of directors approved on December 27, 2019 a plan of reorganization so that the Company would merge with Taisil, a 99.99% equity held subsidiary. The Company would be the existing company and Taisil was dissolved after merging, on February 1, 2020.

GlobalWafers Co., Ltd. and subsidiaries

Notes to the Consolidated Financial Statements

12. Other:

A summary of the employee benefits, depreciation, and amortization expenses, by function is as follows:

By function / By item	For the years ended December 31, 2019			2018		
	Cost of goods sold	Operating expenses	Total	Cost of goods sold	Operating expenses	Total
Employee benefits						
Salary	6,855,977	2,191,619	9,047,596	6,884,428	2,043,993	8,928,421
Labor and health insurance	1,208,059	260,903	1,468,962	1,112,581	247,498	1,360,079
Pension	399,519	86,037	485,556	362,284	93,027	455,311
Others	592,201	129,548	721,749	581,847	136,883	718,730
Depreciation	4,228,567	151,944	4,380,511	4,289,144	171,147	4,460,291
Amortization	358,628	6,202	364,830	351,353	3,426	354,779

13. Other disclosures:

(a) Information on significant transactions:

The following is the information on significant transactions required by the “Regulations Governing the Preparation of Financial Reports by Securities Issuers” for the Group:

(i) Loans to other parties: Please refer to Table 1.

(ii) Guarantees and endorsements for other parties: Please refer to Table 2.

(iii) Securities held as of December 31, 2019 (excluding investment in subsidiaries, associates and joint ventures): Please refer to Table 3.

(iv) Individual securities acquired or disposed of with accumulated amounts exceeding the lower of NT$300 million or 20% of the capital stock: Please refer to Table 4.

(v) Acquisition of individual real estate with amount exceeding the lower of NT$300 million or 20% of the capital stock: Please refer to Table 5.

(vi) Disposal of individual real estate with amount exceeding the lower of NT$300 million or 20% of the capital stock: None

(vii) Related-party transactions for purchases and sales with amounts exceeding the lower of NT$100 million or 20% of the capital stock: Please refer to Table 6.

(Continued)

(viii) Receivables from related parties with amounts exceeding the lower of NT$100 million or 20% of the capital stock: Please refer to Table 7.

(ix) Trading in derivative instruments: Please refer to notes 6(2).

(x) Business relationships and significant intercompany transactions: Please refer to Table 8.

(b) Information on investees (excluding information on investees in Mainland China): Please refer to Table 9.

(c) Information on investment in Mainland China:

(i) The names of investees in Mainland China, the main businesses and products and other information: Please refer to Table 10(1).

(ii) Limitation on investment in Mainland China: Please refer to Table 10(2).

(iii) Significant transactions:

The significant inter-company transactions with the subsidiary in Mainland China, which were eliminated in the preparation of consolidated financial statements, are disclosed in the “Information on significant transactions”.

(14) Segment information:

(1) General information and segment information

The Group has one reportable segment, which is mainly engaged in the research, development, design, manufacturing and sales of semiconductor products. The operating segment information is the same as the information presented in the consolidated financial statements. For revenue (from external customers) and income of segment, please refer to the consolidated statements of comprehensive income, and for assets, please refer to the consolidated statements of balance sheets.

(2) Information by product

The Group's revenue from external customers and the relevant customer contract revenue, please refer to note 6(22).

(3) Geographical information

Segment revenue is presented by the geographical location of customers and non-current assets are presented by the geographical location of the assets as follows:

A. The Group's revenue from external customers and the relevant customer contract revenue, please refer to note 6(22).

B. Non-current assets:

Area	December 31, 2019	December 31, 2018
Korea	$ 12,564,394	8,398,373
United States	8,621,899	6,548,067
Japan	6,989,861	6,333,308
Taiwan	5,990,715	6,280,867
Italy	3,381,455	3,555,632
Others	1,762,684	3,453,880
	$ 39,311,008	**34,570,127**

(4) Major customers information

Sales to individual customers representing greater than 10% of net sales of the Group:

	For the years ended December 31,	
	2019	**2018**
Customer C group	**$ 10,253,312**	**9,494,244**

GlobalWafers Co., Ltd. and Subsidiaries
Loans to other parties
For the year ended December 31, 2019

Table 1 (In Thousands of New Taiwan Dollars)

Number	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		
1	GWJ	The Company	Intercompany Loan	Yes	4,420,500	4,140,000	4,140,000	0.47909 ~ 0.53909%	1	5,998,428	Business between two parties	-	-	-	5,998,428	15,279,926
1	GWJ	MEMC Japan	Intercompany Loan	Yes	294,700	276,000	-	0.56909%	2	-	Operating capital	-	-	-	15,279,926	15,279,926
2	MEMC SpA	GWS	Intercompany Loan	Yes	2,759,640	2,620,020	2,047,302	3.559%	2	-	Operating capital	-	-	-	11,849,317	11,849,317
3	Taisil	The Company	Intercompany Loan	Yes	6,400,000	6,400,000	6,400,000	1.5%	2	-	Operating capital	-	-	-	7,091,890	7,091,890
4	GTI	MEMC LLC	Intercompany Loan	Yes	632,000	599,600	-	3.51%	2	-	Operating capital	-	-	-	9,486,787	9,486,787
5	GWS	GlobalWafers B.V.	Intercompany Loan	Yes	3,050,000	2,998,000	2,998,000	2.5%	2	-	Operating capital	-	-	-	25,151,706	25,151,706
5	GWS	The Company	Intercompany Loan	Yes	10,792,800	10,792,800	-	2.5%	2	-	Operating capital	-	-	-	25,151,706	25,151,706
5	GWS	GlobalWafers Inc.	Intercompany Loan	Yes	3,258,826	3,258,826	3,258,826	2.5%	2	-	Operating capital	-	-	-	25,151,706	25,151,706

Note 1: The nature of financing purposes:
(1) Represents entities with business transaction with the Group.
(2) Represents where an inter-company or inter-firm short-term financing facility is necessary.

Note 2: For entities who have business transactions with the Company, the amount of endorsements offered to a single company and to an investee whose voting shares, directly or indirectly, owned by the Company shall not exceed 40 percent of the lender's net worth.

Note 3: The total amount available for financing purposes shall not exceed 40 percent of the lender's net worth. Investee whose voting shares, directly or indirectly, owned by the Company shall not exceed double of the Company's net worth.

Note 4: The aforementioned inter-company transactions have been eliminated in the consolidated financial statements.

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries
Guarantees and endorsements for other parties
For the year ended December 31, 2019

Table 2 (In Thousands of New Taiwan Dollars)

No.	Name of guarantor	Counter-party of guarantee and endorsement		Limitation on amount of guarantees and endorsements for a specific enterprise (Note 3, 4)	Highest balance for guarantees and endorsements during the period	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	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	The Company	Topsil A/S	2	45,067,015	117,950	112,250	33,675	-	0.25%	135,201,045	Y	N	N
0	The Company	GWS	2	45,067,015	1,896,000	1,798,800	384,827	-	3.99%	135,201,045	Y	N	N
1	GTI	MEMC LLC	2	47,433,935	474,000	449,700	97,831	-	4.74%	47,433,935	N	N	N

Note 1: The character of guarantees and endorsements are coded as follows:
(1) The issuers are coded "0".
(2) The investee is coded consecutively beginning from "1" in the order presented in the table above.

Note 2: The relation between guarantor and guarantee and their endorsement should be disclosed as one of the following:
(1) Ordinary business relationship.
(2) Subsidiary which owned more than 50 percent by the guarantor.
(3) An investee owned more than 50 percent in total by both the guarantor and its subsidiary.
(4) An investee owned more than 90 percent by the guarantor or its subsidiary.
(5) Fulfillment of contractual obligations by providing mutual endorsements and guarantor for peer or joint builders in order to undertake a construction project.
(6) An entity that is guaranteed and endorsed by all capital contributing shareholders in proportion to their shareholding percentages.
(7) The companies in the same industry provide among themselves joint and several securities for a performance guarantee of a sales contract for per-construction homes pursuant to the Consumer Protection Act for each other.

Note 3: The total amount of external endorsements and/or guarantees shall worth no more than triple of the Company’s net worth.

Note 4: The total amount of external endorsements and/or guarantees for any single company shall not exceed 10 percent of the Company’s net worth. However, for subsidiaries shall not exceed 100 percent of the Company’s net worth.

Note 5: Taisil made a guarantee payment for its import VAT amounting to $5,000 thousand.

Note 6: The Company made a guarantee payment for its import VAT amounting $9,000 thousand.

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries

Securities held as of December 31, 2019 (excluding investment in subsidiaries, associates and joint ventures)

December 31, 2019

Table 3

(In Thousands of New Taiwan Dollars)

Name of holder	Category and name of security	Relationship with the Company	Account title	Ending balance				Highest Percentage of ownership (%) during the year	Note
				Shares/Units (thousands)	Carrying value	Percentage of ownership (%)	Fair value		
The Company	CDIB Capital Growth Partners L.P.	None	Financial assets at fair value through profit or loss, mandatorily measured at fair value	-	95,163	3.85%	95,163	3.85%	
GWBV	Overseas securities held	None	Financial assets at fair value through profit or loss	-	1,876,656	- %	1,876,656	- %	

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries

Individual securities acquired or disposed of with accumulated amounts exceeding the lower of than NT$300 million or 20% of the capital stock

For the year ended December 31, 2019

Table 4 (In Thousands of New Taiwan Dollars)

Name of company	Category and name of security	Account name	Name of counter-party	Relationship with the company	Beginning Balance		Purchases		Sales				nding Balance	
					Shares	Amount	Shares	Amount	Shares	Price	Cost	Gain (loss) on disposal	Shares	Amount
GWBV	Overseas securities held	Financial assets at fair value through profit or loss	-	None	-	-	-	1,876,656	-	-	-	-	-	1,876,656

(Continued)

GlobalWafers Co., Ltd. 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, 2019

Table 5 (In Thousands of New Taiwan Dollars)

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: Owner	Relationship with the Company	Date of transfer	Amount	References for determining price	Purpose of acquisition and current condition	Others
MEMC Korea	Property, plant and equipment	October 5, 2018	1,788,848	To the progress of the project	Sungdo Eng. Company	Non-parties Company	-	-	-	-	Fair value	For operating purpose	None
MEMC Korea	Property, plant and equipment	September 2018	323,297	To the progress of the project	L.Keeley Construction	Non-parties Company	-	-	-	-	Fair value	For operating purpose	None

(Continued)

GlobalWafers Co., Ltd. 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, 2019

Table 6

(In Thousands of New Taiwan Dollars)

Name of company	Related party	Nature of relationship	Transaction details				Transactions with terms different from others		Notes/Accounts receivable (payable)		Note
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
The Company	SAS	Parent Company	Purchase	877,825	6%	Net 30 days from the end of the month upon issuance of invoice	-	-	(220,875)	(9)%	
The Company	GTI	Indirectly subsidiaries	Purchase	2,074,272	14%	Net 60 days from the end of the month upon issuance of invoice	-	-	(310,922)	(12)%	
The Company	SST	Indirectly subsidiaries	Purchase	1,969,639	13%	Net 60 days from the end of the month upon issuance of invoice	-	-	(265,059)	(10)%	
The Company	GWJ	Directly subsidiaries	Purchase	5,998,428	40%	Net 60 to 90 days from the end of the month upon issuance of invoice	-	-	(1,365,605)	(53)%	
The Company	Topsil A/S	Directly subsidiaries	Purchase	620,593	4%	Net 30 to 60 days from the end of the month upon issuance of invoice	-	-	(42,126)	(2)%	
The Company	GWS	Directly subsidiaries	Purchase	585,759	4%	Net 60 days from the end of the month upon issuance of invoice	-	-	(58,237)	(2)%	
Taisil	The Company	Directly subsidiaries	Purchase	1,324,609	11%	Net 60 days from the end of the month upon issuance of invoice	-	-	(249,946)	(8)%	
GWS	The Company	Directly subsidiaries	Purchase	549,011	4%	Net 60 days from the end of the month upon issuance of invoice	-	-	(177,954)	(6)%	
Sunshine PV Corp.	The Company	Associate of the parent company	Purchase	229,325	2%	Net 60 days from the end of the month upon issuance of invoice	-	-	(48,111)	(2)%	
MEMC Korea	The Company	Indirectly subsidiaries	Purchase	778,020	6%	Net 60 days from the end of the month upon issuance of invoice	-	-	(109,525)	(4)%	
MEMC SpA	The Company	Indirectly subsidiaries	Purchase	847,708	7%	Net 60 days from the end of the month upon issuance of invoice	-	-	(139,596)	(5)%	
GTI	The Company	Directly subsidiaries	Purchase	3,294,333	26%	Net 45 days from the end of the month upon issuance of invoice	-	-	(256,098)	(9)%	
SST	The Company	Indirectly subsidiaries	Purchase	886,190	7%	Net 30 days from the end of the month upon issuance of invoice	-	-	(72,513)	(2)%	
GWJ	The Company	Directly subsidiaries	Purchase	1,681,018	13%	Net 60 to 90 days from the end of the month upon issuance of invoice	-	-	(426,609)	(14)%	

(Continued)

Name of company	Related party	Nature of relationship	Transaction details				Transactions with terms different from others		Notes/Accounts receivable (payable)		Note
			Purchase/Sale	Amount	Percentage of total purchases/sales	Payment terms	Unit price	Payment terms	Ending balance	Percentage of total notes/accounts receivable (payable)	
Topsil	The Company	Indirectly subsidiaries	Purchase	442,842	3%	Net 30 to 60 days from the end of the month upon issuance of invoice	-	-	(62,464)	(2)%	
GWS	MEMC LLC	Indirectly subsidiaries	Purchase	1,113,615	6%	Net 60 days from the end of the month upon issuance of invoice	-	-	(210,402)	(7)%	
GWS	MEMC LLC	Indirectly Subsidiaries	Sale	(556,291)	(2)%	Net 60 days from the end of the month upon issuance of invoice	-	-	75,379	2%	
GWS	MEMC Sdn Bhd	Indirectly subsidiaries	Purchase	1,686,518	8%	Net 60 days from the end of the month upon issuance of invoice	-	-	(221,284)	(7)%	
GWS	MEMC Sdn Bhd	Indirectly subsidiaries	Sale	(661,023)	(3)%	Net 60 days from the end of the month upon issuance of invoice	-	-	75,452	2%	
GWS	MEMC SpA	Indirectly subsidiaries	Purchase	3,831,532	19%	Net 60 days from the end of the month upon issuance of invoice	-	-	(509,008)	(17)%	
GWS	MEMC SpA	Indirectly subsidiaries	Sale	(3,436,429)	(15)%	Net 60 days from the end of the month upon issuance of invoice	-	-	593,826	19%	
GWS	MEMC Korea	Indirectly subsidiaries	Purchase	1,486,461	7%	Net 60 days from the end of the month upon issuance of invoice	-	-	(201,533)	(7)%	
GWS	MEMC Japan	Indirectly subsidiaries	Purchase	4,382,815	22%	Net 60 days from the end of the month upon issuance of invoice	-	-	(707,117)	(23)%	
GWS	MEMC Japan	Indirectly subsidiaries	Sale	(1,572,917)	(7)%	Net 60 days from the end of the month upon issuance of invoice	-	-	210,912	7%	
GWS	Taisil	Indirectly subsidiaries	Purchase	6,982,787	35%	Net 60 days from the end of the month upon issuance of invoice	-		(1,041,120)	(34)%	
GWS	Taisil	Indirectly subsidiaries	Sale	(524,118)	(2)%	Net 60 days from the end of the month upon issuance of invoice	-		173,631	5%	

Note: The aforementioned inter-company transactions have been eliminated in the consolidated financial statements.

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries

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

December 31, 2019

Table 7

(In Thousands of New Taiwan Dollars)

Name of company	Counter-party	Nature of relationship	Ending balance	Turnover rate	Overdue		Amounts received in subsequent period	Allowance for bad debts
					Amount	Action taken		
The Company	GTI	Indirectly subsidiaries	256,098	11.33	-		256,098	-
The Company	GWJ	Directly subsidiaries	426,609	3.80	-		181,827	-
The Company	GWS	Indirectly subsidiaries	177,954	5.72	-		177,954	-
The Company	MEMC Korea	Indirectly subsidiaries	109,525	3.66	-		79,480	-
The Company	MEMC SpA	Indirectly subsidiaries	139,596	5.24	-		139,596	-
The Company	Taisil	Directly subsidiaries	249,946	8.21	-		249,946	-
Taisil	The Company	Directly subsidiaries	6,400,000	- (Note 3)	-		-	-
SAS	The Company	Parent Company	220,875	4.59	-		220,875	-
GTI	The Company	Indirectly subsidiaries	310,922	6.65	-		310,922	-
SST	The Company	Indirectly subsidiaries	265,059	4.85	-		236,851	-
GWJ	The Company	Directly subsidiaries	1,365,605	3.89	-		857,018	-
GWS	GlobalWafers B.V.	Indirectly subsidiaries	2,998,000	- (Note 3)	-		-	-
GWS	MEMC Japan	Indirectly subsidiaries	210,912	8.89	-		210,912	-
GWS	MEMC SpA	Indirectly subsidiaries	593,826	7.67	-		593,826	-
GWS	GWI	Indirectly subsidiaries	3,258,826	- (Note 3)	-		-	-
GWJ	The Company	Directly subsidiaries	4,140,000	- (Note 3)	-		-	-
GWS	Taisil	Indirectly subsidiaries	173,631	3.42	-		173,631	-
MEMC Sdn Bhd	GWS	Indirectly subsidiaries	221,284	8.33	-		221,284	-
MEMC SpA	GWS	Indirectly subsidiaries	509,008	8.16	-		509,008	-
MEMC SpA	GWS	Indirectly subsidiaries	2,047,302	- (Note 3)	-		-	-
MEMC Korea	GWS	Indirectly subsidiaries	201,533	7.63	-		201,533	-
MEMC Japan	GWS	Indirectly subsidiaries	707,117	4.94	-		-	-
Taisil	GWS	Indirectly and directly subsidiaries	1,041,120	7.34	-		-	-
MEMC LLC	GWS	Indirectly subsidiaries	210,402	6.74	-		210,402	-

Note 1: As of February 25, 2020, the amount had been received.

Note 2: The aforementioned inter-company transactions have been eliminated in the consolidated financial statements.

Note 3: Receivables from related-party for financing purpose.

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries
Business relationships and significant intercompany transactions
For the year ended December 31, 2019

Table 8 (In Thousands of New Taiwan Dollars)

No. (Note 1)	Name of company	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 (Note 3,4)
0	The Company	SAS	2	Purchase	877,825	Net 30 days from the end of the month unon issuance of invoice	1.51%
0	The Company	GTI	1	Purchase	2,074,272	Net 60 days from the end of the month upon issuance of invoice	3.57%
0	The Company	SST	1	Purchase	1,969,639	Net 60 days from the end of the month upon issuance of invoice	3.39%
0	The Company	GWJ	1	Purchase	5,998,428	Net 60 to 90 days from the end of the month upon issuance of invoice	10.33%
0	The Company	GWJ	1	Account payable	1,365,605	Net 60 to 90 days from the end of the month upon issuance of invoice	1.41%
0	The Company	Topsil A/S	1	Purchase	620,593	Net 30 to 60 days from the end of the month upon issuance invoice	1.07%
0	The Company	GTI	1	Sale	3,294,333	Net 45 days from the end of the month upon issuance of invoice	5.67%
0	The Company	SST	1	Sale	886,190	Net 30 days from the end of the month upon issuance of invoice	1.53%
0	The Company	GWJ	1	Sale	1,681,018	Net 60 to 90 days from the end of the month upon issuance of invoice	2.89%
0	The Company	GWS	1	Purchase	585,759	Net 60 days from the end of the month upon issuance of invoice	1.01%
0	The Company	MEMC Korea	1	Sale	778,020	Net 60 days from the end of the month upon issuance of invoice	1.34%
0	The Company	MEMC SpA	1	Sale	847,708	Net 60 days from the end of the month upon issuance of invoice	1.46%
0	The Company	Taisil	1	Sale	1,324,609	Net 60 days from the end of the month upon issuance of invoice	2.28%
1	GWS	MEMC LLC	3	Purchase	1,113,615	Net 60 days from the end of the month upon issuance of invoice	1.92%
1	GWS	MEMC SpA	3	Purchase	3,831,532	Net 60 days from the end of the month upon issuance of invoice	6.60%
1	GWS	MEMC SpA	3	Sale	3,436,429	Net 60 days from the end of the month upon issuance of invoice	5.92%
1	GWS	MEMC Korea	3	Purchase	1,486,461	Net 60 days from the end of the month upon issuance of invoice	2.56%
1	GWS	MEMC Japan	3	Purchase	4,382,815	Net 60 days from the end of the month upon issuance of invoice	7.54%
1	GWS	MEMC Japan	3	Sale	1,572,917	Net 60 days from the end of the month upon issuance of invoice	2.71%
1	GWS	MEMC Sdn Bhd	3	Purchase	1,686,518	Net 60 days from the end of the month upon issuance of invoice	2.90%
1	GWS	MEMC Sdn Bhd	3	Sale	661,023	Net 60 days from the end of the month upon issuance of invoice	1.14%

(Continued)

No. (Note 1)	Name of company	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 (Note 3,4)
1	GWS	Taisil	3	Purchase	6,982,787	Net 60 days from the end of the month upon issuance of invoice	12.02%
1	GWS	Taisil	3	Accounts payable-parties	1,041,120	Net 60 days from the end of the month upon issuance of invoice	1.08%
1	GWS	GlobalWafers B.V.	2	Intercompany loan	2,998,000	-	3.10%
1	GWS	GWI	2	Intercompany loan	3,258,826	-	3.37%
2	GWJ	The Company	2	Intercompany Loan	4,140,000	-	4.29%
3	Taisil	The Company	2	Intercompany Loan	6,400,000	-	6.63%
4	MEMC SpA	GWS	2	Intercompany Loan	2,047,302	-	2.12%

Note 1: The characters of business transactions between parent company and its subsidiaries are coded as follows:

1. The parent company is coded "0".
2. The subsidiaries are coded consecutively beginning from "1" in the order presented in the table above.

Note 2: The relationships with transactions are as follows:

(1) Parent company to its subsidiaries.
(2) Subsidiaries to the parent company.
(3) Transactions between subsidiaries.

Note 3: The ratio of the transaction amount of the consolidated total sales revenue and consolidated total assets are calculated as follows:

(1) For transaction amount accounted for as asset or liability, the ratio is calculated based on the closing balance amount of the consolidated total assets.
(2) For transaction amount accounted for as profit or loss, the ratio is calculated based on the accumulated amount at the end of the financial period of the consolidated total sales revenue.

Note 4: The amount of significant transaction should exceed 1 percent of the consolidated operating revenue or total assets.

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries

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

For the year ended December 31, 2019

Table 9 (In Thousands of New Taiwan Dollars)

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Note
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value				
The Company	GWI	Cayman	Investment activities	2,241,668 (USD73,423)	2,241,668 (USD73,423)	90,000	100.00%	4,360,907	100.00%	2,074,206	2,074,206	Subsidiary
The Company	GSI	Cayman	Investment in various businesses and triangular trade centers with subsidiaries in Mainland China	756,809 (USD26,555)	756,809 (USD26,555)	25,000	100.00%	1,521,431	100.00%	202,929	202,929	Subsidiary
The Company	GWJ	Japan	Manufacturing and trading of silicon wafers	5,44	5,448,015	128	100.00%	15,262,418	100.00%	1,904,017	1,903,960	Subsidiary Notes 2 and 3
The Company	GWafers Singapore	Singapore	Investment activities	11,966,930	11,966,930	364,000	67.20%	23,271,556	100.00%	5,553,670	4,249,594	Subsidiary
The Company	Topsil A/S	Denmark	Manufacturing and trading of silicon wafers	1,964,069 (DKK407,600)	1,964,069 (DKK407,600)	1,000	100.00%	1,660,861	100.00%	64,061	51,353	Subsidiary
The Company	HONG-WANG Investment Co., Ltd.	Taiwan	Investment activities	309,760	200,000	30,976	30.98%	571,929	30.98%	65,636	20,331	Associate
The Company	Taisil	Taiwan	Manufacturing and trading of silicon wafers and sale	14,504,816	14,504,663	9,999	99.99%	17,705,613	99.99%	3,546,184	3,536,769	Associate
GWI	GWafers Singapore	Singapore	Investment activities	5,411,947	5,411,947	177,674	32.80%	4,360,907	32.80%	5,553,670	-	Notes 2 and 3
GWJ	MEMC Japan	Singapore	Manufacturing and trading of silicon wafers	373,413 (JPY100,000)	373,413 (JPY100,000)	750	100.00%	3,066,944	100.00%	227,673	-	Notes 2 and 3
Topsil A/S	Topsil PL	Poland	Manufacturing and trading of silicon wafers	-	-	0.1	100.00%	-	100.00%	13,719	-	Notes 2 and 3
GWafer Singapore	GWS	Singapore	Investment activities	14,671,320 (USD436,398)	14,671,320 (USD436,398)	299,445	100.00%	25,151,706	100.00%	6,223,239	-	Notes 2 and 3
GWS	GWBV	Netherlands	Investment activities	6,413,892 (USD162,723)	6,413,892 (USD162,723)	0.1	100.00%	40,918,549	100.00%	3,547,609	-	Notes 2 and 3
GWBV	MEMC SpA	Italy	Investment, marketing and trading activities	6,732,641 (USD204,788)	6,732,641 (USD204,788)	65,000	100.00%	11,849,317	100.00%	1,425,916	-	Notes 2 and 3
GWBV	MEMC BV	Netherlands	Investment activities	2,430,141 (USD73,918)	-	-	- %	-	- %	414,476	-	Notes 2 and 3
MEMC SpA	MEMC SarL	France	Trading	1,316 (USD40)	1,316 (USD40)	0.5	100.00%	807	100.00%	753	-	Notes 2 and 3
MEMC SpA	MEMC GmbH	Germany	Trading	4,622 (USD141)	4,622 (USD141)	0.002	100.00%	4,817	100.00%	(617)	-	Notes 2 and 3
MEMC SpA	MEMC BV	Netherlands	Investment activities	-	2,430,141 (USD73,918)	-	- %	-	100.00%	414,476	-	Notes 2 and 3
MEMC BV	MEMC Korea	Korea	Manufacturing and trading of silicon wafers and sale	-	2,427,650 (USD73,842)	-	- %	-	- %	1,270,737	-	Notes 2 and 3

(Continued)

Name of investor	Name of investee	Location	Main businesses and products	Original investment amount		Balance as of December 31, 2019			Highest Percentage of Ownership during the year	Net income (losses) of investee	Share of profits/losses of investee	Note
				December 31, 2019	December 31, 2018	Shares (thousands)	Percentage of Ownership	Carrying value				
GWBV	MEMC Korea	Korea	Manufacturing and trading of silicon wafers and sale	3,641,474 (USD110,763)	3,641,474 (USD110,763)	25,200.0	100.00%	15,373,703	60.00%	1,270,737	-	Notes 2 and 3
GWBV	GTI	Korea	Manufacturing of epitaxial wafers and silicon wafers	2,779,849 (USD91,262)	2,779,849 (USD91,262)	1	100.00%	9,486,787	100.00%	947,639	-	Notes 2 and 3
GWBV	MEMC Sdn Bhd	Malaysia	Manufacturing and trading of silicon wafers and sale	898,016 (USD27,315)	898,016 (USD27,315)	1,036	100.00%	740,576	100.00%	75,835	-	Notes 2 and 3
GWBV	MEMC Ipoh	Malaysia	Manufacturing and trading of silicon wafers and sale	93,907 (USD1,323)	146,624 (USD3,020)	612,300	100.00%	3,807	100.00%	236	-	Notes 2 and 3
GTI	MEMC LLC	United states	Research and development, manufacturing and trading of silicon wafers	543,384 (USD17,839)	543,384 (USD17,839)	-	100.00%	4,263,233	100.00%	178,816	-	Notes 2 and 3

Note 1: A limited company.

Note 2 The investees are indirect subsidiaries of the Company. GWafer Singapore had been restructured so the Company and GWI held 67.2 percent and 32.8 percent, respectively, of its shares on July 1, 2018. In addition, GTI was transferred to GWBV; and MEMC LLC was transferred to GTI. In June 18, 2019, MEMC BV was transferred to GWBV and was liquidated in September 2019. MEMC Korea was transferred from GWBV and MEMC BV to GWBV.

Note 3 The investor disclosed the profits and losses of the investment, which include the profits and losses of the investee; therefore, no disclosure is needed from the Company.

Note 4 The aforementioned inter-company transactions have been eliminated in the consolidated financial statements.

(Continued)

GlobalWafers Co., Ltd. and Subsidiaries

The names of investees in Mainland China, the main businesses and products and other information

For the year ended December 31, 2019

Table 10 (In Thousands of New Taiwan Dollars)

(1) 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, 2018	Investment flows		Accumulated outflow of investment from Taiwan as of December 31, 2019	Net income (losses) of the investee	Percentage of ownership	Highest percentage of ownership during the year	Investment income (losses) (Note 4)	Book value	Accumulated remittance of earnings in current period
					Outflow	Inflow							
SST	Processing and trading of ingots and wafers	769,177 (Note 7)	Note 1	713,300 (USD21,729)	-	-	713,300 (USD21,729)	195,307	100%	100%	195,307	1,425,100	-
SunEdison Shanghai	Trading business	7,527 (RMB1,500)	Note 2	Note 2	-	-	Note 2	(557)	100%	100%	(557)	8,914	-
GF	Sale and marketing	9,756 (RMB2,000)	Note 3	-	-	-	-	(21,528)	60%	60%	(12,917)	7,627	-

(2) Limitation on investment in Mainland China

Company Name	Accumulated Investment in Mainland China as of December 31, 2019	Investment Amounts Authorized by Investment Commission, MOEA	Upper Limit on Investment
The Company	713,300 (USD21,729)	818,233 (USD25,000) (Note 5)	27,043,950 (Note 6)

Note 1: Investments through GSI registered in Mainland China.
Note 2: Investments through GWBV registered in Mainland China which is acquired from the acquisition of GWS (SSL).
Note 3: GF was invested by SST 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: Pursuant to the 'Guidelines Governing the Review of Investment or Technical Cooperation in the Mainland Area' dated on August 29, 2008, the total amount of investment shall not exceed 60% of the Company's net worth on December 31, 2019
Note 7: Retained earnings transferred to capital was included.