

**Taiwan Semiconductor Manufacturing
Company Limited and Subsidiaries**

**Consolidated Financial Statements for the
Three Months Ended March 31, 2020 and 2019 and
Independent Auditors' Review Report**

INDEPENDENT AUDITORS' REVIEW REPORT

The Board of Directors and Shareholders
Taiwan Semiconductor Manufacturing Company Limited

Introduction

We have reviewed the accompanying consolidated balance sheets of Taiwan Semiconductor Manufacturing Company Limited and its subsidiaries (collectively, the “Company”) as of March 31, 2020 and 2019, the related consolidated statements of comprehensive income, the consolidated statements of changes in equity and cash flows for the three months then ended, and the related notes to the consolidated financial statements, including a summary of significant accounting policies. Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Accounting Standard 34 “Interim Financial Reporting” endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China. Our responsibility is to express a conclusion on the consolidated financial statements based on our reviews.

Scope of Review

We conducted our reviews in accordance with Statement of Auditing Standards No. 65 “Review of Financial Information Performed by the Independent Auditor of the Entity”. A review of consolidated financial statements consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our reviews, nothing has come to our attention that caused us to believe that the accompanying consolidated financial statements do not present fairly, in all material respects the consolidated financial position of the Company as of March 31, 2020 and 2019, and its consolidated financial performance and its consolidated cash flows for the three months then ended March 31, 2020 and 2019 in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Accounting Standard 34 “Interim Financial Reporting” endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

The engagement partners on the reviews resulting in this independent auditors' review report are Mei Yen Chiang and Yu Feng Huang.



Deloitte & Touche
Taipei, Taiwan
Republic of China

May 12, 2020



Notice to Readers

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

For the convenience of readers, the independent auditors' review report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' review report and consolidated financial statements shall prevail.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED BALANCE SHEETS (In Thousands of New Taiwan Dollars)

ASSETS	March 31, 2020 (Reviewed)		December 31, 2019 (Audited)		March 31, 2019 (Reviewed)	
	Amount	%	Amount	%	Amount	%
CURRENT ASSETS						
Cash and cash equivalents (Note 6)	\$ 430,777,229	18	\$ 455,399,336	20	\$ 645,670,527	30
Financial assets at fair value through profit or loss (Note 7)	1,254,253	-	326,839	-	3,084,399	-
Financial assets at fair value through other comprehensive income (Note 8)	129,219,277	6	127,396,577	6	107,313,205	5
Financial assets at amortized cost (Note 9)	302,393	-	299,884	-	4,179,386	-
Hedging financial assets (Note 10)	-	-	25,884	-	969	-
Notes and accounts receivable, net (Note 11)	145,992,744	6	138,908,589	6	106,431,149	5
Receivables from related parties (Note 31)	427,888	-	862,070	-	309,821	-
Other receivables from related parties (Note 31)	60,170	-	51,653	-	48,674	-
Inventories (Note 12)	78,277,834	3	82,981,196	4	108,682,382	5
Other financial assets (Note 32)	10,696,893	1	11,041,091	-	10,521,565	-
Other current assets	5,461,359	-	5,320,795	-	5,082,738	-
Total current assets	802,470,040	34	822,613,914	36	991,324,815	45
NONCURRENT ASSETS						
Financial assets at fair value through other comprehensive income (Note 8)	4,241,324	-	4,124,337	-	3,837,734	-
Financial assets at amortized cost (Note 9)	7,410,133	-	7,348,914	-	7,864,421	-
Investments accounted for using equity method (Note 13)	19,381,760	1	18,698,788	1	18,336,458	1
Property, plant and equipment (Note 14)	1,438,215,285	62	1,352,377,405	60	1,107,651,816	51
Right-of-use assets (Note 15)	21,720,648	1	17,232,402	1	19,043,554	1
Intangible assets (Note 16)	27,232,071	1	20,653,028	1	17,974,017	1
Deferred income tax assets (Note 4)	19,309,120	1	17,928,358	1	16,959,414	1
Refundable deposits	1,825,670	-	2,084,968	-	2,839,161	-
Other noncurrent assets	1,489,645	-	1,742,918	-	1,605,395	-
Total noncurrent assets	1,540,825,656	66	1,442,191,118	64	1,196,111,970	55
TOTAL	\$ 2,343,295,696	100	\$ 2,264,805,032	100	\$ 2,187,436,785	100
LIABILITIES AND EQUITY						
CURRENT LIABILITIES						
Short-term loans (Notes 17 and 29)	\$ 139,310,384	6	\$ 118,522,290	5	\$ 76,592,550	4
Short-term bills payable (Notes 18 and 29)	2,992,858	-	-	-	-	-
Financial liabilities at fair value through profit or loss (Note 7)	980,241	-	982,349	-	151,079	-
Hedging financial liabilities (Note 10)	109,826	-	1,798	-	111,374	-
Accounts payable	38,283,035	1	38,771,066	2	27,100,909	1
Payables to related parties (Note 31)	1,491,179	-	1,434,900	-	560,941	-
Salary and bonus payable	13,282,444	1	16,272,353	1	8,896,829	-
Accrued profit sharing bonus to employees and compensation to directors and supervisors (Note 28)	31,720,142	1	23,648,903	1	28,088,332	1
Payables to contractors and equipment suppliers	101,466,057	4	140,810,703	6	76,970,966	4
Cash dividends payable (Note 21)	129,651,902	6	129,651,902	6	-	-
Income tax payable (Note 4)	47,565,681	2	32,466,156	1	45,719,763	2
Long-term liabilities - current portion (Notes 19 and 29)	12,800,000	1	31,800,000	1	48,100,000	2
Accrued expenses and other current liabilities (Notes 15, 20, 22 and 29)	69,814,310	3	56,373,281	3	65,974,891	3
Total current liabilities	589,468,059	25	590,735,701	26	378,267,634	17
NONCURRENT LIABILITIES						
Bonds payable (Notes 19 and 29)	46,475,148	2	25,100,000	1	35,300,000	2
Deferred income tax liabilities (Note 4)	356,609	-	344,393	-	204,933	-
Lease liabilities (Notes 15 and 29)	19,490,665	1	15,041,833	1	16,907,533	1
Net defined benefit liability (Note 4)	8,377,553	-	9,182,496	-	9,389,230	-
Guarantee deposits (Notes 20 and 29)	176,664	-	176,904	-	1,820,748	-
Others	1,922,467	-	2,128,279	-	2,029,105	-
Total noncurrent liabilities	76,799,106	3	51,973,905	2	65,651,549	3
Total liabilities	666,267,165	28	642,709,606	28	443,919,183	20
EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT						
Capital stock (Note 21)	259,303,805	11	259,303,805	11	259,303,805	12
Capital surplus (Note 21)	56,339,785	3	56,339,709	3	56,320,688	2
Retained earnings (Note 21)						
Appropriated as legal capital reserve	311,146,899	13	311,146,899	14	276,033,811	13
Appropriated as special capital reserve	27,568,179	1	10,675,106	-	26,907,527	1
Unappropriated earnings	1,046,780,670	45	1,011,512,974	45	1,135,004,816	52
	1,385,495,748	59	1,333,334,979	59	1,437,946,154	66
Others (Note 21)	(24,873,338)	(1)	(27,568,369)	(1)	(10,725,023)	-
Equity attributable to shareholders of the parent	1,676,266,000	72	1,621,410,124	72	1,742,845,624	80
NON - CONTROLLING INTERESTS	762,531	-	685,302	-	671,978	-
Total equity	1,677,028,531	72	1,622,095,426	72	1,743,517,602	80
TOTAL	\$ 2,343,295,696	100	\$ 2,264,805,032	100	\$ 2,187,436,785	100

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

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

(Reviewed, Not Audited)

	Three Months Ended March 31			
	2020		2019	
	Amount	%	Amount	%
NET REVENUE (Notes 22, 31 and 37)	\$ 310,597,183	100	\$ 218,704,469	100
COST OF REVENUE (Notes 12, 28, 31 and 35)	<u>149,813,002</u>	<u>48</u>	<u>128,352,344</u>	<u>59</u>
GROSS PROFIT BEFORE REALIZED (UNREALIZED) GROSS PROFIT ON SALES TO ASSOCIATES	160,784,181	52	90,352,125	41
REALIZED (UNREALIZED) GROSS PROFIT ON SALES TO ASSOCIATES	<u>(7,673)</u>	<u>-</u>	<u>5,432</u>	<u>-</u>
GROSS PROFIT	<u>160,776,508</u>	<u>52</u>	<u>90,357,557</u>	<u>41</u>
OPERATING EXPENSES (Notes 28 and 31)				
Research and development	24,968,883	8	20,417,311	9
General and administrative	5,903,061	2	4,140,729	2
Marketing	<u>1,451,102</u>	<u>1</u>	<u>1,459,973</u>	<u>1</u>
Total operating expenses	<u>32,323,046</u>	<u>11</u>	<u>26,018,013</u>	<u>12</u>
OTHER OPERATING INCOME AND EXPENSES, NET (Notes 14, 15 and 28)	<u>68,175</u>	<u>-</u>	<u>(73,521)</u>	<u>-</u>
INCOME FROM OPERATIONS (Note 37)	<u>128,521,637</u>	<u>41</u>	<u>64,266,023</u>	<u>29</u>
NON-OPERATING INCOME AND EXPENSES				
Share of profits of associates	725,968	1	433,491	-
Other income (Note 23)	3,099,578	1	4,408,776	2
Foreign exchange gain, net (Note 34)	375,791	-	230,682	-
Finance costs (Note 24)	(530,564)	-	(899,065)	-
Other gains and losses, net (Note 25)	<u>(45,232)</u>	<u>-</u>	<u>(258,255)</u>	<u>-</u>
Total non-operating income and expenses	<u>3,625,541</u>	<u>2</u>	<u>3,915,629</u>	<u>2</u>
INCOME BEFORE INCOME TAX	132,147,178	43	68,181,652	31
INCOME TAX EXPENSE (Notes 4 and 26)	<u>15,084,285</u>	<u>5</u>	<u>6,794,342</u>	<u>3</u>
NET INCOME	<u>117,062,893</u>	<u>38</u>	<u>61,387,310</u>	<u>28</u>

(Continued)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (In Thousands of New Taiwan Dollars, Except Earnings Per Share) (Reviewed, Not Audited)

	Three Months Ended March 31			
	2020		2019	
	Amount	%	Amount	%
OTHER COMPREHENSIVE INCOME (LOSS)				
(Notes 21 and 26)				
Items that will not be reclassified subsequently to profit or loss:				
Unrealized gain/(loss) on investments in equity instruments at fair value through other comprehensive income	\$ (44,047)	-	\$ 53,541	-
Loss on hedging instruments	(42,749)	-	(94,548)	-
Share of other comprehensive income (loss) of associates	(3,317)	-	248	-
Income tax benefit (expense) related to items that will not be reclassified subsequently	114	-	(18,051)	-
	<u>(89,999)</u>	<u>-</u>	<u>(58,810)</u>	<u>-</u>
Items that may be reclassified subsequently to profit or loss:				
Exchange differences arising on translation of foreign operations	3,035,024	1	3,218,078	1
Unrealized gain/(loss) on investments in debt instruments at fair value through other comprehensive income	(210,748)	-	1,448,390	1
Share of other comprehensive income (loss) of associates	(86,359)	-	8,328	-
	<u>2,737,917</u>	<u>1</u>	<u>4,674,796</u>	<u>2</u>
Other comprehensive income for the period, net of income tax	<u>2,647,918</u>	<u>1</u>	<u>4,615,986</u>	<u>2</u>
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD	<u>\$ 119,710,811</u>	<u>39</u>	<u>\$ 66,003,296</u>	<u>30</u>
NET INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	\$ 116,986,720	38	\$ 61,393,851	28
Non-controlling interests	76,173	-	(6,541)	-
	<u>\$ 117,062,893</u>	<u>38</u>	<u>\$ 61,387,310</u>	<u>28</u>
TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	\$ 119,634,992	39	\$ 66,009,819	30
Non-controlling interests	75,819	-	(6,523)	-
	<u>\$ 119,710,811</u>	<u>39</u>	<u>\$ 66,003,296</u>	<u>30</u>

(Continued)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

(Reviewed, Not Audited)

	Three Months Ended March 31	
	2020	2019
	Income Attributable to Shareholders of the Parent	Income Attributable to Shareholders of the Parent
EARNINGS PER SHARE (NT\$, Note 27)		
Basic earnings per share	<u>\$ 4.51</u>	<u>\$ 2.37</u>
Diluted earnings per share	<u>\$ 4.51</u>	<u>\$ 2.37</u>

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

(Concluded)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(In Thousands of New Taiwan Dollars)
(Reviewed, Not Audited)

	Equity Attributable to Shareholders of the Parent							Others							
	Capital Stock - Common Stock		Capital Surplus	Retained Earnings			Foreign Currency Translation Reserve	Unrealized Gain (Loss) on Financial Assets at Fair Value Through Other Comprehensive Income	Gain (Loss) on Hedging Instruments	Unearned Stock-Based Employee Compensation	Total	Total	Non-controlling Interests	Total Equity	
	Shares (In Thousands)	Amount		Legal Capital Reserve	Special Capital Reserve	Unappropriated Earnings									Total
BALANCE, JANUARY 1, 2020	25,930,380	\$ 259,303,805	\$ 56,339,709	\$ 311,146,899	\$ 10,675,106	\$ 1,011,512,974	\$ 1,333,334,979	\$ (26,871,400)	\$ (692,959)	\$ (3,820)	\$ (190)	\$ (27,568,369)	\$ 1,621,410,124	\$ 685,302	\$ 1,622,095,426
Appropriations of earnings	-	-	-	-	16,893,073	(16,893,073)	-	-	-	-	-	-	-	-	-
Special capital reserve	-	-	-	-	-	(64,825,951)	(64,825,951)	-	-	-	-	(64,825,951)	-	-	(64,825,951)
Cash dividends to shareholders	-	-	-	-	-	(81,719,024)	(81,719,024)	-	-	-	-	(64,825,951)	-	-	(64,825,951)
Total	-	-	-	-	16,893,073	(148,537,975)	(131,644,902)	-	-	-	-	(129,651,902)	-	-	(131,644,902)
Net income for the three months ended March 31, 2020	-	-	-	-	-	116,986,720	116,986,720	-	-	-	-	-	116,986,720	76,173	117,062,893
Other comprehensive income (loss) for the three months ended March 31, 2020, net of income tax	-	-	-	-	-	-	-	2,948,619	(257,598)	(42,749)	-	2,648,272	2,648,272	(354)	2,647,918
Total comprehensive income (loss) for the three months ended March 31, 2020	-	-	-	-	-	116,986,720	116,986,720	2,948,619	(257,598)	(42,749)	-	2,648,272	119,634,992	75,819	119,710,811
Basis adjustment for gain on hedging instruments	-	-	-	-	-	-	-	-	-	46,569	-	46,569	46,569	-	46,569
Adjustments to share of changes in equities of associates	-	-	76	-	-	-	-	-	-	-	190	190	266	-	266
Increase in non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	-	1,410	1,410
BALANCE, MARCH 31, 2020	25,930,380	\$ 259,303,805	\$ 56,339,785	\$ 311,146,899	\$ 27,568,179	\$ 1,046,780,670	\$ 1,385,495,748	\$ (23,927,781)	\$ (950,557)	\$ -	\$ -	\$ (24,873,338)	\$ 1,676,266,000	\$ 762,531	\$ 1,677,028,531
BALANCE, JANUARY 1, 2019	25,930,380	\$ 259,303,805	\$ 56,315,932	\$ 276,033,811	\$ 26,907,527	\$ 1,073,706,503	\$ 1,376,647,841	\$ (12,042,347)	\$ (3,429,324)	\$ 23,601	\$ (1,843)	\$ (15,449,913)	\$ 1,676,817,665	\$ 678,731	\$ 1,677,496,396
Net income (loss) for the three months ended March 31, 2019	-	-	-	-	-	61,393,851	61,393,851	-	-	-	-	-	61,393,851	(6,541)	61,387,310
Other comprehensive income (loss) for the three months ended March 31, 2019, net of income tax	-	-	-	-	-	-	-	3,226,397	1,484,119	(94,548)	-	4,615,968	4,615,968	18	4,615,986
Total comprehensive income (loss) for the three months ended March 31, 2019	-	-	-	-	-	61,393,851	61,393,851	3,226,397	1,484,119	(94,548)	-	4,615,968	66,009,819	(6,523)	66,003,296
Disposal of investments in equity instruments at fair value through other comprehensive income	-	-	-	-	-	(95,538)	(95,538)	-	95,538	-	-	95,538	-	-	-
Basis adjustment for gain on hedging instruments	-	-	-	-	-	-	-	-	-	12,434	-	12,434	12,434	-	12,434
Adjustments to share of changes in equities of associates	-	-	4,386	-	-	-	-	-	-	-	950	950	5,336	110	5,446
From share of changes in equities of subsidiaries	-	-	370	-	-	-	-	-	-	-	-	-	370	(370)	-
Increase in non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30
BALANCE, MARCH 31, 2019	25,930,380	\$ 259,303,805	\$ 56,320,688	\$ 276,033,811	\$ 26,907,527	\$ 1,135,004,816	\$ 1,437,946,154	\$ (8,815,950)	\$ (1,849,667)	\$ (58,513)	\$ (893)	\$ (10,725,023)	\$ 1,742,845,624	\$ 671,978	\$ 1,743,517,602

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

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Thousands of New Taiwan Dollars)

(Reviewed, Not Audited)

	Three Months Ended March 31	
	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	\$ 132,147,178	\$ 68,181,652
Adjustments for:		
Depreciation expense	67,083,741	76,192,468
Amortization expense	1,470,736	1,355,336
Expected credit losses recognized (reversal) on investments in debt instruments	1,626	(4,885)
Finance costs	530,564	899,065
Share of profits of associates	(725,968)	(433,491)
Interest income	(2,989,069)	(4,408,776)
Share-based compensation	1,410	-
Loss (gain) on disposal or retirement of property, plant and equipment, net	(35,390)	421,408
Reversal of impairment loss on property, plant and equipment	-	(301,384)
Loss on financial instruments at fair value through profit or loss, net	2,883	338,047
Loss (gain) on disposal of investments in debt instruments at fair value through other comprehensive income, net	(179,412)	53,105
Loss from disposal of subsidiaries	-	4,598
Unrealized (realized) gross profit on sales to associates	7,673	(5,432)
Loss on foreign exchange, net	804,399	22,722
Dividend income	(110,509)	-
Gain arising from fair value hedges, net	-	(11,758)
Changes in operating assets and liabilities:		
Financial instruments at fair value through profit or loss	(1,080,340)	72,734
Notes and accounts receivable, net	(8,595,331)	20,639,442
Receivables from related parties	434,182	274,591
Other receivables from related parties	(8,517)	16,354
Inventories	4,703,362	(5,451,406)
Other financial assets	2,109,547	2,545,236
Other current assets	(111,469)	193,059
Accounts payable	(296,602)	(6,105,106)
Payables to related parties	56,279	(815,558)
Salary and bonus payable	(2,989,909)	(5,574,543)
Accrued profit sharing bonus to employees and compensation to directors and supervisors	8,071,239	4,107,178
Accrued expenses and other current liabilities	4,910,661	965,357
Net defined benefit liability	(804,943)	(262,175)
Cash generated from operations	204,408,021	152,907,838
Income taxes paid	(1,378,579)	(237,560)
Net cash generated by operating activities	<u>203,029,442</u>	<u>152,670,278</u>

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Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Thousands of New Taiwan Dollars)

(Reviewed, Not Audited)

	Three Months Ended March 31	
	2020	2019
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of:		
Financial assets at fair value through other comprehensive income	\$ (56,528,394)	\$ (34,445,259)
Financial assets at amortized cost	-	(313,958)
Property, plant and equipment	(192,559,626)	(75,942,118)
Intangible assets	(846,084)	(2,101,026)
Proceeds from disposal or redemption of:		
Financial instruments at fair value through profit or loss - debt instruments	-	93,328
Financial assets at fair value through other comprehensive income	57,185,928	31,684,346
Financial assets at amortized cost	-	10,138,090
Property, plant and equipment	65,867	75,142
Derecognition of hedging financial instruments	(225,847)	(227,383)
Interest received	3,038,375	4,575,286
Proceeds from government grants - property, plant and equipment	475,703	2,565,338
Proceeds from government grants - land use right and others	20,077	850,623
Other dividends received	110,509	-
Refundable deposits paid	(69,469)	(1,320,312)
Refundable deposits refunded	<u>339,693</u>	<u>179,430</u>
Net cash used in investing activities	<u>(188,993,268)</u>	<u>(64,188,473)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Increase (decrease) in short-term loans	20,348,002	(12,262,255)
Proceeds from short-term bills payable	3,992,197	-
Repayments of short-term bills payable	(1,000,000)	-
Proceeds from issuance of bonds	24,000,000	-
Repayment of bonds	(21,600,000)	(8,400,000)
Payments for transaction costs attributable to the issuance of bonds	(24,921)	-
Repayment of the principal portion of lease liabilities	(683,072)	(588,088)
Interest paid	(977,231)	(1,188,528)
Guarantee deposits received	17,203	28,652
Guarantee deposits refunded	(3,638)	(2,456)
Cash dividends	(64,825,951)	-
Increase in non-controlling interests	<u>-</u>	<u>30</u>
Net cash used in financing activities	<u>(40,757,411)</u>	<u>(22,412,645)</u>
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	<u>2,099,130</u>	<u>1,786,766</u>
		(Continued)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Thousands of New Taiwan Dollars)

(Reviewed, Not Audited)

	<u>Three Months Ended March 31</u>	
	<u>2020</u>	<u>2019</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	\$ (24,622,107)	\$ 67,855,926
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	<u>455,399,336</u>	<u>577,814,601</u>
CASH AND CASH EQUIVALENTS, END OF PERIOD	<u>\$ 430,777,229</u>	<u>\$ 645,670,527</u>

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

(Concluded)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

FOR THE THREE MONTHS ENDED MARCH 31, 2020 AND 2019

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

(Reviewed, Not Audited)

1. GENERAL

Taiwan Semiconductor Manufacturing Company Limited (TSMC), a Republic of China (R.O.C.) corporation, was incorporated on February 21, 1987. TSMC is a dedicated foundry in the semiconductor industry which engages mainly in the manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing of masks.

On September 5, 1994, TSMC's shares were listed on the Taiwan Stock Exchange (TWSE). On October 8, 1997, TSMC listed some of its shares of stock on the New York Stock Exchange (NYSE) in the form of American Depositary Shares (ADSs).

The address of its registered office and principal place of business is No. 8, Li-Hsin Rd. 6, Hsinchu Science Park, Taiwan. The principal operating activities of TSMC's subsidiaries are described in Note 4.

2. THE AUTHORIZATION OF FINANCIAL STATEMENTS

The accompanying consolidated financial statements were reported to the Board of Directors and issued on May 12, 2020.

3. APPLICATION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS

- a. Initial application of the amendments to the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) (collectively, "IFRSs") endorsed and issued into effect by the Financial Supervisory Commission (FSC)

The initial application of the amendments to the IFRSs endorsed and issued into effect by the FSC did not have a significant effect on TSMC and its subsidiaries' (collectively as the "Company") accounting policies.

- b. The IFRSs issued by International Accounting Standards Board (IASB) but not yet endorsed and issued into effect by the FSC

<u>New, Revised or Amended Standards and Interpretations</u>	<u>Effective Date Issued by IASB</u>
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture"	To be determined by IASB
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	January 1, 2022

As of the date the accompanying consolidated financial statements were issued, the Company continues in evaluating the impact on its financial position and financial performance as a result of the initial adoption of the aforementioned standards or interpretations. The related impact will be disclosed when the Company completes the evaluation.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Except for the following, the accounting policies applied in these consolidated financial statements are consistent with those applied in the consolidated financial statements for the year ended December 31, 2019.

For the convenience of readers, the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the R.O.C. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language consolidated financial statements shall prevail.

Statement of Compliance

The accompanying consolidated financial statements have been prepared in conformity with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IAS 34, “Interim Financial Reporting,” endorsed and issued into effect by the FSC. The consolidated financial statements do not present all the disclosures required for a complete set of annual consolidated financial statements prepared under the IFRSs endorsed and issued into effect by the FSC (collectively, “Taiwan-IFRSs”).

Basis of Consolidation

The basis of preparation and the basis for the consolidated financial statements

The basis of preparation and the basis for the consolidated financial statements applied in these consolidated financial statements are consistent with those applied in the consolidated financial statements for the year ended December 31, 2019.

The subsidiaries in the consolidated financial statements

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

Name of Investor	Name of Investee	Main Businesses and Products	Establishment and Operating Location	Percentage of Ownership			Note
				March 31, 2020	December 31, 2019	March 31, 2019	
TSMC	TSMC North America	Selling and marketing of integrated circuits and other semiconductor devices	San Jose, California, U.S.A.	100%	100%	100%	-
	TSMC Europe B.V. (TSMC Europe)	Customer service and supporting activities	Amsterdam, the Netherlands	100%	100%	100%	a)
	TSMC Japan Limited (TSMC Japan)	Customer service and supporting activities	Yokohama, Japan	100%	100%	100%	a)
	TSMC Design Technology Japan, Inc. (TSMC JDC)	Engineering support activities	Yokohama, Japan	100%	-	-	a), b)
	TSMC Korea Limited (TSMC Korea)	Customer service and supporting activities	Seoul, Korea	100%	100%	100%	a)
	TSMC Partners, Ltd. (TSMC Partners)	Investing in companies involved in the design, manufacture, and other related business in the semiconductor industry and other investment activities	Tortola, British Virgin Islands	100%	100%	100%	a)
	TSMC Global, Ltd. (TSMC Global)	Investment activities	Tortola, British Virgin Islands	100%	100%	100%	-
	TSMC China Company Limited (TSMC China)	Manufacturing, selling, testing and computer-aided design of integrated circuits and other semiconductor devices	Shanghai, China	100%	100%	100%	-
	TSMC Nanjing Company Limited (TSMC Nanjing)	Manufacturing, selling, testing and computer-aided design of integrated circuits and other semiconductor devices	Nanjing, China	100%	100%	100%	c)
	VisEra Technologies Company Ltd. (VisEra Tech)	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	Hsin-Chu, Taiwan	87%	87%	87%	-
	VentureTech Alliance Fund II, L.P. (VTAF II)	Investing in new start-up technology companies	Cayman Islands	98%	98%	98%	a)
	VentureTech Alliance Fund III, L.P. (VTAF III)	Investing in new start-up technology companies	Cayman Islands	98%	98%	98%	a)

(Continued)

Name of Investor	Name of Investee	Main Businesses and Products	Establishment and Operating Location	Percentage of Ownership			Note
				March 31, 2020	December 31, 2019	March 31, 2019	
TSMC Partners	TSMC Development, Inc. (TSMC Development)	Investing in companies involved in the manufacturing related business in the semiconductor industry	Delaware, U.S.A.	100%	100%	100%	-
	TSMC Technology, Inc. (TSMC Technology)	Engineering support activities	Delaware, U.S.A.	100%	100%	100%	a)
	TSMC Design Technology Canada Inc. (TSMC Canada)	Engineering support activities	Ontario, Canada	100%	100%	100%	a)
	InveStar Semiconductor Development Fund, Inc. (ISDF)	Investing in new start-up technology companies	Cayman Islands	97%	97%	97%	a), d)
	InveStar Semiconductor Development Fund, Inc. (II) LDC. (ISDF II)	Investing in new start-up technology companies	Cayman Islands	97%	97%	97%	a), d)
TSMC Development	WaferTech, LLC (WaferTech)	Manufacturing, selling and testing of integrated circuits and other semiconductor devices	Washington, U.S.A.	100%	100%	100%	-
VTAF III	Growth Fund Limited (Growth Fund)	Investing in new start-up technology companies	Cayman Islands	100%	100%	100%	a)

(Concluded)

Note a: This is an immaterial subsidiary for which the consolidated financial statements are not reviewed by the Company's independent auditors.

Note b: The Company established a subsidiary in Japan in January 2020 to expand the design service center for providing engineering support services to customers.

Note c: Under the investment agreement entered into with the municipal government of Nanjing, China, the Company will make an investment in Nanjing in the amount of approximately US\$3 billion to establish a subsidiary operating a 300mm wafer fab with the capacity of 20,000 12-inch wafers per month, and a design service center.

Note d: The subsidiary is under liquidation procedures.

Retirement Benefits

Pension cost for an interim period is calculated on a year-to-date basis by using the actuarially determined pension cost rate at the end of the prior financial year.

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax. The interim period income tax expense is accrued using the tax rate that would be applicable to expected total annual earnings, that is, the estimated average annual effective income tax rate applied to the pre-tax income of the interim period.

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

The Company has considered the economic implications of COVID-19 on critical accounting estimates and will continue evaluating the impact on its financial position and financial performance as a result of the pandemic. In addition, the same critical accounting judgments and key sources of estimates and uncertainty have been followed in these consolidated financial statements as were applied in the preparation of the Company's consolidated financial statements for the year ended December 31, 2019.

6. CASH AND CASH EQUIVALENTS

	March 31, 2020	December 31, 2019	March 31, 2019
Cash and deposits in banks	\$ 425,726,339	\$ 452,734,378	\$ 643,465,797
Government bonds	1,958,260	2,188,149	1,585,376
Commercial paper	1,204,342	476,809	496,779
Repurchase agreements collateralized by bonds	958,576	-	-
Repurchase agreements collateralized by corporate bonds	905,580	-	-
Agency bonds	<u>24,132</u>	<u>-</u>	<u>122,575</u>
	<u>\$ 430,777,229</u>	<u>\$ 455,399,336</u>	<u>\$ 645,670,527</u>

Deposits in banks consisted of highly liquid time deposits that were readily convertible to known amounts of cash and were subject to an insignificant risk of changes in value.

7. FINANCIAL ASSETS AND LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS

	March 31, 2020	December 31, 2019	March 31, 2019
<u>Financial assets</u>			
Mandatorily measured at FVTPL			
Forward exchange contracts	\$ 1,216,560	\$ 162,155	\$ 110,740
Agency mortgage-backed securities	37,693	40,925	2,973,659
Convertible bonds	<u>-</u>	<u>123,759</u>	<u>-</u>
	<u>\$ 1,254,253</u>	<u>\$ 326,839</u>	<u>\$ 3,084,399</u>
<u>Financial liabilities</u>			
Held for trading			
Forward exchange contracts	<u>\$ 980,241</u>	<u>\$ 982,349</u>	<u>\$ 151,079</u>

The Company entered into forward exchange contracts to manage exposures due to fluctuations of foreign exchange rates. These forward exchange contracts did not meet the criteria for hedge accounting. Therefore, the Company did not apply hedge accounting treatment for these forward exchange contracts.

Outstanding forward exchange contracts consisted of the following:

	Maturity Date	Contract Amount (In Thousands)
<u>March 31, 2020</u>		
Sell NT\$	April 2020 to October 2020	NT\$190,511,446
Sell JPY	April 2020 to May 2020	JPY75,527,269
Sell US\$	April 2020 to June 2020	US\$528,553

(Continued)

	Maturity Date	Contract Amount (In Thousands)
<u>December 31, 2019</u>		
Sell NT\$	January 2020 to June 2020	NT\$108,428,027
Sell JPY	January 2020 to February 2020	JPY57,471,581
Sell US\$	January 2020 to March 2020	US\$529,209
<u>March 31, 2019</u>		
Sell NT\$	April 2019 to May 2019	NT\$39,552,305
Sell US\$	April 2019 to May 2019	US\$352,577
Sell RMB	April 2019	RMB651,023
		(Concluded)

8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	March 31, 2020	December 31, 2019	March 31, 2019
Investments in debt instruments at FVTOCI			
Corporate bonds	\$ 56,092,287	\$ 51,790,045	\$ 42,703,270
Agency bonds/Agency mortgage-backed securities	50,881,130	51,966,460	34,371,268
Government bonds	11,127,278	12,824,223	13,815,264
Asset-backed securities	<u>11,118,582</u>	<u>10,815,849</u>	<u>15,764,847</u>
	<u>129,219,277</u>	<u>127,396,577</u>	<u>106,654,649</u>
Investments in equity instruments at FVTOCI			
Non-publicly traded equity investments	4,241,324	4,124,337	3,837,734
Publicly traded stocks	<u>-</u>	<u>-</u>	<u>658,556</u>
	<u>4,241,324</u>	<u>4,124,337</u>	<u>4,496,290</u>
	<u>\$ 133,460,601</u>	<u>\$ 131,520,914</u>	<u>\$ 111,150,939</u>
Current	\$ 129,219,277	\$ 127,396,577	\$ 107,313,205
Noncurrent	<u>4,241,324</u>	<u>4,124,337</u>	<u>3,837,734</u>
	<u>\$ 133,460,601</u>	<u>\$ 131,520,914</u>	<u>\$ 111,150,939</u>

These investments in equity instruments are held for medium to long-term purposes and therefore are accounted for as FVTOCI. For dividends recognized from these investments, please refer to Note 23. All the dividends are from investments held at the end of the reporting period.

For the three months ended March 31, 2020, the Company did not divest any equity investments designated at FVTOCI. For the three months ended March 31, 2019, as the Company adjusted its investment portfolio, equity investments designated at FVTOCI were divested for NT\$98,188 thousand. The related other equity-unrealized gain/loss on financial assets at FVTOCI of NT\$95,538 thousand were transferred to decrease retained earnings.

As of March 31, 2020 and 2019, the cumulative loss allowance for expected credit loss of NT\$37,525 thousand and NT\$29,299 thousand was recognized under investments in debt instruments at FVTOCI, respectively. Refer to Note 30 for information relating to the credit risk management and expected credit loss.

9. FINANCIAL ASSETS AT AMORTIZED COST

	March 31, 2020	December 31, 2019	March 31, 2019
Corporate bonds	\$ 7,715,480	\$ 7,651,727	\$ 10,950,408
Commercial paper	-	-	1,097,194
Less: Allowance for impairment loss	<u>(2,954)</u>	<u>(2,929)</u>	<u>(3,795)</u>
	<u>\$ 7,712,526</u>	<u>\$ 7,648,798</u>	<u>\$ 12,043,807</u>
Current	\$ 302,393	\$ 299,884	\$ 4,179,386
Noncurrent	<u>7,410,133</u>	<u>7,348,914</u>	<u>7,864,421</u>
	<u>\$ 7,712,526</u>	<u>\$ 7,648,798</u>	<u>\$ 12,043,807</u>

Refer to Note 30 for information relating to credit risk management and expected credit loss for financial assets at amortized cost.

10. HEDGING FINANCIAL INSTRUMENTS

	March 31, 2020	December 31, 2019	March 31, 2019
<u>Financial assets - current</u>			
Fair value hedges			
Interest rate futures contracts	\$ -	\$ 22,380	\$ -
Cash flow hedges			
Forward exchange contracts	<u>-</u>	<u>3,504</u>	<u>969</u>
	<u>\$ -</u>	<u>\$ 25,884</u>	<u>\$ 969</u>
<u>Financial liabilities - current</u>			
Fair value hedges			
Interest rate futures contracts	\$ 109,826	\$ -	\$ 57,247
Cash flow hedges			
Forward exchange contracts	<u>-</u>	<u>1,798</u>	<u>54,127</u>
	<u>\$ 109,826</u>	<u>\$ 1,798</u>	<u>\$ 111,374</u>

Fair value hedge

The Company entered into interest rate futures contracts, which are used to partially hedge against the fair value changes caused by interest rate fluctuation in the Company's fixed income investments. The hedge ratio is adjusted in response to the changes in the financial market and capped at 100%.

On the basis of economic relationships, the Company expects that the value of the interest rate futures contracts and the value of the hedged financial assets will change in opposite directions in response to movements in interest rates.

The main source of hedge ineffectiveness in these hedging relationships is the credit risk of the hedged financial assets, which is not reflected in the fair value of the interest rate futures contracts. No other sources of ineffectiveness emerged from these hedging relationships. Amount of hedge ineffectiveness recognized in profit or loss is classified under other gains and losses.

The following tables summarize the information relating to the hedges of interest rate risk.

March 31, 2020

Hedging Instruments	Contract Amount (US\$ in Thousands)	Maturity
US treasury bonds interest rate futures contracts	US\$ 124,300	June 2020

Hedged Items	Asset Carrying Amount	Accumulated Amount of Fair Value Hedge Adjustments
Financial assets at FVTOCI	\$ 9,023,238	\$ 109,826

December 31, 2019

Hedging Instruments	Contract Amount (US\$ in Thousands)	Maturity
US treasury bonds interest rate futures contracts	US\$ 122,200	March 2020

Hedged Items	Asset Carrying Amount	Accumulated Amount of Fair Value Hedge Adjustments
Financial assets at FVTOCI	\$ 7,364,727	\$ (22,380)

March 31, 2019

Hedging Instruments	Contract Amount (US\$ in Thousands)	Maturity
US treasury bonds interest rate futures contracts	US\$ 140,600	June 2019

Hedged Items	Asset Carrying Amount	Accumulated Amount of Fair Value Hedge Adjustments
Financial assets at FVTOCI	\$ 18,404,220	\$ 128,179

The effect for the three months ended March 31, 2020 and 2019 is detailed below:

Hedging Instruments/Hedged Items	Increase (Decrease) in Value Used for Calculating Hedge Ineffectiveness Three Months Ended March 31	
	2020	2019
Hedging Instruments		
US treasury bonds interest rate futures contracts	\$ (345,536)	\$ (125,581)
Hedged Items		
Financial assets at FVTOCI	<u>345,536</u>	<u>137,339</u>
	<u>\$ -</u>	<u>\$ 11,758</u>

Cash flow hedge

The Company entered into forward exchange contracts to partially hedge foreign exchange rate risks associated with certain highly probable forecast transactions (capital expenditures). The hedge ratio is adjusted in response to the changes in the financial market and capped at 100%. The forward exchange contracts have maturities of 12 months or less.

On the basis of economic relationships, the Company expects that the value of forward exchange contracts and the value of hedged transactions will change in opposite directions in response to movements in foreign exchange rates.

The main source of hedge ineffectiveness in these hedging relationships is driven by the effect of the counterparty's own credit risk on the fair value of forward exchange contracts. No other sources of ineffectiveness emerged from these hedging relationships. For the three months ended March 31, 2020 and 2019, refer to Note 21(d) for gain or loss arising from changes in the fair value of hedging instruments and the amount transferred to initial carrying amount of hedged items.

The following tables summarize the information relating to the hedges for foreign currency risk.

December 31, 2019

Hedging Instruments	Contract Amount (In Thousands)	Maturity	Balance in Other Equity (Continuing Hedges)
Forward exchange contracts	Sell NT\$ 1,342,392	January 2020	\$ (3,820)

March 31, 2019

Hedging Instruments	Contract Amount (In Thousands)	Maturity	Balance in Other Equity (Continuing Hedges)
Forward exchange contracts	Sell NT\$ 8,081,167	April 2019 to May 2019	\$ (58,513)

The effect for the three months ended March 31, 2020 and 2019 is detailed below:

Hedging Instruments/Hedged Items	Increase (Decrease) in Value Used for Calculating Hedge Ineffectiveness	
	Three Months Ended March 31	
	2020	2019
Hedging Instruments		
Forward exchange contracts	<u>\$ (42,749)</u>	<u>\$ (94,548)</u>
Hedged Items		
Forecast transaction (capital expenditures)	<u>\$ 42,749</u>	<u>\$ 94,548</u>

11. NOTES AND ACCOUNTS RECEIVABLE, NET

	March 31, 2020	December 31, 2019	March 31, 2019
At amortized cost			
Notes and accounts receivable	\$ 142,491,942	\$ 135,978,049	\$ 103,904,657
Less: Loss allowance	<u>(330,882)</u>	<u>(325,325)</u>	<u>(11,457)</u>
	142,161,060	135,652,724	103,893,200
At FVTOCI	<u>3,831,684</u>	<u>3,255,865</u>	<u>2,537,949</u>
	<u>\$ 145,992,744</u>	<u>\$ 138,908,589</u>	<u>\$ 106,431,149</u>

The Company signed a contract with the bank to sell certain accounts receivable without recourse and transaction cost required. These accounts receivable are classified as at FVTOCI because they are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets.

In principle, the payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month when the invoice is issued. Aside from recognizing impairment loss for credit-impaired accounts receivable, the Company recognizes loss allowance based on the expected credit loss ratio of customers by different risk levels with consideration of factors of historical loss ratios and customers' financial conditions, competitiveness and business outlook. For accounts receivable past due over 90 days without collaterals or guarantees, the Company recognizes loss allowance at full amount.

Aging analysis of notes and accounts receivable

	March 31, 2020	December 31, 2019	March 31, 2019
Not past due	\$ 133,453,936	\$ 126,134,762	\$ 95,582,954
Past due			
Past due within 30 days	12,838,067	13,082,080	10,500,221
Past due 31-60 days	21,279	12,794	205,899
Past due 61-120 days	9,814	1,033	116,953
Past due over 121 days	530	3,245	36,579
Less: Loss allowance	<u>(330,882)</u>	<u>(325,325)</u>	<u>(11,457)</u>
	<u>\$ 145,992,744</u>	<u>\$ 138,908,589</u>	<u>\$ 106,431,149</u>

All of the Company's accounts receivable classified as at FVTOCI were not past due.

Movements of the loss allowance for accounts receivable

	Three Months Ended March 31	
	2020	2019
Balance, beginning of period	\$ 325,325	\$ 7,253
Provision	5,631	4,204
Effect of exchange rate changes	<u>(74)</u>	<u>-</u>
Balance, end of period	<u>\$ 330,882</u>	<u>\$ 11,457</u>

For the three months ended March 31, 2020 and 2019, the changes in loss allowance were mainly due to the variations in the balance of accounts receivable of different risk levels.

12. INVENTORIES

	March 31, 2020	December 31, 2019	March 31, 2019
Finished goods	\$ 5,917,835	\$ 8,924,541	\$ 12,243,089
Work in process	50,346,660	51,969,105	75,641,271
Raw materials	15,300,850	16,552,275	16,060,259
Supplies and spare parts	<u>6,712,489</u>	<u>5,535,275</u>	<u>4,737,763</u>
	<u>\$ 78,277,834</u>	<u>\$ 82,981,196</u>	<u>\$ 108,682,382</u>

Reversal of write-down of inventories resulting from the increase in net realizable value was included in the cost of revenue, as illustrated below:

	Three Months Ended March 31	
	2020	2019
Reversal of write-down of inventories	<u>\$ 184,001</u>	<u>\$ 519,868</u>

The aforementioned reversal of write-down of inventories excludes wafer contamination losses. Please refer to related losses in Note 35.

13. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

Associates consisted of the following:

Name of Associate	Principal Activities	Place of Incorporation and Operation	Carrying Amount			% of Ownership and Voting Rights Held by the Company		
			March 31, 2020	December 31, 2019	March 31, 2019	March 31, 2020	December 31, 2019	March 31, 2019
Vanguard International Semiconductor Corporation (VIS)	Manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing and design service of masks	Hsinchu, Taiwan	\$ 9,339,016	\$ 9,027,572	\$ 9,402,933	28%	28%	28%
Systems on Silicon Manufacturing Company Pte Ltd. (SSMC)	Manufacturing and selling of integrated circuits and other semiconductor devices	Singapore	6,784,537	6,502,174	5,912,533	39%	39%	39%
Xintec Inc. (Xintec)	Wafer level chip size packaging and wafer level post passivation interconnection service	Taoyuan, Taiwan	1,912,235	1,846,145	1,633,475	41%	41%	41%
Global Unichip Corporation (GUC)	Researching, developing, manufacturing, testing and marketing of integrated circuits	Hsinchu, Taiwan	1,310,591	1,284,377	1,359,341	35%	35%	35%
Mutual-Pak	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	New Taipei, Taiwan	<u>35,381</u>	<u>38,520</u>	<u>28,176</u>	28%	28%	30%
			<u>\$19,381,760</u>	<u>\$18,698,788</u>	<u>\$18,336,458</u>			

The market prices of the investments accounted for using the equity method in publicly traded stocks calculated by the closing price at the end of the reporting period are summarized as follows. The closing price represents the quoted price in active markets, the level 1 fair value measurement.

Name of Associate	March 31, 2020	December 31, 2019	March 31, 2019
VIS	<u>\$ 27,528,453</u>	<u>\$ 36,812,923</u>	<u>\$ 30,870,862</u>
GUC	<u>\$ 8,567,222</u>	<u>\$ 11,251,774</u>	<u>\$ 9,594,355</u>
Xintec	<u>\$ 6,565,634</u>	<u>\$ 8,958,195</u>	<u>\$ 4,451,277</u>

14. PROPERTY, PLANT AND EQUIPMENT

	March 31, 2020	December 31, 2019	March 31, 2019
Assets used by the Company	\$1,438,171,730	\$1,352,313,861	\$ 1,107,570,228
Assets subject to operating leases	<u>43,555</u>	<u>63,544</u>	<u>81,588</u>
	<u>\$1,438,215,285</u>	<u>\$1,352,377,405</u>	<u>\$ 1,107,651,816</u>

a. Assets used by the Company

	Land and Land Improvements	Buildings	Machinery and Equipment	Office Equipment	Equipment under Installation and Construction in Progress	Total
<u>Cost</u>						
Balance at January 1, 2020	\$ 3,991,798	\$ 438,075,063	\$ 2,886,622,968	\$ 54,611,364	\$ 528,295,086	\$ 3,911,596,279
Additions	-	5,510,376	66,788,413	1,948,267	78,315,261	152,562,317
Disposals or retirements	-	(16,162)	(1,122,817)	(76,319)	-	(1,215,298)
Transfers from assets subject to operating leases	-	22,323	-	-	-	22,323
Effect of exchange rate changes	6,527	(229,882)	(42,273)	(16,586)	(66,226)	(348,440)
Balance at March 31, 2020	<u>\$ 3,998,325</u>	<u>\$ 443,361,718</u>	<u>\$ 2,952,246,291</u>	<u>\$ 56,466,726</u>	<u>\$ 606,544,121</u>	<u>\$ 4,062,617,181</u>
<u>Accumulated depreciation and impairment</u>						
Balance at January 1, 2020	\$ 538,690	\$ 243,059,390	\$ 2,278,265,943	\$ 37,418,395	\$ -	\$ 2,559,282,418
Additions	397	6,564,913	58,233,131	1,553,672	-	66,352,113
Disposals or retirements	-	(14,167)	(1,111,272)	(76,052)	-	(1,201,491)
Transfers from assets subject to operating leases	-	8,196	-	-	-	8,196
Effect of exchange rate changes	4,510	(81,532)	87,941	(6,704)	-	4,215
Balance at March 31, 2020	<u>\$ 543,597</u>	<u>\$ 249,536,800</u>	<u>\$ 2,335,475,743</u>	<u>\$ 38,889,311</u>	<u>\$ -</u>	<u>\$ 2,624,445,451</u>
Carrying amounts at January 1, 2020	<u>\$ 3,453,108</u>	<u>\$ 195,015,673</u>	<u>\$ 608,357,025</u>	<u>\$ 17,192,969</u>	<u>\$ 528,295,086</u>	<u>\$ 1,352,313,861</u>
Carrying amounts at March 31, 2020	<u>\$ 3,454,728</u>	<u>\$ 193,824,918</u>	<u>\$ 616,770,548</u>	<u>\$ 17,577,415</u>	<u>\$ 606,544,121</u>	<u>\$ 1,438,171,730</u>
<u>Cost</u>						
Balance at January 1, 2019	\$ 4,011,353	\$ 418,151,675	\$ 2,728,760,127	\$ 48,382,279	\$ 172,910,989	\$ 3,372,216,423
Additions	-	11,387,156	27,140,490	2,227,282	68,891,426	109,646,354
Disposals or retirements	-	-	(2,041,731)	(164,929)	-	(2,206,660)
Transfers from right-of-use assets	-	-	619,779	-	-	619,779
Effect of disposal of subsidiary	-	-	-	(508)	-	(508)
Effect of exchange rate changes	2,340	746,366	2,770,566	61,095	(82,251)	3,498,116
Balance at March 31, 2019	<u>\$ 4,013,693</u>	<u>\$ 430,285,197</u>	<u>\$ 2,757,249,231</u>	<u>\$ 50,505,219</u>	<u>\$ 241,720,164</u>	<u>\$ 3,483,773,504</u>
<u>Accumulated depreciation and impairment</u>						
Balance at January 1, 2019	\$ 550,575	\$ 217,899,243	\$ 2,049,278,908	\$ 32,525,129	\$ -	\$ 2,300,253,855
Additions	408	6,415,223	67,586,999	1,517,848	-	75,520,478
Disposals or retirements	-	-	(1,552,273)	(164,782)	-	(1,717,055)
Transfers from right-of-use assets	-	-	20,659	-	-	20,659
Reversal of impairment	-	-	(301,384)	-	-	(301,384)
Effect of disposal of subsidiary	-	-	-	(508)	-	(508)
Effect of exchange rate changes	1,611	327,550	2,075,968	22,102	-	2,427,231
Balance at March 31, 2019	<u>\$ 552,594</u>	<u>\$ 224,642,016</u>	<u>\$ 2,117,108,877</u>	<u>\$ 33,899,789</u>	<u>\$ -</u>	<u>\$ 2,376,203,276</u>
Carrying amounts at January 1, 2019	<u>\$ 3,460,778</u>	<u>\$ 200,252,432</u>	<u>\$ 679,481,219</u>	<u>\$ 15,857,150</u>	<u>\$ 172,910,989</u>	<u>\$ 1,071,962,568</u>
Carrying amounts at March 31, 2019	<u>\$ 3,461,099</u>	<u>\$ 205,643,181</u>	<u>\$ 640,140,354</u>	<u>\$ 16,605,430</u>	<u>\$ 241,720,164</u>	<u>\$ 1,107,570,228</u>

The significant part of the Company's buildings includes main plants, mechanical and electrical power equipment and clean rooms, and the related depreciation is calculated using the estimated useful lives of 20 years, 10 years and 10 years, respectively.

In the first quarter of 2019, the Company recognized a reversal of impairment loss of NT\$301,384 thousand due to redeployment of certain idle machinery and equipment. Such reversal of impairment loss was recognized in other operating income and expenses.

b. Assets subject to operating leases

	Buildings
<u>Cost</u>	
Balance at January 1, 2020	\$ 562,610
Transfers to assets used by the Company	<u>(22,323)</u>
Balance at March 31, 2020	<u>\$ 540,287</u>
<u>Accumulated depreciation</u>	
Balance at January 1, 2020	\$ 499,066
Additions	5,862
Transfers to assets used by the Company	<u>(8,196)</u>
Balance at March 31, 2020	<u>\$ 496,732</u>
Carrying amounts at January 1, 2020	<u>\$ 63,544</u>
Carrying amounts at March 31, 2020	<u>\$ 43,555</u>
<u>Cost</u>	
Balance at January 1, 2019	<u>\$ 562,610</u>
Balance at March 31, 2019	<u>\$ 562,610</u>
<u>Accumulated depreciation</u>	
Balance at January 1, 2019	\$ 474,899
Additions	<u>6,123</u>
Balance at March 31, 2019	<u>\$ 481,022</u>
Carrying amounts at January 1, 2019	<u>\$ 87,711</u>
Carrying amounts at March 31, 2019	<u>\$ 81,588</u>

Operating leases relate to leases of buildings with lease terms between 1 to 5 years. The lessees do not have purchase options to acquire the assets at the expiry of the lease periods.

The maturity analysis of operating lease payments receivable for the buildings is as follows:

	March 31, 2020	December 31, 2019	March 31, 2019
Year 1	\$ 17,587	\$ 18,450	\$ 29,155
Year 2	16,992	16,992	16,992
Year 3	12,744	16,992	16,992
Year 4	<u>-</u>	<u>-</u>	<u>12,744</u>
	<u>\$ 47,323</u>	<u>\$ 52,434</u>	<u>\$ 75,883</u>

15. LEASE ARRANGEMENTS

a. Right-of-use assets

	March 31, 2020	December 31, 2019	March 31, 2019
<u>Carrying amounts</u>			
Land	\$ 18,647,675	\$ 14,064,036	\$ 14,838,235
Buildings	2,549,108	2,351,809	2,505,993
Machinery and equipment	484,880	775,809	1,648,596
Office equipment	<u>38,985</u>	<u>40,748</u>	<u>50,730</u>
	<u>\$ 21,720,648</u>	<u>\$ 17,232,402</u>	<u>\$ 19,043,554</u>
		Three Months Ended March 31	
		2020	2019
Additions to right-of-use assets		<u>\$ 5,269,725</u>	<u>\$ 211,300</u>
		Three Months Ended March 31	
		2020	2019
Depreciation of right-of-use assets			
Land		\$ 292,756	\$ 242,645
Buildings		135,832	106,108
Machinery and equipment		290,929	311,587
Office equipment		<u>6,249</u>	<u>5,527</u>
		<u>\$ 725,766</u>	<u>\$ 665,867</u>
Income from subleasing right-of-use assets (classified under other operating income and expenses, net)		<u>\$ 18,912</u>	<u>\$ 13,472</u>

b. Lease liabilities

	March 31, 2020	December 31, 2019	March 31, 2019
<u>Carrying amounts</u>			
Current portion (classified under accrued expenses and other current liabilities)	\$ 2,321,413	\$ 2,275,084	\$ 2,699,608
Noncurrent portion	<u>19,490,665</u>	<u>15,041,833</u>	<u>16,907,533</u>
	<u>\$ 21,812,078</u>	<u>\$ 17,316,917</u>	<u>\$ 19,607,141</u>

Ranges of discount rates for lease liabilities are as follows:

	March 31, 2020	December 31, 2019	March 31, 2019
Land	0.62%-2.14%	0.67%-2.14%	0.71%-2.14%
Buildings	0.69%-3.88%	0.67%-3.88%	0.71%-3.88%
Machinery and equipment	3.24%	3.24%	3.24%
Office equipment	0.64%-3.88%	0.64%-3.88%	0.71%-3.88%

c. Material terms of right-of-use assets

The Company leases land and buildings mainly for the use of plants and offices with lease terms of 1 to 36 years. The lease contracts for land located in the R.O.C. specify that lease payments will be adjusted every 2 years on the basis of changes in announced land value prices. The Company does not have purchase options to acquire the leasehold land and buildings at the end of the lease terms.

The Company leases machinery and equipment for use in operation with lease terms of 2 years. The Company has purchase options to acquire leasehold machinery and equipment at the end of the lease terms.

d. Subleases of right-of-use assets

The Company subleases its right-of-use assets for buildings under operating leases with lease terms of 1 to 5 years.

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

	March 31, 2020	December 31, 2019	March 31, 2019
Year 1	\$ 56,523	\$ 58,569	\$ 48,895
Year 2	<u>-</u>	<u>1,885</u>	<u>37</u>
	<u>\$ 56,523</u>	<u>\$ 60,454</u>	<u>\$ 48,932</u>

e. Other lease information

	Three Months Ended March 31 2020	2019
Expenses relating to short-term leases	<u>\$ 968,113</u>	<u>\$ 1,447,573</u>
Expenses relating to low-value asset leases	<u>\$ 86</u>	<u>\$ 204</u>
Expenses relating to variable lease payments not included in the measurement of lease liabilities	<u>\$ 47,845</u>	<u>\$ 50,658</u>
	Three Months Ended March 31 2020	2019
Total cash outflow for leases	<u>\$ 1,794,935</u>	<u>\$ 1,583,732</u>

16. INTANGIBLE ASSETS

	Goodwill	Technology License Fees	Software and System Design Costs	Patent and Others	Total
<u>Cost</u>					
Balance at January 1, 2020	\$ 5,693,376	\$ 15,854,951	\$ 33,024,010	\$ 8,302,996	\$ 62,875,333
Additions	-	4,927,290	373,644	2,716,819	8,017,753
Disposals or retirements	-	-	(48,828)	-	(48,828)
Effect of exchange rate changes	<u>34,083</u>	<u>(3,794)</u>	<u>(4,777)</u>	<u>(383)</u>	<u>25,129</u>
Balance at March 31, 2020	<u>\$ 5,727,459</u>	<u>\$ 20,778,447</u>	<u>\$ 33,344,049</u>	<u>\$ 11,019,432</u>	<u>\$ 70,869,387</u>

(Continued)

	Goodwill	Technology License Fees	Software and System Design Costs	Patent and Others	Total
<u>Accumulated amortization and impairment</u>					
Balance at January 1, 2020	\$ -	\$ 9,823,770	\$ 26,502,067	\$ 5,896,468	\$ 42,222,305
Additions	-	367,942	926,104	176,690	1,470,736
Disposals or retirements	-	-	(48,828)	-	(48,828)
Effect of exchange rate changes	-	(3,795)	(2,826)	(276)	(6,897)
Balance at March 31, 2020	<u>\$ -</u>	<u>\$ 10,187,917</u>	<u>\$ 27,376,517</u>	<u>\$ 6,072,882</u>	<u>\$ 43,637,316</u>
Carrying amounts at January 1, 2020	<u>\$ 5,693,376</u>	<u>\$ 6,031,181</u>	<u>\$ 6,521,943</u>	<u>\$ 2,406,528</u>	<u>\$ 20,653,028</u>
Carrying amounts at March 31, 2020	<u>\$ 5,727,459</u>	<u>\$ 10,590,530</u>	<u>\$ 5,967,532</u>	<u>\$ 4,946,550</u>	<u>\$ 27,232,071</u>
<u>Cost</u>					
Balance at January 1, 2019	\$ 5,795,488	\$ 10,974,458	\$ 29,594,483	\$ 7,656,524	\$ 54,020,953
Additions	-	899,935	1,398,798	7,802	2,306,535
Disposals or retirements	-	-	(11,122)	-	(11,122)
Effect of exchange rate changes	12,221	861	11,246	1,318	25,646
Balance at March 31, 2019	<u>\$ 5,807,709</u>	<u>\$ 11,875,254</u>	<u>\$ 30,993,405</u>	<u>\$ 7,665,644</u>	<u>\$ 56,342,012</u>
<u>Accumulated amortization and impairment</u>					
Balance at January 1, 2019	\$ -	\$ 8,756,005	\$ 23,023,498	\$ 5,239,313	\$ 37,018,816
Additions	-	260,444	921,248	173,644	1,355,336
Disposals or retirements	-	-	(11,122)	-	(11,122)
Effect of exchange rate changes	-	861	3,549	555	4,965
Balance at March 31, 2019	<u>\$ -</u>	<u>\$ 9,017,310</u>	<u>\$ 23,937,173</u>	<u>\$ 5,413,512</u>	<u>\$ 38,367,995</u>
Carrying amounts at January 1, 2019	<u>\$ 5,795,488</u>	<u>\$ 2,218,453</u>	<u>\$ 6,570,985</u>	<u>\$ 2,417,211</u>	<u>\$ 17,002,137</u>
Carrying amounts at March 31, 2019	<u>\$ 5,807,709</u>	<u>\$ 2,857,944</u>	<u>\$ 7,056,232</u>	<u>\$ 2,252,132</u>	<u>\$ 17,974,017</u>

The Company's goodwill has been tested for impairment at the end of the annual reporting period and the recoverable amount is determined based on the value in use. The value in use was calculated based on the cash flow forecast from the financial budgets covering the future five-year period, and the Company used annual discount rate of 8.0% in its test of impairment as of December 31, 2019 to reflect the relevant specific risk in the cash-generating unit.

17. SHORT-TERM LOANS

	March 31, 2020	December 31, 2019	March 31, 2019
Unsecured loans			
Amount	<u>\$ 139,310,384</u>	<u>\$ 118,522,290</u>	<u>\$ 76,592,550</u>
Original loan content			
US\$ (in thousands)	\$ 1,360,000	\$ 2,370,000	\$ 2,265,000
EUR (in thousands)	2,944,000	1,410,000	195,000
Annual interest rate	0.00%-1.60%	0.01%-2.22%	0.01%-2.87%
Maturity date	Due by May 2020	Due by May 2020	Due by April 2019

18. SHORT-TERM BILLS PAYABLE

	March 31, 2020
Commercial paper	\$ 3,000,000
Less: Discounts on commercial paper	<u>(7,142)</u>
	<u>\$ 2,992,858</u>
Annual interest rate	0.50%-0.52%

19. BONDS PAYABLE

	March 31, 2020	December 31, 2019	March 31, 2019
Domestic unsecured bonds	\$ 59,300,000	\$ 56,900,000	\$ 83,400,000
Less: Discounts on bonds payable	(24,852)	-	-
Less: Current portion	<u>(12,800,000)</u>	<u>(31,800,000)</u>	<u>(48,100,000)</u>
	<u>\$ 46,475,148</u>	<u>\$ 25,100,000</u>	<u>\$ 35,300,000</u>

The Company issued domestic unsecured bonds in the first quarter of 2020, which amounted to NT\$24,000,000 thousand. The major terms are as follows:

Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
109-1	A	March 2020 to March 2025	\$ 3,000,000	0.58%	Bullet repayment; interest payable annually
	B	March 2020 to March 2027	10,500,000	0.62%	The same as above
	C	March 2020 to March 2030	10,500,000	0.64%	The same as above

20. GUARANTEE DEPOSITS

	March 31, 2020	December 31, 2019	March 31, 2019
Capacity guarantee	\$ -	\$ 1,499,400	\$ 7,775,326
Receivables guarantee	-	-	669,804
Others	<u>244,614</u>	<u>230,481</u>	<u>273,308</u>
	<u>\$ 244,614</u>	<u>\$ 1,729,881</u>	<u>\$ 8,718,438</u>
Current portion (classified under accrued expenses and other current liabilities)	\$ 67,950	\$ 1,552,977	\$ 6,897,690
Noncurrent portion	<u>176,664</u>	<u>176,904</u>	<u>1,820,748</u>
	<u>\$ 244,614</u>	<u>\$ 1,729,881</u>	<u>\$ 8,718,438</u>

Some of guarantee deposits were refunded to customers by offsetting related accounts receivable.

21. EQUITY

a. Capital stock

	March 31, 2020	December 31, 2019	March 31, 2019
Authorized shares (in thousands)	<u>28,050,000</u>	<u>28,050,000</u>	<u>28,050,000</u>
Authorized capital	<u>\$ 280,500,000</u>	<u>\$ 280,500,000</u>	<u>\$ 280,500,000</u>
Issued and paid shares (in thousands)	<u>25,930,380</u>	<u>25,930,380</u>	<u>25,930,380</u>
Issued capital	<u>\$ 259,303,805</u>	<u>\$ 259,303,805</u>	<u>\$ 259,303,805</u>

A holder of issued common shares with par value of NT\$10 per share is entitled to vote and to receive dividends.

The authorized shares include 500,000 thousand shares allocated for the exercise of employee stock options.

As of March 31, 2020, 1,065,091 thousand ADSs of TSMC were traded on the NYSE. The number of common shares represented by the ADSs was 5,325,454 thousand shares (one ADS represents five common shares).

b. Capital surplus

	March 31, 2020	December 31, 2019	March 31, 2019
Additional paid-in capital	\$ 24,184,939	\$ 24,184,939	\$ 24,184,939
From merger	22,804,510	22,804,510	22,804,510
From convertible bonds	8,892,847	8,892,847	8,892,847
From share of changes in equities of subsidiaries	121,843	121,843	121,843
From share of changes in equities of associates	302,310	302,234	287,206
Donations	<u>33,336</u>	<u>33,336</u>	<u>29,343</u>
	<u>\$ 56,339,785</u>	<u>\$ 56,339,709</u>	<u>\$ 56,320,688</u>

Under the relevant laws, the capital surplus generated from donations and the excess of the issuance price over the par value of capital stock (including the stock issued for new capital, mergers and convertible bonds) may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or stock dividends up to a certain percentage of TSMC's paid-in capital. The capital surplus from share of changes in equities of subsidiaries and associates and dividend of a claim extinguished by a prescription may be used to offset a deficit; however, when generated from issuance of restricted shares for employees, such capital surplus may not be used for any purpose.

c. Retained earnings and dividend policy

The amendments to TSMC's Articles of Incorporation had been approved by TSMC's shareholders in its meeting held on June 5, 2019, which stipulate that earnings distribution may be made on a quarterly basis after the close of each quarter. Distribution of earnings by way of cash dividends should be approved by TSMC's Board of Directors and reported to TSMC's shareholders in its meeting.

TSMC's amended Articles of Incorporation provide that, when allocating earnings, TSMC shall first estimate and reserve the taxes to be paid, offset its losses, set aside a legal capital reserve at 10% of the remaining earnings (until the accumulated legal capital reserve equals TSMC's paid-in capital), then set aside a special capital reserve in accordance with relevant laws or regulations or as requested by the authorities in charge. Any balance left over shall be allocated according to relevant laws and the TSMC's Articles of Incorporation.

TSMC's Articles of Incorporation also provide that profits of TSMC may be distributed by way of cash dividend and/or stock dividend. However, distribution of earnings shall be made preferably by way of cash dividend. Distribution of earnings may also be made by way of stock dividend, provided that the ratio for stock dividend shall not exceed 50% of the total distribution.

The reserve may be used to offset a deficit, or be distributed as dividends in cash or stocks for the portion in excess of 25% of the paid-in capital if the Company incurs no loss.

Pursuant to existing regulations, the Company is required to set aside additional special capital reserve equivalent to the net debit balance of the other components of stockholders' equity, such as the accumulated balance of foreign currency translation reserve, unrealized valuation gain or loss from fair value through other comprehensive income financial assets, unrealized valuation gain or loss from available-for-sale financial assets, gain or loss from changes in fair value of hedging instruments in cash flow hedges, etc. For the subsequent decrease in the deduction amount to stockholders' equity, any special reserve appropriated may be reversed to the extent that the net debit balance reverses.

The appropriation of 2018 earnings has been approved by TSMC's shareholders in its meeting held on June 5, 2019. The appropriation and cash dividends per share were as follows:

	Appropriation of Earnings	Cash Dividends Per Share (NT\$)
Legal capital reserve	<u>\$ 35,113,088</u>	
Special capital reserve	<u>\$ (11,459,458)</u>	
Cash dividends to shareholders	<u>\$ 207,443,044</u>	\$ 8.0

The appropriations of 2019 quarterly earnings have been approved by TSMC's Board of Directors in its meeting. The appropriations and cash dividends per share were as follows:

Resolution Date of TSMC's Board of Directors in its meeting	Fourth Quarter of 2019 February 11, 2020	Third Quarter of 2019 November 12, 2019	Second Quarter of 2019 August 13, 2019	First Quarter of 2019 June 5, 2019
Special capital reserve	<u>\$ 16,893,073</u>	<u>\$ 3,289,166</u>	<u>\$ (3,338,190)</u>	<u>\$ (4,723,939)</u>
Cash dividends to shareholders	<u>\$ 64,825,951</u>	<u>\$ 64,825,951</u>	<u>\$ 64,825,951</u>	<u>\$ 51,860,761</u>
Cash dividends per share (NT\$)	<u>\$ 2.5</u>	<u>\$ 2.5</u>	<u>\$ 2.5</u>	<u>\$ 2.0</u>

The special capital reserve for 2019 is to be presented for approval in the TSMC's shareholders' meeting to be held on June 9, 2020 (expected).

The appropriation of 2020 quarterly earnings has been approved by TSMC's Board of Directors in its meeting. The appropriation and cash dividends per share were as follows:

Resolution Date of TSMC's Board of Directors in its meeting	First Quarter of 2020 May 12, 2020
Special capital reserve	\$ (2,694,841)
Cash dividends to shareholders	\$ 64,825,951
Cash dividends per share (NT\$)	\$ 2.5

d. Others

Changes in others were as follows:

	Three Months Ended March 31, 2020				
	Foreign Currency Translation Reserve	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Gain (Loss) on Hedging Instruments	Unearned Stock-Based Employee Compensation	Total
Balance, beginning of period	\$ (26,871,400)	\$ (692,959)	\$ (3,820)	\$ (190)	\$ (27,568,369)
Exchange differences arising on translation of foreign operations	3,034,978	-	-	-	3,034,978
Unrealized gain (loss) on financial assets at FVTOCI					
Equity instruments	-	(43,647)	-	-	(43,647)
Debt instruments	-	(32,962)	-	-	(32,962)
Cumulative unrealized gain (loss) of debt instruments transferred to profit or loss due to disposal	-	(179,412)	-	-	(179,412)
Loss allowance adjustments from debt instruments	-	1,626	-	-	1,626
Gain (loss) arising on changes in the fair value of hedging instruments	-	-	(42,749)	-	(42,749)
Transferred to initial carrying amount of hedged items	-	-	46,569	-	46,569
Share of other comprehensive income (loss) of associates	(86,359)	(3,317)	-	-	(89,676)
Share of unearned stock-based employee compensation of associates	-	-	-	190	190
Income tax effect	-	114	-	-	114
Balance, end of period	<u>\$ (23,922,781)</u>	<u>\$ (950,557)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (24,873,338)</u>

	Three Months Ended March 31, 2019				
	Foreign Currency Translation Reserve	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Gain (Loss) on Hedging Instruments	Unearned Stock-Based Employee Compensation	Total
Balance, beginning of period	\$ (12,042,347)	\$ (3,429,324)	\$ 23,601	\$ (1,843)	\$ (15,449,913)
Exchange differences arising on translation of foreign operations	3,213,471	-	-	-	3,213,471
Unrealized gain (loss) on financial assets at FVTOCI					
Equity instruments	-	53,532	-	-	53,532
Debt instruments	-	1,395,796	-	-	1,395,796
Cumulative unrealized gain (loss) of equity instruments transferred to retained earnings due to disposal	-	95,538	-	-	95,538
Cumulative unrealized gain (loss) of debt instruments transferred to profit or loss due to disposal	-	53,105	-	-	53,105

(Continued)

	Three Months Ended March 31, 2019				
	Foreign Currency Translation Reserve	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Gain (Loss) on Hedging Instruments	Unearned Stock-Based Employee Compensation	Total
Loss allowance adjustments from debt instruments	\$ -	\$ (511)	\$ -	\$ -	\$ (511)
Other comprehensive income transferred to profit or loss due to disposal of subsidiary	4,598	-	-	-	4,598
Gain (loss) arising on changes in the fair value of hedging instruments	-	-	(94,548)	-	(94,548)
Transferred to initial carrying amount of hedged items	-	-	12,434	-	12,434
Share of other comprehensive income (loss) of associates	8,328	248	-	-	8,576
Share of unearned stock-based employee compensation of associates	-	-	-	950	950
Income tax effect	-	(18,051)	-	-	(18,051)
Balance, end of period	<u>\$ (8,815,950)</u>	<u>\$ (1,849,667)</u>	<u>\$ (58,513)</u>	<u>\$ (893)</u>	<u>\$ (10,725,023)</u>

(Concluded)

The aforementioned other equity includes the changes in other equities of TSMC and TSMC's share of its subsidiaries and associates.

22. NET REVENUE

a. Disaggregation of revenue from contracts with customers

Product	Three Months Ended March 31	
	2020	2019
Wafer	\$ 271,649,812	\$ 190,100,011
Others	<u>38,947,371</u>	<u>28,604,458</u>
	<u>\$ 310,597,183</u>	<u>\$ 218,704,469</u>

Geography	Three Months Ended March 31	
	2020	2019
Taiwan	\$ 30,235,078	\$ 17,358,562
United States	171,574,089	129,023,339
China	68,493,407	39,551,859
Europe, the Middle East and Africa	17,319,245	16,279,553
Japan	17,263,605	13,187,925
Others	<u>5,711,759</u>	<u>3,303,231</u>
	<u>\$ 310,597,183</u>	<u>\$ 218,704,469</u>

The Company categorized the net revenue mainly based on the countries where the customers are headquartered.

Platform	Three Months Ended March 31	
	2020	2019
Smartphone	\$ 151,931,277	\$ 103,210,269
High Performance Computing	92,993,610	62,824,973
Internet of Things	26,595,813	16,717,625
Automotive	13,061,727	10,626,515
Digital Consumer Electronics	15,577,838	14,627,749
Others	<u>10,436,918</u>	<u>10,697,338</u>
	<u>\$ 310,597,183</u>	<u>\$ 218,704,469</u>

Resolution	Three Months Ended March 31	
	2020	2019
7-nanometer	\$ 95,707,564	\$ 42,208,718
10-nanometer	1,279,497	6,981,206
16-nanometer	51,419,279	30,049,700
20-nanometer	1,852,768	2,763,835
28-nanometer	37,999,954	37,142,360
40/45-nanometer	26,094,254	23,286,880
65-nanometer	15,984,202	15,828,535
90-nanometer	7,671,469	6,300,002
0.11/0.13 micron	7,022,429	5,048,576
0.15/0.18 micron	21,653,001	15,672,766
0.25 micron and above	<u>4,965,395</u>	<u>4,817,433</u>
Wafer revenue	<u>\$ 271,649,812</u>	<u>\$ 190,100,011</u>

b. Contract balances

	March 31, 2020	December 31, 2019	March 31, 2019	January 1, 2019
Contract liabilities (classified under accrued expenses and other current liabilities)	<u>\$ 8,404,051</u>	<u>\$ 6,784,323</u>	<u>\$ 6,027,843</u>	<u>\$ 4,684,024</u>

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

The Company recognized revenue from the beginning balance of contract liability, which amounted to NT\$3,469,918 thousand and NT\$2,568,026 thousand for the three months ended March 31, 2020 and 2019, respectively.

23. OTHER INCOME

	Three Months Ended March 31	
	2020	2019
Interest income		
Bank deposits	\$ 1,913,071	\$ 3,150,272
Financial assets at FVTPL	586	186,317
Financial assets at FVTOCI	883,976	785,216
Financial assets at amortized cost	<u>191,436</u>	<u>286,971</u>
	2,989,069	4,408,776
Dividend income	<u>110,509</u>	<u>-</u>
	<u>\$ 3,099,578</u>	<u>\$ 4,408,776</u>

24. FINANCE COSTS

	Three Months Ended March 31	
	2020	2019
Interest expense		
Bank loans	\$ 293,066	\$ 506,581
Corporate bonds	168,442	325,002
Lease liabilities	68,215	67,325
Others	<u>841</u>	<u>157</u>
	<u>\$ 530,564</u>	<u>\$ 899,065</u>

25. OTHER GAINS AND LOSSES, NET

	Three Months Ended March 31	
	2020	2019
Gain (loss) on disposal of financial assets, net		
Investments in debt instruments at FVTOCI	\$ 179,412	\$ (53,105)
Loss on disposal of subsidiaries	-	(4,598)
Loss on financial instruments at FVTPL, net		
Mandatorily measured at FVTPL	(90,963)	(496,763)
Gain arising from fair value hedges, net	-	11,758
The reversal (accrual) of expected credit loss of financial assets		
Investments in debt instruments at FVTOCI	(1,626)	511
Financial assets at amortized cost	-	4,374
Other gains (losses), net	<u>(132,055)</u>	<u>279,568</u>
	<u>\$ (45,232)</u>	<u>\$ (258,255)</u>

26. INCOME TAX

a. Income tax expense recognized in profit or loss

Income tax expense consisted of the following:

	Three Months Ended March 31	
	2020	2019
Current income tax expense		
Current tax expense recognized in the current period	\$ 16,387,346	\$ 6,986,063
Income tax adjustments on prior years	28,402	(1,666)
Other income tax adjustments	<u>33,261</u>	<u>(1,743)</u>
	<u>16,449,009</u>	<u>6,982,654</u>
Deferred income tax benefit		
The origination and reversal of temporary differences	<u>(1,364,724)</u>	<u>(188,312)</u>
Income tax expense recognized in profit or loss	<u>\$ 15,084,285</u>	<u>\$ 6,794,342</u>

Under the amendment to the R.O.C Statute of Industrial Innovation in 2019, the amounts of unappropriated earnings in 2018 and thereafter used for building or purchasing specific assets or technologies can qualify for deduction when computing the income tax on unappropriated earnings.

For other jurisdictions, taxes are calculated using the applicable tax rate for each individual jurisdiction.

b. Income tax expense recognized in other comprehensive income

	Three Months Ended March 31	
	2020	2019
Deferred income tax benefit (expense)		
Related to unrealized gain/loss on investments in equity instruments at FVTOCI	<u>\$ 114</u>	<u>\$ (18,051)</u>

c. Income tax examination

The tax authorities have examined income tax returns of TSMC through 2018. All investment tax credit adjustments assessed by the tax authorities have been recognized accordingly.

27. EARNINGS PER SHARE

	Three Months Ended March 31	
	2020	2019
Basic EPS	<u>\$ 4.51</u>	<u>\$ 2.37</u>
Diluted EPS	<u>\$ 4.51</u>	<u>\$ 2.37</u>

EPS is computed as follows:

	Amounts (Numerator)	Number of Shares (Denominator) (In Thousands)	EPS (NT\$)
<u>Three months ended March 31, 2020</u>			
Basic/Diluted EPS			
Net income available to common shareholders of the parent	<u>\$ 116,986,720</u>	<u>25,930,380</u>	<u>\$ 4.51</u>
<u>Three months ended March 31, 2019</u>			
Basic/Diluted EPS			
Net income available to common shareholders of the parent	<u>\$ 61,393,851</u>	<u>25,930,380</u>	<u>\$ 2.37</u>

28. ADDITIONAL INFORMATION OF EXPENSES BY NATURE

	<u>Three Months Ended March 31</u>	
	2020	2019
a. Depreciation of property, plant and equipment and right-of-use assets		
Recognized in cost of revenue	\$ 60,839,984	\$ 69,934,176
Recognized in operating expenses	6,237,895	6,252,169
Recognized in other operating income and expenses	<u>5,862</u>	<u>6,123</u>
	<u>\$ 67,083,741</u>	<u>\$ 76,192,468</u>
b. Amortization of intangible assets		
Recognized in cost of revenue	\$ 895,398	\$ 713,093
Recognized in operating expenses	<u>575,338</u>	<u>642,243</u>
	<u>\$ 1,470,736</u>	<u>\$ 1,355,336</u>
c. Research and development costs expensed as incurred	<u>\$ 24,968,883</u>	<u>\$ 20,417,311</u>
d. Employee benefits expenses		
Post-employment benefits		
Defined contribution plans	\$ 680,824	\$ 653,319
Defined benefit plans	<u>51,215</u>	<u>64,880</u>
	732,039	718,199
Other employee benefits	<u>31,787,671</u>	<u>22,953,464</u>
	<u>\$ 32,519,710</u>	<u>\$ 23,671,663</u>

(Continued)

	Three Months Ended March 31	
	2020	2019
Employee benefits expense summarized by function		
Recognized in cost of revenue	\$ 19,444,500	\$ 14,074,980
Recognized in operating expenses	<u>13,075,210</u>	<u>9,596,683</u>
	<u>\$ 32,519,710</u>	<u>\$ 23,671,663</u>
		(Concluded)

According to TSMC's Articles of Incorporation, TSMC shall allocate compensation to directors and profit sharing bonus to employees of TSMC not more than 0.3% and not less than 1% of annual profits during the period, respectively.

TSMC accrued profit sharing bonus to employees based on a percentage of net income before income tax, profit sharing bonus to employees and compensation to directors during the period; compensation to directors was expensed based on estimated amount payable. If there is a change in the proposed amounts after the annual consolidated financial statements are authorized for issue, the differences are recorded as a change in accounting estimate. Accrued profit sharing bonus to employees is illustrated below:

	Three Months Ended March 31	
	2020	2019
Profit sharing bonus to employees	<u>\$ 7,853,916</u>	<u>\$ 4,119,681</u>

TSMC's profit sharing bonus to employees and compensation to directors for 2019 and 2018 had been approved by the Board of Directors of TSMC, as illustrated below:

	Years Ended December 31	
	2019	2018
Resolution Date of TSMC's Board of Directors in its meeting	February 11, 2020	February 19, 2019
Profit sharing bonus to employees	<u>\$ 23,165,745</u>	<u>\$ 23,570,040</u>
Compensation to directors	<u>\$ 360,404</u>	<u>\$ 349,272</u>

There is no significant difference between the aforementioned approved amounts and the amounts charged against earnings of 2019 and 2018, respectively.

The information about the appropriations of TSMC's profit sharing bonus to employees and compensation to directors is available at the Market Observation Post System website.

29. CASH FLOW INFORMATION

a. Non-cash transactions

	Three Months Ended March 31	
	2020	2019
Additions of property, plant and equipment	\$ 152,562,317	\$ 109,646,354
Changes in other financial assets	381,464	212,735
Changes in payables to contractors and equipment suppliers	39,662,414	(33,904,537)
Transferred to initial carrying amount of hedged items	<u>(46,569)</u>	<u>(12,434)</u>
Payments for acquisition of property, plant and equipment	<u>\$ 192,559,626</u>	<u>\$ 75,942,118</u>
Additions of intangible assets	\$ 8,017,753	\$ 2,306,535
Changes in other financial assets	2,285	19,573
Changes in account payable	191,430	(225,082)
Changes in accrued expenses and other current liabilities	<u>(7,365,384)</u>	<u>-</u>
Payments for acquisition of intangible assets	<u>\$ 846,084</u>	<u>\$ 2,101,026</u>
Additions of financial assets at FVTOCI	\$ 59,702,728	\$ 35,283,654
Conversion of convertible bonds into equity securities	(120,548)	-
Changes in accrued expenses and other current liabilities	<u>(3,053,786)</u>	<u>(838,395)</u>
Payments for acquisition of financial assets at FVTOCI	<u>\$ 56,528,394</u>	<u>\$ 34,445,259</u>
Disposal of financial assets at FVTOCI	\$ 59,050,681	\$ 29,447,714
Changes in other financial assets	<u>(1,864,753)</u>	<u>2,236,632</u>
Proceeds from disposal of financial assets at FVTOCI	<u>\$ 57,185,928</u>	<u>\$ 31,684,346</u>

b. Reconciliation of liabilities arising from financing activities

	Balance as of January 1, 2020	Financing Cash Flow	Non-cash changes			Balance as of March 31, 2020
			Foreign Exchange Movement	Leases Modifications	Other Changes (Note)	
Short-term loans	\$ 118,522,290	\$ 20,348,002	\$ 440,092	\$ -	\$ -	\$ 139,310,384
Short-term bills payable	-	2,992,197	-	-	661	2,992,858
Guarantee deposits	1,729,881	13,565	12,418	-	(1,511,250)	244,614
Lease liabilities	17,316,917	(784,284)	22,733	5,188,497	68,215	21,812,078
Bonds payable	<u>56,900,000</u>	<u>2,375,079</u>	<u>-</u>	<u>-</u>	<u>69</u>	<u>59,275,148</u>
Total	<u>\$ 194,469,088</u>	<u>\$ 24,944,559</u>	<u>\$ 475,243</u>	<u>\$ 5,188,497</u>	<u>\$ (1,442,305)</u>	<u>\$ 223,635,082</u>

	Balance as of January 1, 2019	Financing Cash Flow	Non-cash changes			Balance as of March 31, 2019
			Foreign Exchange Movement	Leases Modifications	Other Changes (Note)	
Short-term loans	\$ 88,754,640	\$ (12,262,255)	\$ 100,165	\$ -	\$ -	\$ 76,592,550
Guarantee deposits	10,189,045	26,196	45,997	-	(1,542,800)	8,718,438
Lease liabilities	19,903,615	(589,592)	17,141	208,652	67,325	19,607,141
Bonds payable	<u>91,800,000</u>	<u>(8,400,000)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>83,400,000</u>
Total	<u>\$ 210,647,300</u>	<u>\$ (21,225,651)</u>	<u>\$ 163,303</u>	<u>\$ 208,652</u>	<u>\$ (1,475,475)</u>	<u>\$ 188,318,129</u>

Note: Other changes include amortization of short-term bills payable, guarantee deposits refunded to customers by offsetting related accounts receivable, financial cost of lease liabilities and amortization of bonds payable.

30. FINANCIAL INSTRUMENTS

a. Categories of financial instruments

	March 31, 2020	December 31, 2019	March 31, 2019
Financial assets			
FVTPL (Note 1)	\$ 1,254,253	\$ 326,839	\$ 3,084,399
FVTOCI (Note 2)	137,292,285	134,776,779	113,688,888
Hedging financial assets	-	25,884	969
Amortized cost (Note 3)	<u>593,661,436</u>	<u>612,740,640</u>	<u>775,326,755</u>
	<u>\$ 732,207,974</u>	<u>\$ 747,870,142</u>	<u>\$ 892,101,011</u>
Financial liabilities			
FVTPL (Note 4)	\$ 980,241	\$ 982,349	\$ 151,079
Hedging financial liabilities	109,826	1,798	111,374
Amortized cost (Note 5)	<u>531,736,073</u>	<u>533,581,640</u>	<u>323,693,554</u>
	<u>\$ 532,826,140</u>	<u>\$ 534,565,787</u>	<u>\$ 323,956,007</u>

Note 1: Financial assets mandatorily measured at FVTPL.

Note 2: Including notes and accounts receivable (net), equity and debt investments.

Note 3: Including cash and cash equivalents, financial assets at amortized cost, notes and accounts receivable (including related parties), other receivables and refundable deposits.

Note 4: Held for trading.

Note 5: Including short-term loans, short-term bills payable, accounts payable (including related parties), payables to contractors and equipment suppliers, cash dividends payable, accrued expenses and other current liabilities, bonds payable and guarantee deposits.

b. Financial risk management objectives

The Company seeks to ensure that sufficient cost-efficient funding is readily available when needed. The Company manages its exposure to foreign currency risk, interest rate risk, equity price risk, credit risk and liquidity risk with the objective to reduce the potentially adverse effects the market uncertainties may have on its financial performance.

The plans for material treasury activities are reviewed by Audit Committees and/or Board of Directors in accordance with procedures required by relevant regulations or internal controls. During the implementation of such plans, the corporate treasury function must comply with certain treasury procedures that provide guiding principles for overall financial risk management and segregation of duties.

c. Market risk

The Company is exposed to the financial market risks, primarily changes in foreign currency exchange rates, interest rates and equity investment prices. A portion of these risks is hedged.

Foreign currency risk

The majority of the Company's revenue is denominated in U.S. dollar and over one-half of its capital expenditures are denominated in currencies other than NT dollar, primarily in U.S. dollar, Japanese yen and Euro. As a result, any significant fluctuations to its disadvantage in exchange rate of NT dollar against such currencies, in particular a weakening of U.S. dollar against NT dollar, would have an adverse impact on the revenue and operating profit as expressed in NT dollar. The Company uses foreign currency derivative contracts, such as currency forwards or currency swaps, to protect against currency exchange rate risks associated with non-NT dollar-denominated assets and liabilities and certain forecasted transactions. The Company utilizes U.S. dollar denominated debt to partially offset currency risk arising from U.S. dollar denominated receivables for balance sheet hedges. These hedges reduce, but do not entirely eliminate, the effect of foreign currency exchange rate movements on the assets and liabilities.

Based on a sensitivity analysis performed on the Company's total monetary assets and liabilities for the three months ended March 31, 2020 and 2019, a hypothetical adverse foreign currency exchange rate change of 10% would have decreased its net income by NT\$714,775 thousand and NT\$1,069,244 thousand for the three months ended March 31, 2020 and 2019, respectively, and decreased its other comprehensive income by NT\$613,142 thousand for the three months ended March 31, 2019, after taking into account hedges and offsetting positions.

Interest rate risk

The Company is exposed to interest rate risks primarily related to its investment portfolio and outstanding debt. Changes in interest rates affect the interest earned on the Company's cash and cash equivalents and fixed income securities, the fair value of those securities, as well as the interest paid on its short-term loans.

The Company's cash and cash equivalents as well as fixed income investments in both fixed- and floating-rate securities carry a degree of interest rate risk. The majority of the Company's fixed income investments are fixed-rate securities and classified as financial assets at FVTOCI, and may have their fair value adversely affected due to a rise in interest rates, while cash and cash equivalents as well as floating-rate securities may generate less interest income than predicted if interest rates fall. The Company has entered, and may enter in the future, into interest rate futures to partially hedge the interest rate risk on its fixed income investments. However, these hedges can offset only a small portion of the financial impact from movement in interest rates.

Based on a sensitivity analysis performed on the Company's fixed income investments at the end of the reporting period, interest rates increase of 100 basis points (1.00%) across all maturities would have decreased the fair value by NT\$2,904,515 thousand and NT\$2,515,345 thousand for the three months ended March 31, 2020 and 2019, respectively. The decreases were composed of NT\$2,903,800 thousand decrease and NT\$3,000,289 thousand decrease in other comprehensive income, and NT\$715 thousand decrease and NT\$484,944 thousand increase in net income for the three months ended March 31, 2020 and 2019, respectively.

Majority of the Company's short-term debts are floating-rate; hence, a rise in interest rates may incur higher interest expense than predicted. All of the Company's long-term debts are fixed-rate and measured at amortized cost; as such, changes in interest rates would not affect the future cash flows and the carrying amount.

Other price risk

The Company is exposed to equity price risk arising from financial assets at FVTOCI.

Assuming a hypothetical decrease of 10% in prices of the equity investments at the end of the reporting period for the three months ended March 31, 2020 and 2019, the other comprehensive income would have decreased by NT\$413,365 thousand and NT\$424,983 thousand, respectively.

d. Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial losses to the Company. The Company is exposed to credit risks from operating activities, primarily trade receivables, and from investing activities, primarily deposits, fixed-income investments and other financial instruments with banks. Credit risk is managed separately for business related and financial related exposures. As of the end of the reporting period, the Company's maximum credit risk exposure is equal to the carrying amount of financial assets.

Business related credit risk

The Company's trade receivables are from its customers worldwide. The majority of the Company's outstanding trade receivables are not covered by collaterals or guarantees. While the Company has procedures to monitor and manage credit risk exposure on trade receivables, there is no assurance such procedures will effectively eliminate losses resulting from its credit risk. This risk is heightened during periods when economic conditions worsen.

As of March 31, 2020, December 31, 2019 and March 31, 2019, the Company's ten largest customers accounted for 78%, 79% and 74% of accounts receivable, respectively. The Company considers the concentration of credit risk for the remaining accounts receivable not material.

Financial credit risk

The Company mitigates its financial credit risk by selecting counterparties with investment grade credit ratings and by limiting the exposure to any individual counterparty. The Company regularly monitors and reviews the limit applied to counterparties and adjusts the limit according to market conditions and the credit standing of the counterparties.

The objective of the Company's investment policy is to achieve a return that will allow the Company to preserve principal and support liquidity requirements. The policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer. The Company assesses whether there has been a significant increase in credit risk in the securities since initial recognition by reviewing changes in external credit ratings, financial market conditions and material information of the issuers. The credit rating information is supplied by external rating agencies.

The Company assesses the 12-month expected credit loss and lifetime expected credit loss based on the probability of default and loss given default provided by external credit rating agencies. The current credit risk assessment policies are as follows:

Category	Description	Basis for Recognizing Expected Credit Loss	Expected Credit Loss Ratio
Performing	Credit rating on trade date and valuation date: (1) Within investment grade (2) Between BB+ and BB-	12 months expected credit loss	0-0.1%
Doubtful	Credit rating on trade date and valuation date: (1) From investment grade to non-investment grade (2) From BB+~BB- to B+~CCC-	Lifetime expected credit loss-not credit impaired	-

(Continued)

Category	Description	Basis for Recognizing Expected Credit Loss	Expected Credit Loss Ratio
In default	Credit rating CC or below	Lifetime expected credit loss-credit impaired	-
Write-off	There is evidence indicating that the debtor is in severe financial difficulty and the Company has no realistic prospect of recovery	Amount is written off	-

(Concluded)

For the three months ended March 31, 2020 and 2019, the expected credit loss increases NT\$1,954 thousand and decreases NT\$4,776 thousand, respectively. The changes are mainly due to investment portfolio adjustment.

e. Liquidity risk management

The objective of liquidity risk management is to ensure the Company has sufficient liquidity to fund its business operations over the next 12 months. The Company manages its liquidity risk by maintaining adequate cash and cash equivalent, debt investment at FVTPL, financial assets at FVTOCI-current, and financial assets amortized at cost-current.

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual undiscounted payments, including principal and interest.

	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years	Total
<u>March 31, 2020</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 139,328,860	\$ -	\$ -	\$ -	\$ 139,328,860
Short-term bills payable	3,000,000	-	-	-	3,000,000
Accounts payable (including related parties)	39,774,214	-	-	-	39,774,214
Payables to contractors and equipment suppliers	101,466,057	-	-	-	101,466,057
Accrued expenses and other current liabilities	59,020,896	-	-	-	59,020,896
Bonds payable	13,432,174	17,428,125	9,442,842	21,463,355	61,766,496
Lease liabilities (including those classified under accrued expenses and other current liabilities)	2,524,171	3,475,775	3,156,510	14,299,301	23,455,757
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	67,950	120,340	55,966	358	244,614
	<u>358,614,322</u>	<u>21,024,240</u>	<u>12,655,318</u>	<u>35,763,014</u>	<u>428,056,894</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	214,398,608	-	-	-	214,398,608
Inflows	(215,631,561)	-	-	-	(215,631,561)
	<u>(1,232,953)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(1,232,953)</u>
	<u>\$ 357,381,369</u>	<u>\$ 21,024,240</u>	<u>\$ 12,655,318</u>	<u>\$ 35,763,014</u>	<u>\$ 426,823,941</u>

(Continued)

	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years	Total
<u>December 31, 2019</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 118,562,641	\$ -	\$ -	\$ -	\$ 118,562,641
Accounts payable (including related parties)	40,205,966	-	-	-	40,205,966
Payables to contractors and equipment suppliers	140,810,703	-	-	-	140,810,703
Accrued expenses and other current liabilities	45,760,898	-	-	-	45,760,898
Bonds payable	32,338,853	7,777,715	18,203,601	-	58,320,169
Lease liabilities (including those classified under accrued expenses and other current liabilities)	2,475,177	2,782,860	2,484,478	10,947,730	18,690,245
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	1,552,977	121,047	55,501	356	1,729,881
	<u>381,707,215</u>	<u>10,681,622</u>	<u>20,743,580</u>	<u>10,948,086</u>	<u>424,080,503</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	\$ 141,450,762	\$ -	\$ -	\$ -	\$ 141,450,762
Inflows	<u>(141,128,914)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(141,128,914)</u>
	<u>321,848</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>321,848</u>
	<u>\$ 382,029,063</u>	<u>\$ 10,681,622</u>	<u>\$ 20,743,580</u>	<u>\$ 10,948,086</u>	<u>\$ 424,402,351</u>
<u>March 31, 2019</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 76,638,209	\$ -	\$ -	\$ -	\$ 76,638,209
Accounts payable (including related parties)	27,661,850	-	-	-	27,661,850
Payables to contractors and equipment suppliers	76,970,966	-	-	-	76,970,966
Accrued expenses and other current liabilities	50,349,750	-	-	-	50,349,750
Bonds payable	49,080,086	13,673,294	22,881,721	-	85,635,101
Lease liabilities (including those classified under accrued expenses and other current liabilities)	2,704,611	3,411,829	2,498,203	11,897,443	20,512,086
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	6,897,690	1,357,681	463,067	-	8,718,438
	<u>290,303,162</u>	<u>18,442,804</u>	<u>25,842,991</u>	<u>11,897,443</u>	<u>346,486,400</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	59,765,345	-	-	-	59,765,345
Inflows	<u>(59,580,087)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(59,580,087)</u>
	<u>185,258</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>185,258</u>
	<u>\$ 290,488,420</u>	<u>\$ 18,442,804</u>	<u>\$ 25,842,991</u>	<u>\$ 11,897,443</u>	<u>\$ 346,671,658</u>
					(Concluded)

Additional information about the maturity analysis for lease liabilities:

	Less than 5 Years	5-10 Years	10-15 Years	15-20 Years	More Than 20 Years
<u>March 31, 2020</u>					
Lease liabilities	\$ 9,156,456	\$ 6,972,775	\$ 5,045,286	\$ 2,242,470	\$ 38,770
<u>December 31, 2019</u>					
Lease liabilities	\$ 7,742,515	\$ 5,581,116	\$ 3,691,272	\$ 1,600,962	\$ 74,380
<u>March 31, 2019</u>					
Lease liabilities	\$ 8,614,643	\$ 5,776,436	\$ 4,001,755	\$ 1,928,816	\$ 190,436

f. Fair value of financial instruments

1) Fair value measurements recognized in the consolidated balance sheets

Fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

2) Fair value of financial instruments that are measured at fair value on a recurring basis

Fair value hierarchy

The following table presents the Company's financial assets and liabilities measured at fair value on a recurring basis:

	<u>March 31, 2020</u>			
	Level 1	Level 2	Level 3	Total
<u>Financial assets at FVTPL</u>				
Mandatorily measured at FVTPL				
Forward exchange contracts	\$ -	\$ 1,216,560	\$ -	\$ 1,216,560
Agency mortgage-backed securities	-	37,693	-	37,693
	<u>\$ -</u>	<u>\$ 1,254,253</u>	<u>\$ -</u>	<u>\$ 1,254,253</u>

(Continued)

March 31, 2020

	Level 1	Level 2	Level 3	Total
<u>Financial assets at FVTOCI</u>				
Investments in debt instruments				
Corporate bonds	\$ -	\$ 56,092,287	\$ -	\$ 56,092,287
Agency bonds/Agency mortgage-backed securities	-	50,881,130	-	50,881,130
Government bonds	10,981,492	145,786	-	11,127,278
Asset-backed securities	-	11,118,582	-	11,118,582
Investments in equity instruments				
Non-publicly traded equity investments	-	28,492	4,212,832	4,241,324
Notes and accounts receivable, net	-	3,831,684	-	3,831,684
	<u>\$ 10,981,492</u>	<u>\$ 122,097,961</u>	<u>\$ 4,212,832</u>	<u>\$ 137,292,285</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>\$ -</u>	<u>\$ 980,241</u>	<u>\$ -</u>	<u>\$ 980,241</u>
<u>Hedging financial liabilities</u>				
Fair value hedges				
Interest rate futures contracts	<u>\$ 109,826</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 109,826</u>
				(Concluded)

December 31, 2019

	Level 1	Level 2	Level 3	Total
<u>Financial assets at FVTPL</u>				
Mandatorily measured at FVTPL				
Forward exchange contracts	\$ -	\$ 162,155	\$ -	\$ 162,155
Convertible bonds	-	-	123,759	123,759
Agency mortgage-backed securities	-	40,925	-	40,925
	<u>\$ -</u>	<u>\$ 203,080</u>	<u>\$ 123,759</u>	<u>\$ 326,839</u>
<u>Financial assets at FVTOCI</u>				
Investments in debt instruments				
Agency bonds/Agency mortgage-backed securities	\$ -	\$ 51,966,460	\$ -	\$ 51,966,460
Corporate bonds	-	51,790,045	-	51,790,045
Government bonds	12,678,086	146,137	-	12,824,223
Asset-backed securities	-	10,815,849	-	10,815,849
Investments in equity instruments				
Non-publicly traded equity investments	-	39,196	4,085,141	4,124,337
Notes and accounts receivable, net	-	3,255,865	-	3,255,865
	<u>\$ 12,678,086</u>	<u>\$ 118,013,552</u>	<u>\$ 4,085,141</u>	<u>\$ 134,776,779</u>
				(Continued)

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
<u>Hedging financial assets</u>				
Fair value hedges				
Interest rate futures contracts	\$ 22,380	\$ -	\$ -	\$ 22,380
Cash flow hedges				
Forward exchange contracts	-	3,504	-	3,504
	<u>\$ 22,380</u>	<u>\$ 3,504</u>	<u>\$ -</u>	<u>\$ 25,884</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>-</u>	<u>982,349</u>	<u>-</u>	<u>982,349</u>
<u>Hedging financial liabilities</u>				
Cash flow hedges				
Forward exchange contracts	<u>-</u>	<u>1,798</u>	<u>-</u>	<u>1,798</u> (Concluded)

	March 31, 2019			
	Level 1	Level 2	Level 3	Total
<u>Financial assets at FVTPL</u>				
Mandatorily measured at FVTPL				
Agency mortgage-backed securities	\$ -	\$ 2,973,659	\$ -	\$ 2,973,659
Forward exchange contracts	-	110,740	-	110,740
	<u>\$ -</u>	<u>\$ 3,084,399</u>	<u>\$ -</u>	<u>\$ 3,084,399</u>
<u>Financial assets at FVTOCI</u>				
Investments in debt instruments				
Corporate bonds	\$ -	\$ 42,703,270	\$ -	\$ 42,703,270
Agency bonds/Agency mortgage-backed securities	-	34,371,268	-	34,371,268
Asset-backed securities	-	15,764,847	-	15,764,847
Government bonds	13,667,515	147,749	-	13,815,264
Investments in equity instruments				
Non-publicly traded equity investments	-	-	3,837,734	3,837,734
Publicly traded stocks	658,556	-	-	658,556
Notes and accounts receivable, net	-	2,537,949	-	2,537,949
	<u>\$ 14,326,071</u>	<u>\$ 95,525,083</u>	<u>\$ 3,837,734</u>	<u>\$ 113,688,888</u>
<u>Hedging financial assets</u>				
Cash flow hedges				
Forward exchange contracts	<u>-</u>	<u>969</u>	<u>-</u>	<u>969</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>-</u>	<u>151,079</u>	<u>-</u>	<u>151,079</u> (Continued)

	March 31, 2019			
	Level 1	Level 2	Level 3	Total
<u>Hedging financial liabilities</u>				
Fair value hedges				
Interest rate futures contracts	\$ 57,247	\$ -	\$ -	\$ 57,247
Cash flow hedges				
Forward exchange contracts	-	54,127	-	54,127
	<u>\$ 57,247</u>	<u>\$ 54,127</u>	<u>\$ -</u>	<u>\$ 111,374</u>
				(Concluded)

Reconciliation of Level 3 fair value measurements of financial assets

The financial assets measured at Level 3 fair value were financial assets at FVTPL and equity investments classified as financial assets at FVTOCI. Reconciliations for the three months ended March 31, 2020 and 2019 were as follows:

	Three Months Ended March 31	
	2020	2019
Balance, beginning of period	\$ 4,208,900	\$ 3,910,681
Additions	13,064	31,437
Recognized in profit or loss	(3,821)	-
Recognized in other comprehensive income	(33,052)	(37,567)
Disposals and proceeds from return of capital of investments	-	(75,425)
Effect of exchange rate changes	<u>27,741</u>	<u>8,608</u>
Balance, end of period	<u>\$ 4,212,832</u>	<u>\$ 3,837,734</u>

Valuation techniques and assumptions used in Level 2 fair value measurement

The fair values of financial assets and financial liabilities are determined as follows:

- The fair values of corporate bonds, agency bonds, agency mortgage-backed securities, asset-backed securities, government bonds and non-publicly traded equity investments are determined by quoted market prices provided by third party pricing services.
- Forward exchange contracts are measured using forward exchange rates and the discounted curves that are derived from quoted market prices.
- The fair value of accounts receivables classified as at FVTOCI is determined by the present value of future cash flows based on the discount rate that reflects the credit risk of counterparties.

Valuation techniques and assumptions used in Level 3 fair value measurement

The fair values of non-publicly traded equity investments are mainly determined by using the asset approach and market approach.

The asset approach takes into account the net asset value measured at the fair value by independent parties. On March 31, 2020, December 31, 2019 and March 31, 2019, the Company uses unobservable inputs derived from discount for lack of marketability by 10%. When other inputs remain equal, the fair value will decrease by NT\$34,937 thousand, NT\$34,843 thousand and NT\$30,782 thousand if discounts for lack of marketability increase by 1%.

For the remaining few investments, the market approach is used to arrive at their fair values, for which the recent financing activities of investees, the market transaction prices of the similar companies and market conditions are considered.

In addition, the fair values of convertible bonds are determined by the present value of future cash flow based on a discount rate reflecting issuer's credit spread and market conditions, combined with the fair value of conversion option estimated by the option pricing model considering recent financing activities of the investee and market transaction prices of the similar companies.

3) Fair value of financial instruments that are not measured at fair value

Except as detailed in the following table, the Company considers that the carrying amounts of financial instruments in the consolidated financial statements that are not measured at fair value approximate their fair values.

Fair value hierarchy

The table below sets out the fair value hierarchy for the Company's assets and liabilities which are not required to measure at fair value:

	March 31, 2020	
	Carrying Amount	Level 2 Fair Value
<u>Financial assets</u>		
Financial assets at amortized costs		
Corporate bonds	\$ 7,712,526	\$ 7,623,253
<u>Financial liabilities</u>		
Financial liabilities at amortized costs		
Bonds payable	\$ 59,275,148	\$ 60,091,863
Short-term bills payable	<u>2,992,858</u>	<u>2,989,622</u>
	<u>\$ 62,268,006</u>	<u>\$ 63,081,485</u>
	December 31, 2019	
	Carrying Amount	Level 2 Fair Value
<u>Financial assets</u>		
Financial assets at amortized costs		
Corporate bonds	\$ 7,648,798	\$ 7,718,731
<u>Financial liabilities</u>		
Financial liabilities at amortized costs		
Bonds payable	\$ 56,900,000	\$ 57,739,115

	March 31, 2019	
	Carrying Amount	Level 2 Fair Value
<u>Financial assets</u>		
Financial assets at amortized costs		
Corporate bonds	\$ 10,946,613	\$ 11,031,635
Commercial paper	<u>1,097,194</u>	<u>1,099,932</u>
	<u>\$ 12,043,807</u>	<u>\$ 12,131,567</u>

Financial liabilities

Financial liabilities at amortized costs		
Bonds payable	<u>\$ 83,400,000</u>	<u>\$ 84,633,252</u>

Valuation techniques and assumptions used in Level 2 fair value measurement

The fair values of corporate bonds and the Company's bonds payable are determined by quoted market prices provided by third party pricing services.

The fair values of commercial paper and the Company's short-term bills payable are determined by the present value of future cash flows based on the discounted curves that are derived from the quoted market prices.

31. RELATED PARTY TRANSACTIONS

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

a. Related party name and categories

<u>Related Party Name</u>	<u>Related Party Categories</u>
GUC	Associates
VIS	Associates
SSMC	Associates
Xintec	Associates
TSMC Education and Culture Foundation	Other related parties
TSMC Charity Foundation	Other related parties

b. Net revenue

		Three Months Ended March 31	
		2020	2019
<u>Item</u>	<u>Related Party Categories</u>		
Net revenue from sale of goods	Associates	<u>\$ 1,817,399</u>	<u>\$ 1,469,598</u>
Net revenue from royalties	Associates	<u>\$ 51,547</u>	<u>\$ 43,919</u>

c. Purchases

Three Months Ended March 31
2020 **2019**

Related Party Categories

Associates	<u>\$ 1,714,333</u>	<u>\$ 1,550,402</u>
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d. Receivables from related parties

		March 31, 2020	December 31, 2019	March 31, 2019
<u>Item</u>	<u>Related Party Name/Categories</u>			
Receivables from related parties	GUC	\$ 275,942	\$ 741,898	\$ 303,556
	Xintec	<u>151,946</u>	<u>120,172</u>	<u>6,265</u>
		<u>\$ 427,888</u>	<u>\$ 862,070</u>	<u>\$ 309,821</u>
Other receivables from related parties	SSMC	\$ 48,461	\$ 46,506	\$ 44,397
	VIS	10,664	3,920	3,506
	Other associates	<u>1,045</u>	<u>1,227</u>	<u>771</u>
		<u>\$ 60,170</u>	<u>\$ 51,653</u>	<u>\$ 48,674</u>

e. Payables to related parties

		March 31, 2020	December 31, 2019	March 31, 2019
<u>Item</u>	<u>Related Party Name/Categories</u>			
Payables to related parties	Xintec	\$ 793,763	\$ 736,860	\$ 101,703
	SSMC	430,648	487,944	164,403
	VIS	244,861	153,977	273,032
	Other associates	<u>21,907</u>	<u>56,119</u>	<u>21,803</u>
		<u>\$ 1,491,179</u>	<u>\$ 1,434,900</u>	<u>\$ 560,941</u>

f. Others

Three Months Ended March 31
2020 **2019**

<u>Item</u>	<u>Related Party Categories</u>		
Manufacturing expenses	Associates	<u>\$ 957,286</u>	<u>\$ 196,686</u>
Research and development expenses	Associates	<u>\$ 21,602</u>	<u>\$ 20,829</u>
General and administrative expenses	Other related parties	<u>\$ 30,000</u>	<u>\$ 30,000</u>

The sales prices and payment terms to related parties were not significantly different from those of sales to third parties. For other related party transactions, price and terms were determined in accordance with mutual agreements.

The Company leased factory and office from associates. The lease terms and prices were both determined in accordance with mutual agreements. The rental expenses were paid to associates monthly; the related expenses were both classified under manufacturing expenses.

g. Compensation of key management personnel

The compensation to directors and other key management personnel for the three months ended March 31, 2020 and 2019 were as follows:

	Three Months Ended March 31	
	2020	2019
Short-term employee benefits	\$ 558,301	\$ 334,198
Post-employment benefits	<u>652</u>	<u>761</u>
	<u>\$ 558,953</u>	<u>\$ 334,959</u>

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

32. PLEDGED ASSETS

The Company provided certificate of deposits recorded in other financial assets as collateral mainly for building lease agreements. As of March 31, 2020, December 31, 2019 and March 31, 2019, the aforementioned other financial assets amounted to NT\$115,060 thousand, NT\$114,467 thousand and NT\$115,443 thousand, respectively.

33. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

Significant contingent liabilities and unrecognized commitments of the Company as of the end of the reporting period, excluding those disclosed in other notes, were as follows:

- a. Under a technical cooperation agreement with Industrial Technology Research Institute, the R.O.C. Government or its designee approved by TSMC can use up to 35% of TSMC's capacity provided TSMC's outstanding commitments to its customers are not prejudiced. The term of this agreement is for five years beginning from January 1, 1987 and is automatically renewed for successive periods of five years unless otherwise terminated by either party with one year prior notice. As of March 31, 2020, the R.O.C. Government did not invoke such right.
- b. Under a Shareholders Agreement entered into with Philips and EDB Investments Pte Ltd. on March 30, 1999, the parties formed a joint venture company, SSMC, which is an integrated circuit foundry in Singapore. TSMC's equity interest in SSMC was 32%. Nevertheless, in September 2006, Philips spun-off its semiconductor subsidiary which was renamed as NXP B.V. Further, TSMC and NXP B.V. purchased all the SSMC shares owned by EDB Investments Pte Ltd. pro rata according to the Shareholders Agreement on November 15, 2006. After the purchase, TSMC and NXP B.V. currently own approximately 39% and 61% of the SSMC shares, respectively. TSMC and NXP B.V. are required, in the aggregate, to purchase at least 70% of SSMC's capacity, but TSMC alone is not required to purchase more than 28% of the capacity. If any party defaults on the commitment and the capacity utilization of SSMC falls below a specific percentage of its capacity, the defaulting party is required to compensate

SSMC for all related unavoidable costs. There was no default from the aforementioned commitment as of March 31, 2020.

- c. On September 28, 2017, TSMC was contacted by the European Commission (the “Commission”), which asked us for information and documents concerning alleged anti-competitive practices in relation to semiconductor sales. We cooperated continuously with the Commission to provide the requested information and documents. The Commission subsequently decided to close the investigation in May 2020.
- d. TSMC entered into long-term purchase agreements of material with multiple suppliers. The relative minimum purchase quantity and price are specified in the agreements.
- e. TSMC entered into a long-term purchase agreement of equipment. The relative purchase quantity and price are specified in the agreement.
- f. TSMC entered into long-term energy purchase agreements with multiple suppliers. The relative purchase period, quantity and price are specified in the agreements.
- g. Amounts available under unused letters of credit as of March 31, 2020, December 31, 2019 and March 31, 2019 were NT\$60,478 thousand, NT\$59,976 thousand and NT\$61,660 thousand, respectively.

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

The following information was summarized according to the foreign currencies other than the functional currency of the Company. The exchange rates disclosed were used to translate the foreign currencies into the functional currency. The significant financial assets and liabilities denominated in foreign currencies were as follows:

	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Carrying Amount (In Thousands)
<u>March 31, 2020</u>			
<u>Financial assets</u>			
Monetary items			
USD	\$ 4,894,616	30.239	\$ 148,008,282
USD	440,722	7.093 (Note 2)	13,326,995
EUR	9,063	33.351	302,276
JPY	79,502,028	0.2796	22,228,767
<u>Financial liabilities</u>			
Monetary items			
USD	7,142,327	30.239	215,976,813
EUR	3,587,165	33.351	119,635,540
JPY	76,647,662	0.2796	21,430,686
			(Continued)

	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Carrying Amount (In Thousands)
<u>December 31, 2019</u>			
<u>Financial assets</u>			
Monetary items			
USD	\$ 4,725,056	29.988	\$ 141,694,967
USD	455,984	6.966 (Note 2)	13,674,047
EUR	3,638	33.653	122,418
JPY	72,369,239	0.2751	19,908,778
<u>Financial liabilities</u>			
Monetary items			
USD	6,018,287	29.988	180,476,401
EUR	2,551,824	33.653	85,876,547
JPY	101,455,514	0.2751	27,910,412
<u>March 31, 2019</u>			
<u>Financial assets</u>			
Monetary items			
USD	3,885,072	30.830	119,776,760
USD	348,046	6.720 (Note 2)	10,730,247
EUR	7,963	34.68	276,149
JPY	961,694	0.2796	268,890
Non-monetary items			
HKD	167,571	3.93	658,556
<u>Financial liabilities</u>			
Monetary items			
USD	4,368,580	30.830	134,683,321
EUR	517,367	34.68	17,942,289
JPY	79,536,948	0.2796	22,238,531
			(Concluded)

Note 1: Except as otherwise noted, exchange rate represents the number of NT dollar for which one foreign currency could be exchanged.

Note 2: The exchange rate represents the number of RMB for which one U.S. dollar could be exchanged.

Please refer to the consolidated statements of comprehensive income for the total of realized and unrealized foreign exchange gain and loss for the three months ended March 31, 2020 and 2019, respectively. Since there were varieties of foreign currency transactions and functional currencies within the subsidiaries of the Company, the Company was unable to disclose foreign exchange gain (loss) towards each foreign currency with significant impact.

35. SIGNIFICANT OPERATION LOSSES

On January 19, 2019, the Company discovered a wafer contamination issue in a fab in Taiwan caused by a batch of unqualified photoresist materials. After investigation, the Company immediately stopped using the unqualified materials. An estimated loss of NT\$3,400,000 thousand related to this event was recognized in cost of revenue for the three months ended March 31, 2019.

36. ADDITIONAL DISCLOSURES

Following are the additional disclosures required by the Securities and Futures Bureau for TSMC:

- a. Financings provided: See Table 1 attached;
- b. Endorsement/guarantee provided: See Table 2 attached;
- c. Marketable securities held (excluding investments in subsidiaries and associates): See Table 3 attached;
- d. Marketable securities acquired and disposed of at costs or prices of at least NT\$300 million or 20% of the paid-in capital: See Table 4 attached;
- e. Acquisition of individual real estate properties at costs of at least NT\$300 million or 20% of the paid-in capital: See Table 5 attached;
- f. Disposal of individual real estate properties at prices of at least NT\$300 million or 20% of the paid-in capital: None;
- g. Total purchases from or sales to related parties of at least NT\$100 million or 20% of the paid-in capital: See Table 6 attached;
- h. Receivables from related parties amounting to at least NT\$100 million or 20% of the paid-in capital: See Table 7 attached;
- i. Information about the derivative financial instruments transaction: See Notes 7 and 10;
- j. Others: The business relationship between the parent and the subsidiaries and significant transactions between them: See Table 8 attached;
- k. Names, locations, and related information of investees over which TSMC exercises significant influence (excluding information on investment in mainland China): See Table 9 attached;
- l. Information on investment in mainland China
 - 1) The name of the investee in mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, income (losses) of the investee, share of profits/losses of investee, ending balance, amount received as dividends from the investee, and the limitation on investee: See Table 10 attached.
 - 2) Significant direct or indirect transactions with the investee, its prices and terms of payment, unrealized gain or loss, and other related information which is helpful to understand the impact of investment in mainland China on financial reports: See Table 8 attached.
- m. Information of major shareholder

List of all shareholders with ownership of 5 percent or greater showing the names and the number of shares and percentage of ownership held by each shareholder: See Table 11 attached.

37. OPERATING SEGMENTS INFORMATION

TSMC's chief operating decision makers periodically review operating results, focusing on operating income generated by foundry segment. Operating results are used for resource allocation and/or performance assessment. As a result, the Company has only one operating segment, the foundry segment. The foundry segment engages mainly in the manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing of masks.

The basis for the measurement of income from operations is the same as that for the preparation of financial statements. Please refer to the consolidated statements of comprehensive income for the related segment revenue and operating results.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

FINANCINGS PROVIDED
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

No.	Financing Company	Counterparty	Financial Statement Account	Related Party	Maximum Balance for the Period (Foreign Currencies in Thousands) (Note 3)	Ending Balance (Foreign Currencies in Thousands) (Note 3)	Amount Actually Drawn (Foreign Currencies in Thousands)	Interest Rate	Nature for Financing (Note 4)	Transaction Amounts	Reason for Financing (Note 4)	Allowance for Bad Debt	Collateral		Financing Limits for Each Borrowing Company (Notes 1 and 2)	Financing Company's Total Financing Amount Limits (Notes 1 and 2)
													Item	Value		
1	TSMC China	TSMC Nanjing	Other receivables from related parties	Yes	\$ 38,763,404 (RMB 6,000,000) & (US\$ 436,000)	\$ 37,910,764 (RMB 5,800,000) & (US\$ 436,000)	\$ 23,063,914 (RMB 4,800,000) & (US\$ 86,000)	1.50-1.96%	The need for long-term financing	\$ -	Operating capital	\$ -	-	\$ -	\$ 58,438,313	\$ 58,438,313
2	TSMC Global	TSMC	Other receivables from related parties	Yes	93,740,900 (US\$ 3,100,000)	93,740,900 (US\$ 3,100,000)	93,740,900 (US\$ 3,100,000)	0.00%	The need for short-term financing	-	Operating capital	-	-	-	403,318,967	403,318,967

Note 1: The total amount available for lending purpose shall not exceed the net worth of TSMC China. The total amount for lending to a company for funding for a short-term period shall not exceed ten percent (10%) of the net worth of TSMC China. In addition, the total amount lendable to any one borrower shall be no more than thirty percent (30%) of the borrower's net worth. The above restriction does not apply to the subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC. However, the total amount lendable to any such subsidiary of TSMC shall not exceed forty percent (40%) of the net worth of TSMC China. When there is a lending for funding needs by TSMC China to TSMC, or to the subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC, which are not located in Taiwan, the lending will not be subject to the restriction set forth in the above paragraph of this Article. Notwithstanding the foregoing, the aggregate amount available for lending to such borrowers and the total amount lendable to each of such borrowers still shall not exceed the net worth of TSMC China.

Note 2: The total amount available for lending purpose shall not exceed the net worth of TSMC Global. The total amount for lending to a company for funding for a short-term period shall not exceed ten percent (10%) of the net worth of TSMC Global. In addition, the total amount lendable to any one borrower shall be no more than thirty percent (30%) of the borrower's net worth. While TSMC, or foreign subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC will not be subject to this restriction, their total borrowing amount still shall not exceed the net worth of TSMC Global. Notwithstanding the foregoing, the aggregate amount for lending to Taiwan companies other than TSMC shall not exceed forty percent (40%) of the net worth of TSMC Global.

Note 3: The maximum balance for the period and ending balance represent the amounts approved by the Board of Directors.

Note 4: The restriction of the term of each loan for funding not exceeding one year shall not apply to inter-company loans for funding between offshore subsidiaries in which the Company holds, directly or indirectly, 100% of the voting shares.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

ENDORSEMENTS/GUARANTEES PROVIDED

FOR THE THREE MONTHS ENDED MARCH 31, 2020

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

No.	Endorsement/ Guarantee Provider	Guaranteed Party		Limits on Endorsement/ Guarantee Amount Provided to Each Guaranteed Party (Notes 1 and 2)	Maximum Balance for the Period (Foreign Currencies in Thousands) (Note 3)	Ending Balance (Foreign Currencies in Thousands) (Note 3)	Amount Actually Drawn (US\$ in Thousands)	Amount of Endorsement/ Guarantee Collateralized by Properties	Ratio of Accumulated Endorsement/ Guarantee to Net Equity per Latest Financial Statements	Maximum Endorsement/ Guarantee Amount Allowable (Note 1 and 2)	Guarantee Provided by Parent Company	Guarantee Provided by A Subsidiary	Guarantee Provided to Subsidiaries in Mainland China
		Name	Nature of Relationship										
0	TSMC	TSMC North America	Subsidiary	\$ 419,066,500	\$ 2,516,287 (US\$ 83,213)	\$ 2,516,287 (US\$ 83,213)	\$ 2,516,287 (US\$ 83,213)	\$ -	0.15%	\$ 419,066,500	Yes	No	No
1	TSMC Japan	TSMC JDC	The same parent company	167,626,600	369,072 (JPY 1,320,000)	369,072 (JPY 1,320,000)	369,072 (JPY 1,320,000)	-	0.02%	167,626,600	No	No	No

Note 1: The total amount of the guarantee provided by TSMC to any individual entity shall not exceed ten percent (10%) of TSMC's net worth, or the net worth of such entity. However, subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC are not subject to the above restrictions after the approval of the Board of Directors. The total amount of guarantee shall not exceed twenty-five percent (25%) of TSMC's net worth.

Note 2: The total amount of the guarantee provided by TSMC Japan to any individual entity shall not exceed ten percent (10%) of TSMC's net worth. The total amount of guarantee shall not exceed ten percent (10%) of TSMC's net worth.

Note 3: The maximum balance for the period and ending balance represent the amounts approved by the Board of Directors.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

MARKETABLE SECURITIES HELD

MARCH 31, 2020

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

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC	<u>Non-publicly traded equity investments</u>							
	United Industrial Gases Co., Ltd.	-	Financial assets at fair value through other comprehensive income	21,230	\$ 483,034	10	\$ 483,034	
	Shin-Etsu Handotai Taiwan Co., Ltd.	-	"	10,500	321,636	7	321,636	
	Global Investment Holding Inc.	-	"	11,124	80,447	6	80,447	
	W.K. Technology Fund IV	-	"	806	6,942	2	6,942	
	Crimson Asia Capital	-	"	-	2,643	1	2,643	
	Horizon Ventures Fund	-	"	-	510	12	510	
TSMC Partners	<u>Non-publicly traded equity investments</u>							
	China Walden Venture Investments II, L.P.	-	Financial assets at fair value through other comprehensive income	-	US\$ 9,467	9	US\$ 9,467	
	Shanghai Walden Venture Capital Enterprise	-	"	-	US\$ 8,487	6	US\$ 8,487	
	Inpria Corporation	-	"	1,778	US\$ 3,600	4	US\$ 3,600	
	China Walden Venture Investments III, L.P.	-	"	-	US\$ 3,515	4	US\$ 3,515	
	Mcube Inc.	-	"	6,333	-	12	-	
	Tela Innovations	-	"	10,440	-	25	-	
TSMC Global	<u>Corporate bond</u>							
	Bank of America Corp	-	Financial assets at fair value through other comprehensive income	-	US\$ 50,921	N/A	US\$ 50,921	
	Morgan Stanley	-	"	-	US\$ 43,401	N/A	US\$ 43,401	
	Citigroup Inc	-	"	-	US\$ 41,122	N/A	US\$ 41,122	
	Goldman Sachs Group Inc/The	-	"	-	US\$ 37,496	N/A	US\$ 37,496	
	JPMorgan Chase & Co	-	"	-	US\$ 33,079	N/A	US\$ 33,079	
	AbbVie Inc	-	"	-	US\$ 31,781	N/A	US\$ 31,781	
	Wells Fargo & Co	-	"	-	US\$ 27,181	N/A	US\$ 27,181	
	AT&T Inc	-	"	-	US\$ 25,476	N/A	US\$ 25,476	
	Bristol-Myers Squibb Co	-	"	-	US\$ 23,417	N/A	US\$ 23,417	
	Sumitomo Mitsui Financial Group Inc	-	"	-	US\$ 22,161	N/A	US\$ 22,161	
	CVS Health Corp	-	"	-	US\$ 22,134	N/A	US\$ 22,134	
	Apple Inc	-	"	-	US\$ 20,441	N/A	US\$ 20,441	
	Mitsubishi UFJ Financial Group Inc	-	"	-	US\$ 20,304	N/A	US\$ 20,304	
	HSBC Holdings PLC	-	"	-	US\$ 19,467	N/A	US\$ 19,467	
	Toronto-Dominion Bank/The	-	"	-	US\$ 18,432	N/A	US\$ 18,432	
	General Dynamics Corp	-	"	-	US\$ 16,276	N/A	US\$ 16,276	
	Walt Disney Co/The	-	"	-	US\$ 16,228	N/A	US\$ 16,228	
	Comcast Corp	-	"	-	US\$ 15,684	N/A	US\$ 15,684	
	Santander UK PLC	-	"	-	US\$ 15,388	N/A	US\$ 15,388	
Credit Agricole SA/London	-	"	-	US\$ 14,488	N/A	US\$ 14,488		
Mizuho Financial Group Inc	-	"	-	US\$ 12,844	N/A	US\$ 12,844		
BNP Paribas SA	-	"	-	US\$ 12,552	N/A	US\$ 12,552		
Verizon Communications Inc	-	"	-	US\$ 12,530	N/A	US\$ 12,530		
Banco Santander SA	-	"	-	US\$ 12,249	N/A	US\$ 12,249		
Thermo Fisher Scientific Inc	-	"	-	US\$ 11,687	N/A	US\$ 11,687		

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Skandinaviska Enskilda Banken AB	-	Financial assets at fair value through other comprehensive income	-	US\$ 11,565	N/A	US\$ 11,565	
	ERAC USA Finance LLC	-	"	-	US\$ 11,486	N/A	US\$ 11,486	
	UBS Group Funding Switzerland AG	-	"	-	US\$ 11,471	N/A	US\$ 11,471	
	BPCE SA	-	"	-	US\$ 11,440	N/A	US\$ 11,440	
	Banque Federative du Credit Mutuel SA	-	"	-	US\$ 11,245	N/A	US\$ 11,245	
	Metropolitan Life Global Funding I	-	"	-	US\$ 11,164	N/A	US\$ 11,164	
	BAT Capital Corp	-	"	-	US\$ 10,882	N/A	US\$ 10,882	
	Nationwide Building Society	-	"	-	US\$ 10,746	N/A	US\$ 10,746	
	NIKE Inc	-	"	-	US\$ 10,698	N/A	US\$ 10,698	
	American International Group Inc	-	"	-	US\$ 10,657	N/A	US\$ 10,657	
	Lloyds Banking Group PLC	-	"	-	US\$ 10,547	N/A	US\$ 10,547	
	Bank of Nova Scotia/The	-	"	-	US\$ 10,429	N/A	US\$ 10,429	
	Equifax Inc	-	"	-	US\$ 10,390	N/A	US\$ 10,390	
	DTE Energy Co	-	"	-	US\$ 10,332	N/A	US\$ 10,332	
	Hewlett Packard Enterprise Co	-	"	-	US\$ 10,302	N/A	US\$ 10,302	
	Ryder System Inc	-	"	-	US\$ 10,276	N/A	US\$ 10,276	
	Credit Suisse AG/New York NY	-	"	-	US\$ 9,873	N/A	US\$ 9,873	
	Macquarie Bank Ltd	-	"	-	US\$ 9,841	N/A	US\$ 9,841	
	TJX Cos Inc/The	-	"	-	US\$ 9,388	N/A	US\$ 9,388	
	SMBC Aviation Capital Finance DAC	-	"	-	US\$ 9,377	N/A	US\$ 9,377	
	Nordea Bank Abp	-	"	-	US\$ 9,182	N/A	US\$ 9,182	
	Cox Communications Inc	-	"	-	US\$ 8,975	N/A	US\$ 8,975	
	NextEra Energy Capital Holdings Inc	-	"	-	US\$ 8,937	N/A	US\$ 8,937	
	Fiserv Inc	-	"	-	US\$ 8,897	N/A	US\$ 8,897	
	Societe Generale SA	-	"	-	US\$ 8,844	N/A	US\$ 8,844	
	Suncorp-Metway Ltd	-	"	-	US\$ 8,840	N/A	US\$ 8,840	
	Tyson Foods Inc	-	"	-	US\$ 8,691	N/A	US\$ 8,691	
	Penske Truck Leasing Co Lp/PTL Finance Corp	-	"	-	US\$ 8,689	N/A	US\$ 8,689	
	Shire Acquisitions Investments Ireland DAC	-	"	-	US\$ 8,387	N/A	US\$ 8,387	
	Scentre Group Trust 1/Scentre Group Trust 2	-	"	-	US\$ 8,316	N/A	US\$ 8,316	
	Canadian Imperial Bank of Commerce	-	"	-	US\$ 8,287	N/A	US\$ 8,287	
	Capital One NA	-	"	-	US\$ 8,227	N/A	US\$ 8,227	
	Inter-American Development Bank	-	"	-	US\$ 8,154	N/A	US\$ 8,154	
	Truist Bank	-	"	-	US\$ 8,125	N/A	US\$ 8,125	
	Athene Global Funding	-	"	-	US\$ 8,111	N/A	US\$ 8,111	
	Reliance Standard Life Global Funding II	-	"	-	US\$ 8,071	N/A	US\$ 8,071	
	New York Life Global Funding	-	"	-	US\$ 7,937	N/A	US\$ 7,937	
	BB&T Corp	-	"	-	US\$ 7,664	N/A	US\$ 7,664	
	Tencent Holdings Ltd	-	"	-	US\$ 7,648	N/A	US\$ 7,648	
	Novartis Capital Corp	-	"	-	US\$ 7,624	N/A	US\$ 7,624	
	Altria Group Inc	-	"	-	US\$ 7,608	N/A	US\$ 7,608	
	Microsoft Corp	-	"	-	US\$ 7,576	N/A	US\$ 7,576	
	Exxon Mobil Corp	-	"	-	US\$ 7,512	N/A	US\$ 7,512	
	NatWest Markets PLC	-	"	-	US\$ 7,455	N/A	US\$ 7,455	
	Intel Corp	-	"	-	US\$ 7,447	N/A	US\$ 7,447	
	Midwest Connector Capital Co LLC	-	"	-	US\$ 7,373	N/A	US\$ 7,373	
	ANZ New Zealand Int'l Ltd/London	-	"	-	US\$ 7,220	N/A	US\$ 7,220	
	Fox Corp	-	"	-	US\$ 7,204	N/A	US\$ 7,204	
	Jackson National Life Global Funding	-	"	-	US\$ 7,170	N/A	US\$ 7,170	
	BG Energy Capital PLC	-	"	-	US\$ 7,152	N/A	US\$ 7,152	
	International Business Machines Corp	-	"	-	US\$ 7,135	N/A	US\$ 7,135	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Bank of Montreal	-	Financial assets at fair value through other comprehensive income	-	US\$ 7,129	N/A	US\$ 7,129	
	Huntington Bancshares Inc/OH	-	"	-	US\$ 7,128	N/A	US\$ 7,128	
	BP Capital Markets America Inc	-	"	-	US\$ 7,035	N/A	US\$ 7,035	
	Oracle Corp	-	"	-	US\$ 7,034	N/A	US\$ 7,034	
	Prudential Funding LLC	-	"	-	US\$ 7,032	N/A	US\$ 7,032	
	Deere & Co	-	"	-	US\$ 6,863	N/A	US\$ 6,863	
	Air Lease Corp	-	"	-	US\$ 6,823	N/A	US\$ 6,823	
	Credit Suisse Group AG	-	"	-	US\$ 6,786	N/A	US\$ 6,786	
	Western Union Co/The	-	"	-	US\$ 6,740	N/A	US\$ 6,740	
	PNC Bank NA	-	"	-	US\$ 6,656	N/A	US\$ 6,656	
	ING Groep NV	-	"	-	US\$ 6,620	N/A	US\$ 6,620	
	Coca-Cola Co/The	-	"	-	US\$ 6,579	N/A	US\$ 6,579	
	Daimler Finance North America LLC	-	"	-	US\$ 6,415	N/A	US\$ 6,415	
	Target Corp	-	"	-	US\$ 6,336	N/A	US\$ 6,336	
	Cigna Corp	-	"	-	US\$ 6,332	N/A	US\$ 6,332	
	Regions Financial Corp	-	"	-	US\$ 6,186	N/A	US\$ 6,186	
	American Express Co	-	"	-	US\$ 6,181	N/A	US\$ 6,181	
	Anheuser-Busch InBev Worldwide Inc	-	"	-	US\$ 6,148	N/A	US\$ 6,148	
	DNB Bank ASA	-	"	-	US\$ 6,104	N/A	US\$ 6,104	
	Macquarie Group Ltd	-	"	-	US\$ 6,099	N/A	US\$ 6,099	
	Dominion Energy Gas Holdings LLC	-	"	-	US\$ 6,000	N/A	US\$ 6,000	
	Analog Devices Inc	-	"	-	US\$ 5,970	N/A	US\$ 5,970	
	Panasonic Corp	-	"	-	US\$ 5,966	N/A	US\$ 5,966	
	Royal Bank of Canada	-	"	-	US\$ 5,933	N/A	US\$ 5,933	
	AIG Global Funding	-	"	-	US\$ 5,877	N/A	US\$ 5,877	
	Reckitt Benckiser Treasury Services PLC	-	"	-	US\$ 5,875	N/A	US\$ 5,875	
	National Australia Bank Ltd/New York	-	"	-	US\$ 5,854	N/A	US\$ 5,854	
	Fortive Corp	-	"	-	US\$ 5,732	N/A	US\$ 5,732	
	Wells Fargo Bank NA	-	"	-	US\$ 5,705	N/A	US\$ 5,705	
	Capital One Financial Corp	-	"	-	US\$ 5,682	N/A	US\$ 5,682	
	WPP Finance 2010	-	"	-	US\$ 5,659	N/A	US\$ 5,659	
	Shell International Finance BV	-	"	-	US\$ 5,518	N/A	US\$ 5,518	
	Roper Technologies Inc	-	"	-	US\$ 5,498	N/A	US\$ 5,498	
	Anheuser-Busch InBev Finance Inc	-	"	-	US\$ 5,486	N/A	US\$ 5,486	
	Alabama Power Co	-	"	-	US\$ 5,428	N/A	US\$ 5,428	
	Bayer US Finance II LLC	-	"	-	US\$ 5,420	N/A	US\$ 5,420	
	Mastercard Inc	-	"	-	US\$ 5,258	N/A	US\$ 5,258	
	Sompo International Holdings Ltd	-	"	-	US\$ 5,227	N/A	US\$ 5,227	
	Laboratory Corp of America Holdings	-	"	-	US\$ 5,152	N/A	US\$ 5,152	
	Dominion Energy Inc	-	"	-	US\$ 5,137	N/A	US\$ 5,137	
	CNA Financial Corp	-	"	-	US\$ 5,016	N/A	US\$ 5,016	
	United Parcel Service Inc	-	"	-	US\$ 4,971	N/A	US\$ 4,971	
	Bank of New York Mellon Corp/The	-	"	-	US\$ 4,969	N/A	US\$ 4,969	
	National Bank of Canada	-	"	-	US\$ 4,938	N/A	US\$ 4,938	
	Cooperatieve Rabobank UA	-	"	-	US\$ 4,934	N/A	US\$ 4,934	
	BMW US Capital LLC	-	"	-	US\$ 4,925	N/A	US\$ 4,925	
	Archer-Daniels-Midland Co	-	"	-	US\$ 4,919	N/A	US\$ 4,919	
	Saudi Arabian Oil Co	-	"	-	US\$ 4,864	N/A	US\$ 4,864	
	Florida Power & Light Co	-	"	-	US\$ 4,852	N/A	US\$ 4,852	
	Five Corners Funding Trust	-	"	-	US\$ 4,771	N/A	US\$ 4,771	
	John Deere Capital Corp	-	"	-	US\$ 4,765	N/A	US\$ 4,765	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Charles Schwab Corp/The	-	Financial assets at fair value through other comprehensive income	-	US\$ 4,736	N/A	US\$ 4,736	
	Vodafone Group PLC	-	"	-	US\$ 4,723	N/A	US\$ 4,723	
	AvalonBay Communities Inc	-	"	-	US\$ 4,715	N/A	US\$ 4,715	
	Keurig Dr Pepper Inc	-	"	-	US\$ 4,625	N/A	US\$ 4,625	
	American Express Credit Corp	-	"	-	US\$ 4,589	N/A	US\$ 4,589	
	Home Depot Inc/The	-	"	-	US\$ 4,581	N/A	US\$ 4,581	
	Enel Finance International NV	-	"	-	US\$ 4,566	N/A	US\$ 4,566	
	NiSource Inc	-	"	-	US\$ 4,560	N/A	US\$ 4,560	
	General Electric Co	-	"	-	US\$ 4,559	N/A	US\$ 4,559	
	Procter & Gamble Co/The	-	"	-	US\$ 4,508	N/A	US\$ 4,508	
	Svenska Handelsbanken AB	-	"	-	US\$ 4,489	N/A	US\$ 4,489	
	Berkshire Hathaway Energy Co	-	"	-	US\$ 4,476	N/A	US\$ 4,476	
	Lloyds Bank PLC	-	"	-	US\$ 4,383	N/A	US\$ 4,383	
	Sempra Energy	-	"	-	US\$ 4,317	N/A	US\$ 4,317	
	Eversource Energy	-	"	-	US\$ 4,266	N/A	US\$ 4,266	
	Fifth Third Bancorp	-	"	-	US\$ 4,266	N/A	US\$ 4,266	
	Duke Energy Corp	-	"	-	US\$ 4,226	N/A	US\$ 4,226	
	Compass Bank	-	"	-	US\$ 4,221	N/A	US\$ 4,221	
	Principal Life Global Funding II	-	"	-	US\$ 4,191	N/A	US\$ 4,191	
	European Bank for Reconstruction & Development	-	"	-	US\$ 4,177	N/A	US\$ 4,177	
	Welltower Inc	-	"	-	US\$ 4,048	N/A	US\$ 4,048	
	Intercontinental Exchange Inc	-	"	-	US\$ 4,035	N/A	US\$ 4,035	
	BOC Aviation Ltd	-	"	-	US\$ 4,004	N/A	US\$ 4,004	
	Verisk Analytics Inc	-	"	-	US\$ 3,968	N/A	US\$ 3,968	
	CenterPoint Energy Inc	-	"	-	US\$ 3,929	N/A	US\$ 3,929	
	Alimentation Couche-Tard Inc	-	"	-	US\$ 3,914	N/A	US\$ 3,914	
	Standard Chartered PLC	-	"	-	US\$ 3,869	N/A	US\$ 3,869	
	Ameren Corp	-	"	-	US\$ 3,863	N/A	US\$ 3,863	
	Exelon Corp	-	"	-	US\$ 3,860	N/A	US\$ 3,860	
	Toyota Motor Credit Corp	-	"	-	US\$ 3,849	N/A	US\$ 3,849	
	Hyundai Capital America	-	"	-	US\$ 3,815	N/A	US\$ 3,815	
	Monongahela Power Co	-	"	-	US\$ 3,794	N/A	US\$ 3,794	
	Caterpillar Financial Services Corp	-	"	-	US\$ 3,764	N/A	US\$ 3,764	
	Volkswagen Group of America Finance LLC	-	"	-	US\$ 3,755	N/A	US\$ 3,755	
	KeyBank NA/Cleveland OH	-	"	-	US\$ 3,739	N/A	US\$ 3,739	
	Texas Instruments Inc	-	"	-	US\$ 3,721	N/A	US\$ 3,721	
	GE Capital International Funding Co Unlimited Co	-	"	-	US\$ 3,674	N/A	US\$ 3,674	
	HCP Inc	-	"	-	US\$ 3,595	N/A	US\$ 3,595	
	Commonwealth Bank of Australia	-	"	-	US\$ 3,449	N/A	US\$ 3,449	
	Husky Energy Inc	-	"	-	US\$ 3,438	N/A	US\$ 3,438	
	US Bancorp	-	"	-	US\$ 3,433	N/A	US\$ 3,433	
	AstraZeneca PLC	-	"	-	US\$ 3,358	N/A	US\$ 3,358	
	Westpac Banking Corp	-	"	-	US\$ 3,352	N/A	US\$ 3,352	
	US Bank NA/Cincinnati OH	-	"	-	US\$ 3,338	N/A	US\$ 3,338	
	AutoZone Inc	-	"	-	US\$ 3,225	N/A	US\$ 3,225	
	Credit Suisse Group Funding Guernsey Ltd	-	"	-	US\$ 3,223	N/A	US\$ 3,223	
	WEC Energy Group Inc	-	"	-	US\$ 3,211	N/A	US\$ 3,211	
	Barclays Bank PLC	-	"	-	US\$ 3,204	N/A	US\$ 3,204	
	ONE Gas Inc	-	"	-	US\$ 3,093	N/A	US\$ 3,093	
	Marriott International Inc/MD	-	"	-	US\$ 3,088	N/A	US\$ 3,088	
	People's United Financial Inc	-	"	-	US\$ 3,080	N/A	US\$ 3,080	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	MPLX LP	-	Financial assets at fair value through other comprehensive income	-	US\$ 3,072	N/A	US\$ 3,072	
	Rockwell Collins Inc	-	"	-	US\$ 2,994	N/A	US\$ 2,994	
	DuPont de Nemours Inc	-	"	-	US\$ 2,982	N/A	US\$ 2,982	
	Zions Bancorp NA	-	"	-	US\$ 2,971	N/A	US\$ 2,971	
	Xcel Energy Inc	-	"	-	US\$ 2,924	N/A	US\$ 2,924	
	Oncor Electric Delivery Co LLC	-	"	-	US\$ 2,894	N/A	US\$ 2,894	
	Federation des Caisses Desjardins du Quebec	-	"	-	US\$ 2,890	N/A	US\$ 2,890	
	Huntington National Bank/The	-	"	-	US\$ 2,889	N/A	US\$ 2,889	
	Baxter International Inc	-	"	-	US\$ 2,887	N/A	US\$ 2,887	
	McDonald's Corp	-	"	-	US\$ 2,867	N/A	US\$ 2,867	
	MUFG Union Bank NA	-	"	-	US\$ 2,844	N/A	US\$ 2,844	
	Reynolds American Inc	-	"	-	US\$ 2,787	N/A	US\$ 2,787	
	Royal Bank of Scotland Group PLC	-	"	-	US\$ 2,745	N/A	US\$ 2,745	
	Canadian Natural Resources Ltd	-	"	-	US\$ 2,729	N/A	US\$ 2,729	
	Quest Diagnostics Inc	-	"	-	US\$ 2,643	N/A	US\$ 2,643	
	Newcrest Finance Pty Ltd	-	"	-	US\$ 2,640	N/A	US\$ 2,640	
	Public Service Enterprise Group Inc	-	"	-	US\$ 2,623	N/A	US\$ 2,623	
	Ventas Realty LP	-	"	-	US\$ 2,609	N/A	US\$ 2,609	
	Deutsche Telekom International Finance BV	-	"	-	US\$ 2,573	N/A	US\$ 2,573	
	GlaxoSmithKline Capital PLC	-	"	-	US\$ 2,568	N/A	US\$ 2,568	
	Exelon Generation Co LLC	-	"	-	US\$ 2,544	N/A	US\$ 2,544	
	McKesson Corp	-	"	-	US\$ 2,533	N/A	US\$ 2,533	
	Enterprise Products Operating LLC	-	"	-	US\$ 2,506	N/A	US\$ 2,506	
	Nutrien Ltd	-	"	-	US\$ 2,488	N/A	US\$ 2,488	
	PNC Financial Services Group Inc/The	-	"	-	US\$ 2,487	N/A	US\$ 2,487	
	Entergy Corp	-	"	-	US\$ 2,484	N/A	US\$ 2,484	
	Barclays PLC	-	"	-	US\$ 2,481	N/A	US\$ 2,481	
	UBS Group AG	-	"	-	US\$ 2,471	N/A	US\$ 2,471	
	Citizens Bank NA/Providence RI	-	"	-	US\$ 2,436	N/A	US\$ 2,436	
	SunTrust Bank/Atlanta GA	-	"	-	US\$ 2,422	N/A	US\$ 2,422	
	Berkshire Hathaway Inc	-	"	-	US\$ 2,404	N/A	US\$ 2,404	
	Ventas Realty LP / Ventas Capital Corp	-	"	-	US\$ 2,402	N/A	US\$ 2,402	
	Unilever Capital Corp	-	"	-	US\$ 2,399	N/A	US\$ 2,399	
	Danske Bank A/S	-	"	-	US\$ 2,393	N/A	US\$ 2,393	
	Nuveen Finance LLC	-	"	-	US\$ 2,387	N/A	US\$ 2,387	
	Baidu Inc	-	"	-	US\$ 2,379	N/A	US\$ 2,379	
	Northrop Grumman Corp	-	"	-	US\$ 2,376	N/A	US\$ 2,376	
	Delta Air Lines 2007-1 Class A Pass Through Trust	-	"	-	US\$ 2,355	N/A	US\$ 2,355	
	Anthem Inc	-	"	-	US\$ 2,348	N/A	US\$ 2,348	
	State Street Corp	-	"	-	US\$ 2,307	N/A	US\$ 2,307	
	Dow Chemical Co/The	-	"	-	US\$ 2,271	N/A	US\$ 2,271	
	Otis Worldwide Corp	-	"	-	US\$ 2,267	N/A	US\$ 2,267	
	Magellan Midstream Partners LP	-	"	-	US\$ 2,252	N/A	US\$ 2,252	
	Eastman Chemical Co	-	"	-	US\$ 2,229	N/A	US\$ 2,229	
	Cintas Corp No 2	-	"	-	US\$ 2,197	N/A	US\$ 2,197	
	Aetna Inc	-	"	-	US\$ 2,191	N/A	US\$ 2,191	
	ASB Bank Ltd	-	"	-	US\$ 2,157	N/A	US\$ 2,157	
	ITC Holdings Corp	-	"	-	US\$ 2,156	N/A	US\$ 2,156	
	American Honda Finance Corp	-	"	-	US\$ 2,141	N/A	US\$ 2,141	
	PSEG Power LLC	-	"	-	US\$ 2,136	N/A	US\$ 2,136	
	QUALCOMM Inc	-	"	-	US\$ 2,136	N/A	US\$ 2,136	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Southern California Edison Co	-	Financial assets at fair value through other comprehensive income	-	US\$ 2,122	N/A	US\$ 2,122	
	Bank of New Zealand	-	"	-	US\$ 2,116	N/A	US\$ 2,116	
	Woolworths Group Ltd	-	"	-	US\$ 2,076	N/A	US\$ 2,076	
	Unum Group	-	"	-	US\$ 2,074	N/A	US\$ 2,074	
	San Diego Gas & Electric Co	-	"	-	US\$ 2,066	N/A	US\$ 2,066	
	Ingersoll-Rand Luxembourg Finance SA	-	"	-	US\$ 2,047	N/A	US\$ 2,047	
	Boeing Co/The	-	"	-	US\$ 2,018	N/A	US\$ 2,018	
	WR Berkley Corp	-	"	-	US\$ 2,003	N/A	US\$ 2,003	
	American Airlines 2013-2 Class A Pass Through Trust	-	"	-	US\$ 1,999	N/A	US\$ 1,999	
	CK Hutchison International 16 Ltd	-	"	-	US\$ 1,993	N/A	US\$ 1,993	
	Amphenol Corp	-	"	-	US\$ 1,971	N/A	US\$ 1,971	
	Suncor Energy Inc	-	"	-	US\$ 1,923	N/A	US\$ 1,923	
	Sydney Airport Finance Co Pty Ltd	-	"	-	US\$ 1,918	N/A	US\$ 1,918	
	ABN AMRO Bank NV	-	"	-	US\$ 1,897	N/A	US\$ 1,897	
	Pricoa Global Funding I	-	"	-	US\$ 1,884	N/A	US\$ 1,884	
	Australia & New Zealand Banking Group Ltd/New York NY	-	"	-	US\$ 1,882	N/A	US\$ 1,882	
	Georgia Power Co	-	"	-	US\$ 1,868	N/A	US\$ 1,868	
	Avangrid Inc	-	"	-	US\$ 1,864	N/A	US\$ 1,864	
	Evergy Kansas Central Inc	-	"	-	US\$ 1,810	N/A	US\$ 1,810	
	Discover Bank	-	"	-	US\$ 1,753	N/A	US\$ 1,753	
	Public Service Co of Oklahoma	-	"	-	US\$ 1,739	N/A	US\$ 1,739	
	WestRock RKT LLC	-	"	-	US\$ 1,731	N/A	US\$ 1,731	
	Equinor ASA	-	"	-	US\$ 1,716	N/A	US\$ 1,716	
	Philip Morris International Inc	-	"	-	US\$ 1,714	N/A	US\$ 1,714	
	Moody's Corp	-	"	-	US\$ 1,701	N/A	US\$ 1,701	
	General Mills Inc	-	"	-	US\$ 1,698	N/A	US\$ 1,698	
	McCormick & Co Inc/MD	-	"	-	US\$ 1,683	N/A	US\$ 1,683	
	Wisconsin Public Service Corp	-	"	-	US\$ 1,670	N/A	US\$ 1,670	
	PPL Capital Funding Inc	-	"	-	US\$ 1,670	N/A	US\$ 1,670	
	Cooperatieve Rabobank UA/NY	-	"	-	US\$ 1,670	N/A	US\$ 1,670	
	Toyota Industries Corp	-	"	-	US\$ 1,643	N/A	US\$ 1,643	
	Mondelez International Holdings Netherlands BV	-	"	-	US\$ 1,639	N/A	US\$ 1,639	
	Walgreens Boots Alliance Inc	-	"	-	US\$ 1,623	N/A	US\$ 1,623	
	Southern Co/The	-	"	-	US\$ 1,618	N/A	US\$ 1,618	
	Lincoln National Corp	-	"	-	US\$ 1,618	N/A	US\$ 1,618	
	Suntory Holdings Ltd	-	"	-	US\$ 1,615	N/A	US\$ 1,615	
	Marathon Petroleum Corp	-	"	-	US\$ 1,578	N/A	US\$ 1,578	
	CK Hutchison International 19 Ltd	-	"	-	US\$ 1,549	N/A	US\$ 1,549	
	Xylem Inc/NY	-	"	-	US\$ 1,544	N/A	US\$ 1,544	
	Nestle Holdings Inc	-	"	-	US\$ 1,543	N/A	US\$ 1,543	
	CenterPoint Energy Resources Corp	-	"	-	US\$ 1,525	N/A	US\$ 1,525	
	NTT Finance Corp	-	"	-	US\$ 1,521	N/A	US\$ 1,521	
	Sinopec Group Overseas Development 2015 Ltd	-	"	-	US\$ 1,500	N/A	US\$ 1,500	
	Public Service Electric & Gas Co	-	"	-	US\$ 1,497	N/A	US\$ 1,497	
	KEB Hana Bank	-	"	-	US\$ 1,493	N/A	US\$ 1,493	
	Guardian Life Global Funding	-	"	-	US\$ 1,492	N/A	US\$ 1,492	
	Activision Blizzard Inc	-	"	-	US\$ 1,487	N/A	US\$ 1,487	
	AIA Group Ltd	-	"	-	US\$ 1,480	N/A	US\$ 1,480	
	Brookfield Finance Inc	-	"	-	US\$ 1,461	N/A	US\$ 1,461	
	Westlake Chemical Corp	-	"	-	US\$ 1,460	N/A	US\$ 1,460	
	Protective Life Global Funding	-	"	-	US\$ 1,456	N/A	US\$ 1,456	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Spectra Energy Partners LP	-	Financial assets at fair value through other comprehensive income	-	US\$ 1,446	N/A	US\$ 1,446	
	Citizens Financial Group Inc	-	"	-	US\$ 1,400	N/A	US\$ 1,400	
	Daiwa Securities Group Inc	-	"	-	US\$ 1,400	N/A	US\$ 1,400	
	HSBC Bank PLC	-	"	-	US\$ 1,399	N/A	US\$ 1,399	
	CNOOC Curtis Funding No 1 Pty Ltd	-	"	-	US\$ 1,391	N/A	US\$ 1,391	
	First Republic Bank/CA	-	"	-	US\$ 1,383	N/A	US\$ 1,383	
	Virginia Electric & Power Co	-	"	-	US\$ 1,378	N/A	US\$ 1,378	
	Ameriprise Financial Inc	-	"	-	US\$ 1,342	N/A	US\$ 1,342	
	Trust F/1401	-	"	-	US\$ 1,341	N/A	US\$ 1,341	
	Nomura Holdings Inc	-	"	-	US\$ 1,335	N/A	US\$ 1,335	
	Pernod Ricard SA	-	"	-	US\$ 1,322	N/A	US\$ 1,322	
	JPMorgan Chase Bank NA	-	"	-	US\$ 1,300	N/A	US\$ 1,300	
	Baker Hughes a GE Co LLC / Baker Hughes Co-Obligor Inc	-	"	-	US\$ 1,295	N/A	US\$ 1,295	
	Essex Portfolio LP	-	"	-	US\$ 1,282	N/A	US\$ 1,282	
	Ontario Teachers' Cadillac Fairview Properties Trust	-	"	-	US\$ 1,260	N/A	US\$ 1,260	
	Interpublic Group of Cos Inc/The	-	"	-	US\$ 1,255	N/A	US\$ 1,255	
	Entergy Arkansas LLC	-	"	-	US\$ 1,224	N/A	US\$ 1,224	
	Santander UK Group Holdings PLC	-	"	-	US\$ 1,192	N/A	US\$ 1,192	
	Cleveland Electric Illuminating Co/The	-	"	-	US\$ 1,164	N/A	US\$ 1,164	
	Fifth Third Bank/Cincinnati OH	-	"	-	US\$ 1,163	N/A	US\$ 1,163	
	Regions Bank/Birmingham AL	-	"	-	US\$ 1,147	N/A	US\$ 1,147	
	UDR Inc	-	"	-	US\$ 1,131	N/A	US\$ 1,131	
	APT Pipelines Ltd	-	"	-	US\$ 1,125	N/A	US\$ 1,125	
	TransCanada PipeLines Ltd	-	"	-	US\$ 1,119	N/A	US\$ 1,119	
	Manulife Financial Corp	-	"	-	US\$ 1,109	N/A	US\$ 1,109	
	Johnson Controls International plc	-	"	-	US\$ 1,103	N/A	US\$ 1,103	
	Aviation Capital Group LLC	-	"	-	US\$ 1,073	N/A	US\$ 1,073	
	Diageo Capital PLC	-	"	-	US\$ 1,060	N/A	US\$ 1,060	
	Continental Airlines 2012-1 Class A Pass Through Trust	-	"	-	US\$ 1,046	N/A	US\$ 1,046	
	Amazon.com Inc	-	"	-	US\$ 1,032	N/A	US\$ 1,032	
	Union Pacific Corp	-	"	-	US\$ 1,027	N/A	US\$ 1,027	
	Baltimore Gas & Electric Co	-	"	-	US\$ 1,026	N/A	US\$ 1,026	
	Lowe's Cos Inc	-	"	-	US\$ 1,022	N/A	US\$ 1,022	
	Toyota Motor Finance Netherlands BV	-	"	-	US\$ 1,021	N/A	US\$ 1,021	
	CMS Energy Corp	-	"	-	US\$ 1,019	N/A	US\$ 1,019	
	Corp Nacional del Cobre de Chile	-	"	-	US\$ 1,012	N/A	US\$ 1,012	
	Sprint Spectrum Co LLC / Sprint Spectrum Co II LLC / Sprint Spectrum Co III LLC	-	"	-	US\$ 1,011	N/A	US\$ 1,011	
	WP Carey Inc	-	"	-	US\$ 1,008	N/A	US\$ 1,008	
	DH Europe Finance II Sarl	-	"	-	US\$ 1,007	N/A	US\$ 1,007	
	Realty Income Corp	-	"	-	US\$ 1,004	N/A	US\$ 1,004	
	Republic Services Inc	-	"	-	US\$ 1,003	N/A	US\$ 1,003	
	Commonwealth Edison Co	-	"	-	US\$ 1,000	N/A	US\$ 1,000	
	Loews Corp	-	"	-	US\$ 999	N/A	US\$ 999	
	Gilead Sciences Inc	-	"	-	US\$ 989	N/A	US\$ 989	
	Alexandria Real Estate Equities Inc	-	"	-	US\$ 988	N/A	US\$ 988	
	Texas Eastern Transmission LP	-	"	-	US\$ 982	N/A	US\$ 982	
	MetLife Inc	-	"	-	US\$ 974	N/A	US\$ 974	
	BBVA USA	-	"	-	US\$ 949	N/A	US\$ 949	
	Marsh & McLennan Cos Inc	-	"	-	US\$ 931	N/A	US\$ 931	
	Entergy Mississippi LLC	-	"	-	US\$ 929	N/A	US\$ 929	

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Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Kimco Realty Corp	-	Financial assets at fair value through other comprehensive income	-	US\$ 923	N/A	US\$ 923	
	Prudential Financial Inc	-	"	-	US\$ 908	N/A	US\$ 908	
	British Airways 2013-1 Class A Pass Through Trust	-	"	-	US\$ 905	N/A	US\$ 905	
	MassMutual Global Funding II	-	"	-	US\$ 894	N/A	US\$ 894	
	CNOOC Finance 2011 Ltd	-	"	-	US\$ 864	N/A	US\$ 864	
	Mitsubishi UFJ Lease & Finance Co Ltd	-	"	-	US\$ 859	N/A	US\$ 859	
	Amgen Inc	-	"	-	US\$ 857	N/A	US\$ 857	
	Viterra Inc	-	"	-	US\$ 830	N/A	US\$ 830	
	CA Inc	-	"	-	US\$ 820	N/A	US\$ 820	
	Sinopec Capital 2013 Ltd	-	"	-	US\$ 809	N/A	US\$ 809	
	UnitedHealth Group Inc	-	"	-	US\$ 783	N/A	US\$ 783	
	Nationwide Financial Services Inc	-	"	-	US\$ 759	N/A	US\$ 759	
	AXIS Specialty Finance LLC	-	"	-	US\$ 755	N/A	US\$ 755	
	PayPal Holdings Inc	-	"	-	US\$ 743	N/A	US\$ 743	
	ONEOK Partners LP	-	"	-	US\$ 739	N/A	US\$ 739	
	Sky Ltd	-	"	-	US\$ 734	N/A	US\$ 734	
	BNZ International Funding Ltd/London	-	"	-	US\$ 720	N/A	US\$ 720	
	Warner Media LLC	-	"	-	US\$ 716	N/A	US\$ 716	
	American Electric Power Co Inc	-	"	-	US\$ 716	N/A	US\$ 716	
	Kroger Co/The	-	"	-	US\$ 698	N/A	US\$ 698	
	Southern California Gas Co	-	"	-	US\$ 691	N/A	US\$ 691	
	BAE Systems Holdings Inc	-	"	-	US\$ 685	N/A	US\$ 685	
	Aon Corp	-	"	-	US\$ 652	N/A	US\$ 652	
	Digital Realty Trust LP	-	"	-	US\$ 646	N/A	US\$ 646	
	OneBeacon US Holdings Inc	-	"	-	US\$ 641	N/A	US\$ 641	
	Ohio Power Co	-	"	-	US\$ 627	N/A	US\$ 627	
	Norfolk Southern Railway Co	-	"	-	US\$ 607	N/A	US\$ 607	
	RBC USA Holdco Corp	-	"	-	US\$ 600	N/A	US\$ 600	
	Toledo Edison Co/The	-	"	-	US\$ 596	N/A	US\$ 596	
	Pioneer Natural Resources Co	-	"	-	US\$ 579	N/A	US\$ 579	
	American Water Capital Corp	-	"	-	US\$ 577	N/A	US\$ 577	
	Evergy Inc	-	"	-	US\$ 576	N/A	US\$ 576	
	Duke Energy Progress LLC	-	"	-	US\$ 569	N/A	US\$ 569	
	ViacomCBS Inc	-	"	-	US\$ 565	N/A	US\$ 565	
	Kinder Morgan Energy Partners LP	-	"	-	US\$ 563	N/A	US\$ 563	
	Continental Airlines 2007-1 Class A Pass Through Trust	-	"	-	US\$ 557	N/A	US\$ 557	
	ABC Inc	-	"	-	US\$ 552	N/A	US\$ 552	
	salesforce.com Inc	-	"	-	US\$ 522	N/A	US\$ 522	
	Aflac Inc	-	"	-	US\$ 515	N/A	US\$ 515	
	TTX Co	-	"	-	US\$ 505	N/A	US\$ 505	
	Adobe Inc	-	"	-	US\$ 503	N/A	US\$ 503	
	Juniper Networks Inc	-	"	-	US\$ 501	N/A	US\$ 501	
	Danone SA	-	"	-	US\$ 500	N/A	US\$ 500	
	Hanwha Energy USA Holdings Corp	-	"	-	US\$ 497	N/A	US\$ 497	
	Regency Centers Corp	-	"	-	US\$ 495	N/A	US\$ 495	
	Simon Property Group LP	-	"	-	US\$ 493	N/A	US\$ 493	
	Duke Energy Carolinas LLC	-	"	-	US\$ 462	N/A	US\$ 462	
	United Overseas Bank Ltd	-	"	-	US\$ 455	N/A	US\$ 455	
	BAT International Finance PLC	-	"	-	US\$ 449	N/A	US\$ 449	
	National Oilwell Varco Inc	-	"	-	US\$ 441	N/A	US\$ 441	
	Newmont Goldcorp Corp	-	"	-	US\$ 402	N/A	US\$ 402	
	Eaton Electric Holdings LLC	-	"	-	US\$ 397	N/A	US\$ 397	

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Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	StanCorp Financial Group Inc	-	Financial assets at fair value through other comprehensive income	-	US\$ 396	N/A	US\$ 396	
	Comerica Bank	-	"	-	US\$ 396	N/A	US\$ 396	
	Canadian Pacific Railway Co	-	"	-	US\$ 395	N/A	US\$ 395	
	Boston Properties LP	-	"	-	US\$ 394	N/A	US\$ 394	
	Southern Power Co	-	"	-	US\$ 392	N/A	US\$ 392	
	Metropolitan Edison Co	-	"	-	US\$ 390	N/A	US\$ 390	
	Fidelity National Information Services Inc	-	"	-	US\$ 385	N/A	US\$ 385	
	CBS Corp	-	"	-	US\$ 379	N/A	US\$ 379	
	AXA Equitable Holdings Inc	-	"	-	US\$ 370	N/A	US\$ 370	
	Banco del Estado de Chile	-	"	-	US\$ 370	N/A	US\$ 370	
	Phillips 66	-	"	-	US\$ 355	N/A	US\$ 355	
	Principal Financial Group Inc	-	"	-	US\$ 346	N/A	US\$ 346	
	Enbridge Inc	-	"	-	US\$ 331	N/A	US\$ 331	
	Chubb INA Holdings Inc	-	"	-	US\$ 304	N/A	US\$ 304	
	America Movil SAB de CV	-	"	-	US\$ 303	N/A	US\$ 303	
	Alibaba Group Holding Ltd	-	"	-	US\$ 302	N/A	US\$ 302	
	CommonSpirit Health	-	"	-	US\$ 302	N/A	US\$ 302	
	Eli Lilly & Co	-	"	-	US\$ 300	N/A	US\$ 300	
	Total Capital International SA	-	"	-	US\$ 295	N/A	US\$ 295	
	Continental Airlines 2000-1 Class A-1 Pass Through Trust	-	"	-	US\$ 285	N/A	US\$ 285	
	PACCAR Financial Corp	-	"	-	US\$ 285	N/A	US\$ 285	
	Southern Natural Gas Co LLC / Southern Natural Issuing Corp	-	"	-	US\$ 275	N/A	US\$ 275	
	Bank of America NA	-	"	-	US\$ 250	N/A	US\$ 250	
	Grupo Bimbo SAB de CV	-	"	-	US\$ 250	N/A	US\$ 250	
	Aon PLC	-	"	-	US\$ 240	N/A	US\$ 240	
	Capital One Bank USA NA	-	"	-	US\$ 240	N/A	US\$ 240	
	United Technologies Corp	-	"	-	US\$ 220	N/A	US\$ 220	
	Telstra Corp Ltd	-	"	-	US\$ 206	N/A	US\$ 206	
	Waste Management Inc	-	"	-	US\$ 203	N/A	US\$ 203	
	US Airways 2013-1 Class A Pass Through Trust	-	"	-	US\$ 199	N/A	US\$ 199	
	WestRock MWV LLC	-	"	-	US\$ 198	N/A	US\$ 198	
	QNB Finance Ltd	-	"	-	US\$ 198	N/A	US\$ 198	
	Glencore Funding LLC	-	"	-	US\$ 179	N/A	US\$ 179	
	Nucor Corp	-	"	-	US\$ 174	N/A	US\$ 174	
	American Airlines 2011-1 Class A Pass Through Trust	-	"	-	US\$ 99	N/A	US\$ 99	
	Halliburton Co	-	"	-	US\$ 10	N/A	US\$ 10	
	Wells Fargo & Co	-	Financial assets at amortized cost	-	US\$ 160,089	N/A	US\$ 157,404	
	JPMorgan Chase & Co.	-	"	-	US\$ 84,967	N/A	US\$ 84,671	
	Industrial and Commercial Bank of China	-	"	-	US\$ 9,996	N/A	US\$ 10,025	
	<u>Government bond</u>							
	United States Treasury Note/Bond	-	Financial assets at fair value through other comprehensive income	-	US\$ 356,157	N/A	US\$ 356,157	
	United States Treasury Bill	-	"	-	US\$ 6,999	N/A	US\$ 6,999	
	Abu Dhabi Government International Bond	-	"	-	US\$ 3,489	N/A	US\$ 3,489	
	Qatar Government International Bond	-	"	-	US\$ 1,333	N/A	US\$ 1,333	
	<u>Agency bonds/Agency mortgage-backed securities</u>							
	Freddie Mac Multifamily Structured Pass Through Certificates	-	Financial assets at fair value through Profit or Loss	-	US\$ 1,247	N/A	US\$ 1,247	
	Fannie Mae Pool	-	Financial assets at fair value through other comprehensive income	-	US\$ 717,160	N/A	US\$ 717,160	
	Freddie Mac REMICS	-	"	-	US\$ 163,919	N/A	US\$ 163,919	

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Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Freddie Mac Gold Pool	-	Financial assets at fair value through other comprehensive income	-	US\$ 156,595	N/A	US\$ 156,595	
	Fannie Mae REMICS	-	"	-	US\$ 155,152	N/A	US\$ 155,152	
	Freddie Mac Pool	-	"	-	US\$ 150,977	N/A	US\$ 150,977	
	Ginnie Mae II Pool	-	"	-	US\$ 116,551	N/A	US\$ 116,551	
	Fannie Mae or Freddie Mac	-	"	-	US\$ 82,257	N/A	US\$ 82,257	
	Government National Mortgage Association	-	"	-	US\$ 50,913	N/A	US\$ 50,913	
	Ginnie Mae	-	"	-	US\$ 48,361	N/A	US\$ 48,361	
	Fannie Mae-Aces	-	"	-	US\$ 21,571	N/A	US\$ 21,571	
	Freddie Mac Multifamily Structured Pass Through Certificates	-	"	-	US\$ 8,501	N/A	US\$ 8,501	
	Korea Hydro & Nuclear Power Co Ltd	-	"	-	US\$ 1,981	N/A	US\$ 1,981	
	Federal National Mortgage Association	-	"	-	US\$ 1,153	N/A	US\$ 1,153	
	Freddie Mac Strips	-	"	-	US\$ 1,140	N/A	US\$ 1,140	
	Denver City & County Housing Authority	-	"	-	US\$ 1,003	N/A	US\$ 1,003	
	Ginnie Mae I Pool	-	"	-	US\$ 931	N/A	US\$ 931	
	Oregon Health & Science University	-	"	-	US\$ 796	N/A	US\$ 796	
	FHLMC-GNMA	-	"	-	US\$ 788	N/A	US\$ 788	
	FRESB 2019-SB61 Mortgage Trust	-	"	-	US\$ 663	N/A	US\$ 663	
	State of Wisconsin	-	"	-	US\$ 497	N/A	US\$ 497	
	Freddie Mac Non Gold Pool	-	"	-	US\$ 485	N/A	US\$ 485	
	Brazos Higher Education Authority Inc	-	"	-	US\$ 461	N/A	US\$ 461	
	FRESB 2019-SB60 Mortgage Trust	-	"	-	US\$ 413	N/A	US\$ 413	
	Sales Tax Securitization Corp	-	"	-	US\$ 252	N/A	US\$ 252	
	Fannie Mae Benchmark REMIC	-	"	-	US\$ 112	N/A	US\$ 112	
	<u>Asset-backed securities</u>							
	Hyundai Auto Receivables Trust 2017-A	-	Financial assets at fair value through other comprehensive income	-	US\$ 9,902	N/A	US\$ 9,902	
	Citibank Credit Card Issuance Trust	-	"	-	US\$ 7,314	N/A	US\$ 7,314	
	BANK 2020-BNK26	-	"	-	US\$ 6,713	N/A	US\$ 6,713	
	Citigroup Commercial Mortgage Trust 2014-GC21	-	"	-	US\$ 6,711	N/A	US\$ 6,711	
	Benchmark 2019-B11 Mortgage Trust	-	"	-	US\$ 6,251	N/A	US\$ 6,251	
	CGDBB Commercial Mortgage Trust 2017-BIOC	-	"	-	US\$ 6,114	N/A	US\$ 6,114	
	Ford Credit Auto Owner Trust 2017-A	-	"	-	US\$ 6,054	N/A	US\$ 6,054	
	CD 2019-CD8 Mortgage Trust	-	"	-	US\$ 5,954	N/A	US\$ 5,954	
	Wells Fargo Commercial Mortgage Trust 2016-C35	-	"	-	US\$ 5,899	N/A	US\$ 5,899	
	Morgan Stanley Bank of America Merrill Lynch Trust 2016-C29	-	"	-	US\$ 5,894	N/A	US\$ 5,894	
	UBS-Barclays Commercial Mortgage Trust 2012-C2	-	"	-	US\$ 5,890	N/A	US\$ 5,890	
	Wells Fargo Commercial Mortgage Trust 2019-C53	-	"	-	US\$ 5,618	N/A	US\$ 5,618	
	WFRBS Commercial Mortgage Trust 2013-C13	-	"	-	US\$ 5,606	N/A	US\$ 5,606	
	Wells Fargo Commercial Mortgage Trust 2020-C55	-	"	-	US\$ 5,353	N/A	US\$ 5,353	
	COMM 2015-CCRE24 Mortgage Trust	-	"	-	US\$ 5,071	N/A	US\$ 5,071	
	BBCMS 2018-TALL Mortgage Trust	-	"	-	US\$ 4,976	N/A	US\$ 4,976	
	Morgan Stanley Bank of America Merrill Lynch Trust 2013-C10	-	"	-	US\$ 4,785	N/A	US\$ 4,785	
	Morgan Stanley Bank of America Merrill Lynch Trust 2016-C30	-	"	-	US\$ 4,691	N/A	US\$ 4,691	
	Hyundai Auto Lease Securitization Trust 2018-A	-	"	-	US\$ 4,639	N/A	US\$ 4,639	
	MRCB 2019-MARK Mortgage Trust	-	"	-	US\$ 4,543	N/A	US\$ 4,543	
	Hyundai Auto Receivables Trust 2016-B	-	"	-	US\$ 4,481	N/A	US\$ 4,481	
	BANK 2019-BNK22	-	"	-	US\$ 4,461	N/A	US\$ 4,461	
	Mercedes-Benz Auto Lease Trust 2019-B	-	"	-	US\$ 4,278	N/A	US\$ 4,278	
	Morgan Stanley Bank of America Merrill Lynch Trust 2013-C7	-	"	-	US\$ 4,181	N/A	US\$ 4,181	
	Hyundai Auto Receivables Trust 2016-A	-	"	-	US\$ 4,156	N/A	US\$ 4,156	
	UBS Commercial Mortgage Trust 2018-C10	-	"	-	US\$ 4,140	N/A	US\$ 4,140	
	JPMCC Commercial Mortgage Securities Trust 2017-JP7	-	"	-	US\$ 4,124	N/A	US\$ 4,124	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	BANK 2017-BNK6	-	Financial assets at fair value through other comprehensive income	-	US\$ 4,116	N/A	US\$ 4,116	
	BANK 2017-BNK5	-	"	-	US\$ 4,073	N/A	US\$ 4,073	
	BANK 2019-BNK17	-	"	-	US\$ 4,065	N/A	US\$ 4,065	
	JPMBB Commercial Mortgage Securities Trust 2015-C28	-	"	-	US\$ 4,044	N/A	US\$ 4,044	
	Enterprise Fleet Financing 2020-1 LLC	-	"	-	US\$ 3,970	N/A	US\$ 3,970	
	JP Morgan Chase Commercial Mortgage Securities Trust 2012-LC9	-	"	-	US\$ 3,920	N/A	US\$ 3,920	
	American Express Credit Account Master Trust	-	"	-	US\$ 3,820	N/A	US\$ 3,820	
	BX Commercial Mortgage Trust 2018-IND	-	"	-	US\$ 3,728	N/A	US\$ 3,728	
	Enterprise Fleet Financing 2019-2 LLC	-	"	-	US\$ 3,715	N/A	US\$ 3,715	
	Barclays Commercial Mortgage Trust 2019-C5	-	"	-	US\$ 3,666	N/A	US\$ 3,666	
	Citigroup Commercial Mortgage Trust 2019-C7	-	"	-	US\$ 3,646	N/A	US\$ 3,646	
	BANK 2019-BNK23	-	"	-	US\$ 3,604	N/A	US\$ 3,604	
	CSAIL 2016-C6 Commercial Mortgage Trust	-	"	-	US\$ 3,323	N/A	US\$ 3,323	
	GM Financial Consumer Automobile Receivables Trust 2018-1	-	"	-	US\$ 3,307	N/A	US\$ 3,307	
	Benchmark 2018-B2 Mortgage Trust	-	"	-	US\$ 3,279	N/A	US\$ 3,279	
	UBS-Barclays Commercial Mortgage Trust 2013-C6	-	"	-	US\$ 3,272	N/A	US\$ 3,272	
	GS Mortgage Securities Trust 2012-GC6	-	"	-	US\$ 3,170	N/A	US\$ 3,170	
	Toyota Auto Receivables 2017-A Owner Trust	-	"	-	US\$ 3,109	N/A	US\$ 3,109	
	Ford Credit Auto Lease Trust 2019-B	-	"	-	US\$ 3,102	N/A	US\$ 3,102	
	Citigroup Commercial Mortgage Trust 2016-P5	-	"	-	US\$ 3,010	N/A	US\$ 3,010	
	Wells Fargo Commercial Mortgage Trust 2017-C40	-	"	-	US\$ 3,007	N/A	US\$ 3,007	
	UBS-Barclays Commercial Mortgage Trust 2012-C3	-	"	-	US\$ 2,984	N/A	US\$ 2,984	
	GM Financial Consumer Automobile Receivables Trust 2017-2	-	"	-	US\$ 2,978	N/A	US\$ 2,978	
	Morgan Stanley Capital I Trust 2017-H1	-	"	-	US\$ 2,945	N/A	US\$ 2,945	
	Hyundai Auto Receivables Trust 2018-A	-	"	-	US\$ 2,882	N/A	US\$ 2,882	
	Nissan Auto Lease Trust 2019-B	-	"	-	US\$ 2,875	N/A	US\$ 2,875	
	BANK 2020-BNK25	-	"	-	US\$ 2,807	N/A	US\$ 2,807	
	GS Mortgage Securities Corp Trust 2018-RIVR	-	"	-	US\$ 2,800	N/A	US\$ 2,800	
	Citigroup Commercial Mortgage Trust 2016-C3	-	"	-	US\$ 2,748	N/A	US\$ 2,748	
	GS Mortgage Securities Trust 2013-GCJ12	-	"	-	US\$ 2,629	N/A	US\$ 2,629	
	BANK 2019-BNK24	-	"	-	US\$ 2,607	N/A	US\$ 2,607	
	GS Mortgage Securities Trust 2011-GC3	-	"	-	US\$ 2,581	N/A	US\$ 2,581	
	J.P. Morgan Chase Commercial Mortgage Securities Trust 2016-WIKI	-	"	-	US\$ 2,555	N/A	US\$ 2,555	
	Morgan Stanley Bank of America Merrill Lynch Trust 2012-C6	-	"	-	US\$ 2,446	N/A	US\$ 2,446	
	Toyota Auto Receivables 2018-D Owner Trust	-	"	-	US\$ 2,443	N/A	US\$ 2,443	
	ARI Fleet Lease Trust 2019-A	-	"	-	US\$ 2,371	N/A	US\$ 2,371	
	Ford Credit Auto Owner Trust 2020-REV1	-	"	-	US\$ 2,315	N/A	US\$ 2,315	
	UBS Commercial Mortgage Trust 2018-C11	-	"	-	US\$ 2,165	N/A	US\$ 2,165	
	GS Mortgage Securities Trust 2020-GC45	-	"	-	US\$ 2,156	N/A	US\$ 2,156	
	Morgan Stanley Capital I Trust 2018-H3	-	"	-	US\$ 2,144	N/A	US\$ 2,144	
	BENCHMARK 2018-B4	-	"	-	US\$ 2,122	N/A	US\$ 2,122	
	COMM 2013-CCRE12 Mortgage Trust	-	"	-	US\$ 2,101	N/A	US\$ 2,101	
	Ford Credit Auto Owner Trust 2019-A	-	"	-	US\$ 2,090	N/A	US\$ 2,090	
	Wells Fargo Commercial Mortgage Trust 2012-LC5	-	"	-	US\$ 2,060	N/A	US\$ 2,060	
	JPMDDB Commercial Mortgage Securities Trust 2017-C7	-	"	-	US\$ 2,043	N/A	US\$ 2,043	
	CSAIL 2015-C3 Commercial Mortgage Trust	-	"	-	US\$ 2,043	N/A	US\$ 2,043	
	JPMBB Commercial Mortgage Securities Trust 2014-C19	-	"	-	US\$ 2,018	N/A	US\$ 2,018	
	Morgan Stanley Bank of America Merrill Lynch Trust 2016-C31	-	"	-	US\$ 2,014	N/A	US\$ 2,014	
	Citigroup Commercial Mortgage Trust 2017-P8	-	"	-	US\$ 2,010	N/A	US\$ 2,010	
	Mercedes-Benz Auto Lease Trust 2018-B	-	"	-	US\$ 1,953	N/A	US\$ 1,953	
	WFRBS Commercial Mortgage Trust 2013-C17	-	"	-	US\$ 1,913	N/A	US\$ 1,913	
	COMM 2014-CCRE17 Mortgage Trust	-	"	-	US\$ 1,878	N/A	US\$ 1,878	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	GS Mortgage Securities Trust 2014-GC22	-	Financial assets at fair value through other comprehensive income	-	US\$ 1,840	N/A	US\$ 1,840	
	Citigroup Commercial Mortgage Trust 2015-GC35	-	"	-	US\$ 1,783	N/A	US\$ 1,783	
	Morgan Stanley Bank of America Merrill Lynch Trust 2013-C8	-	"	-	US\$ 1,769	N/A	US\$ 1,769	
	Morgan Stanley Capital I Trust 2019-H6	-	"	-	US\$ 1,714	N/A	US\$ 1,714	
	GS Mortgage Securities Trust 2015-GC34	-	"	-	US\$ 1,687	N/A	US\$ 1,687	
	Wells Fargo Commercial Mortgage Trust 2015-C28	-	"	-	US\$ 1,665	N/A	US\$ 1,665	
	GM Financial Automobile Leasing Trust 2019-1	-	"	-	US\$ 1,640	N/A	US\$ 1,640	
	JPMBB Commercial Mortgage Securities Trust 2013-C12	-	"	-	US\$ 1,501	N/A	US\$ 1,501	
	Chesapeake Funding II LLC	-	"	-	US\$ 1,496	N/A	US\$ 1,496	
	Morgan Stanley Bank of America Merrill Lynch Trust 2015-C24	-	"	-	US\$ 1,473	N/A	US\$ 1,473	
	Citigroup Commercial Mortgage Trust 2015-GC27	-	"	-	US\$ 1,451	N/A	US\$ 1,451	
	Honda Auto Receivables 2017-3 Owner Trust	-	"	-	US\$ 1,437	N/A	US\$ 1,437	
	WFRBS Commercial Mortgage Trust 2013-C14	-	"	-	US\$ 1,420	N/A	US\$ 1,420	
	Wells Fargo Commercial Mortgage Trust 2016-C36	-	"	-	US\$ 1,383	N/A	US\$ 1,383	
	GS Mortgage Securities Trust 2014-GC24	-	"	-	US\$ 1,369	N/A	US\$ 1,369	
	COMM 2020-CBM Mortgage Trust	-	"	-	US\$ 1,354	N/A	US\$ 1,354	
	Morgan Stanley Bank of America Merrill Lynch Trust 2013-C12	-	"	-	US\$ 1,331	N/A	US\$ 1,331	
	Benchmark 2019-B14 Mortgage Trust	-	"	-	US\$ 1,314	N/A	US\$ 1,314	
	Hyundai Auto Receivables Trust 2019-B	-	"	-	US\$ 1,266	N/A	US\$ 1,266	
	Nissan Auto Lease Trust 2019-A	-	"	-	US\$ 1,226	N/A	US\$ 1,226	
	GM Financial Automobile Leasing Trust 2019-4	-	"	-	US\$ 1,193	N/A	US\$ 1,193	
	GS Mortgage Securities Trust 2019-GSA1	-	"	-	US\$ 1,183	N/A	US\$ 1,183	
	Chase Issuance Trust	-	"	-	US\$ 1,182	N/A	US\$ 1,182	
	Wells Fargo Commercial Mortgage Trust 2015-LC20	-	"	-	US\$ 1,174	N/A	US\$ 1,174	
	DBGS 2018-BIOD Mortgage Trust	-	"	-	US\$ 1,164	N/A	US\$ 1,164	
	Benchmark 2019-B9 Mortgage Trust	-	"	-	US\$ 1,107	N/A	US\$ 1,107	
	WFRBS Commercial Mortgage Trust 2011-C4	-	"	-	US\$ 1,016	N/A	US\$ 1,016	
	GM Financial Consumer Automobile 2017-1	-	"	-	US\$ 996	N/A	US\$ 996	
	Ford Credit Auto Owner Trust 2017-REV1	-	"	-	US\$ 992	N/A	US\$ 992	
	BBCMS MORTGAGE TRUST 2017-C1	-	"	-	US\$ 991	N/A	US\$ 991	
	COMM 2013-LC6 Mortgage Trust	-	"	-	US\$ 986	N/A	US\$ 986	
	Ford Credit Auto Lease Trust 2019-A	-	"	-	US\$ 978	N/A	US\$ 978	
	Citigroup Commercial Mortgage Trust 2013-GC11	-	"	-	US\$ 952	N/A	US\$ 952	
	Benchmark 2019-B15 Mortgage Trust	-	"	-	US\$ 947	N/A	US\$ 947	
	Morgan Stanley Bank of America Merrill Lynch Trust 2013-C13	-	"	-	US\$ 939	N/A	US\$ 939	
	Hertz Fleet Lease Funding LP	-	"	-	US\$ 935	N/A	US\$ 935	
	Morgan Stanley Capital I Trust 2016-UB11	-	"	-	US\$ 899	N/A	US\$ 899	
	Citigroup Commercial Mortgage Trust 2014-GC23	-	"	-	US\$ 896	N/A	US\$ 896	
	Toyota Auto Receivables 2020-A Owner Trust	-	"	-	US\$ 892	N/A	US\$ 892	
	COMM 2012-CCRE5 Mortgage Trust	-	"	-	US\$ 892	N/A	US\$ 892	
	Cantor Commercial Real Estate Lending 2019-CF1	-	"	-	US\$ 880	N/A	US\$ 880	
	COMM 2015-PC1 Mortgage Trust	-	"	-	US\$ 855	N/A	US\$ 855	
	JPMDDB Commercial Mortgage Securities Trust 2016-C2	-	"	-	US\$ 834	N/A	US\$ 834	
	GM Financial Automobile Leasing Trust 2019-2	-	"	-	US\$ 811	N/A	US\$ 811	
	Morgan Stanley Capital I Trust 2019-H7	-	"	-	US\$ 810	N/A	US\$ 810	
	Ford Credit Auto Lease Trust	-	"	-	US\$ 793	N/A	US\$ 793	
	280 Park Avenue 2017-280P Mortgage Trust	-	"	-	US\$ 776	N/A	US\$ 776	
	BANK 2017-BNK7	-	"	-	US\$ 768	N/A	US\$ 768	
	GM Financial Automobile Leasing Trust 2018-1	-	"	-	US\$ 756	N/A	US\$ 756	
	Morgan Stanley Bank of America Merrill Lynch Trust 2015-C20	-	"	-	US\$ 733	N/A	US\$ 733	
	COMM 2015-CCRE22 Mortgage Trust	-	"	-	US\$ 719	N/A	US\$ 719	
	Wells Fargo Commercial Mortgage Trust 2015-NXS3	-	"	-	US\$ 700	N/A	US\$ 700	
	COMM 2013-CCRE8 Mortgage Trust	-	"	-	US\$ 694	N/A	US\$ 694	

(Continued)

Holding Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	CFCRE Commercial Mortgage Trust 2011-C1	-	Financial assets at fair value through other comprehensive income	-	US\$ 683	N/A	US\$ 683	
	GM Financial Automobile Leasing Trust 2019-3	-	"	-	US\$ 649	N/A	US\$ 649	
	Mercedes-Benz Auto Lease Trust 2019-A	-	"	-	US\$ 613	N/A	US\$ 613	
	UBS-Barclays Commercial Mortgage Trust 2013-C5	-	"	-	US\$ 606	N/A	US\$ 606	
	JP Morgan Chase Commercial Mortgage Securities Trust 2012-WLDN	-	"	-	US\$ 579	N/A	US\$ 579	
	JPMDB Commercial Mortgage Securities Trust 2019-COR6	-	"	-	US\$ 566	N/A	US\$ 566	
	GS Mortgage Securities Corp Trust 2020-UPTN	-	"	-	US\$ 562	N/A	US\$ 562	
	Citigroup Commercial Mortgage Trust 2014-GC19	-	"	-	US\$ 547	N/A	US\$ 547	
	DBUBS 2011-LC2 Mortgage Trust	-	"	-	US\$ 504	N/A	US\$ 504	
	CD 2016-CD2 Mortgage Trust	-	"	-	US\$ 503	N/A	US\$ 503	
	JP Morgan Chase Commercial Mortgage Securities Trust 2015-JP1	-	"	-	US\$ 487	N/A	US\$ 487	
	GM Financial Consumer Automobile Receivables Trust 2019-3	-	"	-	US\$ 446	N/A	US\$ 446	
	GS Mortgage Securities Trust 2014-GC26	-	"	-	US\$ 440	N/A	US\$ 440	
	Nissan Auto Lease Trust 2017-B	-	"	-	US\$ 431	N/A	US\$ 431	
	WFRBS Commercial Mortgage Trust 2014-C25	-	"	-	US\$ 386	N/A	US\$ 386	
	GM Financial Automobile Leasing Trust 2018-3	-	"	-	US\$ 337	N/A	US\$ 337	
	Toyota Auto Receivables 2018-B Owner Trust	-	"	-	US\$ 283	N/A	US\$ 283	
	COMM 2015-CCRE26 Mortgage Trust	-	"	-	US\$ 280	N/A	US\$ 280	
	GS Mortgage Securities Corp II	-	"	-	US\$ 271	N/A	US\$ 271	
	Morgan Stanley Bank of America Merrill Lynch Trust 2012-C5	-	"	-	US\$ 267	N/A	US\$ 267	
	Hyundai Auto Lease Securitization Trust 2017-C	-	"	-	US\$ 267	N/A	US\$ 267	
	Mercedes-Benz Auto Lease Trust 2018-A	-	"	-	US\$ 245	N/A	US\$ 245	
	GM Financial Automobile Leasing Trust 2018-2	-	"	-	US\$ 200	N/A	US\$ 200	
	COMM 2015-DC1 Mortgage Trust	-	"	-	US\$ 178	N/A	US\$ 178	
	JPMCC Commercial Mortgage Securities Trust 2017-JP5	-	"	-	US\$ 139	N/A	US\$ 139	
	BMW Vehicle Lease Trust 2017-2	-	"	-	US\$ 101	N/A	US\$ 101	
	Wells Fargo Commercial Mortgage Trust 2015-NXS1	-	"	-	US\$ 47	N/A	US\$ 47	
	COMM 2014-CCRE15 Mortgage Trust	-	"	-	US\$ 46	N/A	US\$ 46	
	Morgan Stanley Bank of America Merrill Lynch Trust 2014-C18	-	"	-	US\$ 20	N/A	US\$ 20	
	GS Mortgage Securities Trust 2010-C2	-	"	-	US\$ 14	N/A	US\$ 14	
	Wells Fargo Commercial Mortgage Trust 2015-SG1	-	"	-	US\$ 10	N/A	US\$ 10	
		<u>Non-publicly traded equity investments</u>						
	Primavera Capital Fund II L.P.	-	Financial assets at fair value through other comprehensive income	-	US\$ 79,520	4	US\$ 79,520	
VTAF II	<u>Non-publicly traded equity investments</u>							
	Sentelic	-	Financial assets at fair value through other comprehensive income	1,019	US\$ 942	4	US\$ 942	
	Aether Systems, Inc.	-	"	1,085	US\$ 359	20	US\$ 359	
	5V Technologies, Inc.	-	"	4	-	-	-	
VTAF III	<u>Non-publicly traded equity investments</u>							
	LiquidLeds Lighting Corp.	-	Financial assets at fair value through other comprehensive income	1,952	US\$ 800	14	US\$ 800	
	Neoconix, Inc.	-	"	4,147	US\$ 174	-	US\$ 174	
Growth Fund	<u>Non-publicly traded equity investments</u>							
	Innovium, Inc.	-	Financial assets at fair value through other comprehensive income	230	US\$ 1,560	-	US\$ 1,560	
	Innovium, Inc.	-	"	221	US\$ 1,501	-	US\$ 1,501	
	CNEX Labs, Inc.	-	"	237	US\$ 479	-	US\$ 479	
	Astera Labs, Inc.	-	"	127	US\$ 250	-	US\$ 250	

(Concluded)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

MARKETABLE SECURITIES ACQUIRED AND DISPOSED OF AT COSTS OR PRICES OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Marketable Securities Type and Name	Financial Statement Account	Counterparty	Nature of Relationship	Beginning Balance		Acquisition		Disposal			Ending Balance (Note)		
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Carrying Value	Gain/Loss on Disposal	Shares/Units (In Thousands)	Amount
TSMC Global	<u>Corporate bond</u>													
	Walt Disney Co/The	Financial assets at fair value through other comprehensive income	-	-	-	US\$ 3,246	-	US\$ 12,319	-	US\$ -	US\$ -	US\$ -	-	US\$ 16,228
	NIKE Inc	"	-	-	-	US\$ -	-	US\$ 10,393	-	US\$ -	US\$ -	US\$ -	-	US\$ 10,698
	United Technologies Corp	"	-	-	-	US\$ 12,108	-	US\$ -	-	US\$ 11,704	US\$ 11,660	US\$ 44	-	US\$ 220
	<u>Government bond</u>													
	United States Treasury Note/Bond	Financial assets at fair value through other comprehensive income	-	-	-	US\$ 419,942	-	US\$ 245,863	-	US\$ 330,568	US\$ 322,699	US\$ 7,869	-	US\$ 356,157
	<u>Agency bonds/Agency mortgage-backed securities</u>													
	FNMA TBA 30 Yr 3	Financial assets at fair value through other comprehensive income	-	-	-	US\$ 2,028	-	US\$ 190,298	-	US\$ 158,991	US\$ 158,866	US\$ 125	-	US\$ 29,853
	Fannie Mae Pool	"	-	-	-	US\$ -	-	US\$ 25,431	-	US\$ 29	US\$ 29	US\$ -	-	US\$ 26,065
	Fannie Mae Pool	"	-	-	-	US\$ -	-	US\$ 23,708	-	US\$ 888	US\$ 857	US\$ 31	-	US\$ 23,667
	GNMA II TBA 30 Yr 3	"	-	-	-	US\$ 15,095	-	US\$ 195,426	-	US\$ 191,595	US\$ 191,586	US\$ 9	-	US\$ 19,719
	Freddie Mac Pool	"	-	-	-	US\$ -	-	US\$ 19,031	-	US\$ -	US\$ -	US\$ -	-	US\$ 19,506
	Fannie Mae Pool	"	-	-	-	US\$ -	-	US\$ 18,793	-	US\$ 136	US\$ 144	US\$ (8)	-	US\$ 19,174
	FNMA TBA 30 Yr 4	"	-	-	-	US\$ 17,372	-	US\$ 124,120	-	US\$ 123,967	US\$ 123,907	US\$ 60	-	US\$ 17,895
	Fannie Mae Pool	"	-	-	-	US\$ 29,463	-	US\$ -	-	US\$ 13,277	US\$ 13,229	US\$ 48	-	US\$ 16,615
	Freddie Mac	"	-	-	-	US\$ 696	-	US\$ 15,872	-	US\$ 243	US\$ 259	US\$ (16)	-	US\$ 16,289
	Fannie Mae Pool	"	-	-	-	US\$ 40,438	-	US\$ -	-	US\$ 24,675	US\$ 24,641	US\$ 34	-	US\$ 16,245
	GNMA II TBA 30 Yr 3.5	"	-	-	-	US\$ 10,517	-	US\$ 71,086	-	US\$ 68,246	US\$ 68,320	US\$ (74)	-	US\$ 13,727
	Fannie Mae Pool	"	-	-	-	US\$ 43,455	-	US\$ -	-	US\$ 30,179	US\$ 30,022	US\$ 157	-	US\$ 13,710
	FNMA TBA 30 Yr 3.5	"	-	-	-	US\$ 9,259	-	US\$ 104,329	-	US\$ 100,473	US\$ 100,398	US\$ 75	-	US\$ 13,462
	Freddie Mac Gold Pool	"	-	-	-	US\$ -	-	US\$ 12,610	-	US\$ 69	US\$ 72	US\$ (3)	-	US\$ 12,808
	FNMA TBA 30 Yr 4.5	"	-	-	-	US\$ 20,165	-	US\$ 77,674	-	US\$ 90,382	US\$ 90,075	US\$ 307	-	US\$ 7,813
	GNMA II TBA 30 Yr 4.5	"	-	-	-	US\$ 7,496	-	US\$ 32,806	-	US\$ 32,764	US\$ 32,835	US\$ (71)	-	US\$ 7,581
	GNMA II TBA 30 Yr 4	"	-	-	-	US\$ -	-	US\$ 14,253	-	US\$ 9,698	US\$ 9,668	US\$ 30	-	US\$ 4,676
	Fannie Mae or Freddie Mac	"	-	-	-	US\$ -	-	US\$ 75,729	-	US\$ 72,430	US\$ 71,802	US\$ 628	-	US\$ 4,026
	FNMA TBA 30 Yr 5	"	-	-	-	US\$ 3,603	-	US\$ 21,723	-	US\$ 21,723	US\$ 21,695	US\$ 28	-	US\$ 3,645
	Ginnie Mae II Pool	"	-	-	-	US\$ -	-	US\$ 12,270	-	US\$ 12,345	US\$ 12,262	US\$ 83	-	US\$ -
	Fannie Mae Pool	"	-	-	-	US\$ -	-	US\$ 10,112	-	US\$ 10,402	US\$ 10,103	US\$ 299	-	US\$ -
	Fannie Mae Pool	"	-	-	-	US\$ 6,284	-	US\$ 7,821	-	US\$ 14,163	US\$ 14,070	US\$ 93	-	US\$ -
	Freddie Mac Pool	"	-	-	-	US\$ -	-	US\$ 12,107	-	US\$ 12,146	US\$ 12,080	US\$ 66	-	US\$ -
	Fannie Mae Pool	"	-	-	-	US\$ -	-	US\$ 18,742	-	US\$ 18,650	US\$ 18,742	US\$ (92)	-	US\$ -
	Fannie Mae Pool	"	-	-	-	US\$ 16,122	-	US\$ -	-	US\$ 16,194	US\$ 16,095	US\$ 99	-	US\$ -
	GNMA II Pool MA6155	"	-	-	-	US\$ 23,932	-	US\$ -	-	US\$ 23,946	US\$ 24,029	US\$ (83)	-	US\$ -

Note: The ending balance includes the amortization of premium/discount on bonds investments, share of profits/losses of investees and other related adjustment.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

ACQUISITION OF INDIVIDUAL REAL ESTATE PROPERTIES AT COSTS OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE THREE MONTHS ENDED MARCH 31, 2020

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

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty (Note)	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Fab	February 11, 2020	\$ 47,500,000	Based on the terms in the purchase order	80 counterparties, including: ABB Ltd. Accudevice Co., Ltd. Air Liquide Far Eastern Ltd. Allis Electric Co., Ltd. Am-Power Machine International Enterprise Co., Ltd. Atlas Copco Taiwan Ltd. Atlas Technology Corp. Capital Machinery Limited Chen Yuan International Co., Ltd. Chenfull International Co., Ltd. Cheng Deh Fire Protection Industrial Corp. China Steel Structure Co., Ltd. Chun Yuan Steel Industry Co., Ltd. Cica-Huntek Chemical Technology Taiwan Co., Ltd. Confederate Technology Co., Ltd. Da-Cin Construction Co., Ltd. Desiccant Technology Corporation EDS International Evergreen Steel Corporation Exyte Taiwan Co., Ltd. Fortune Electric Co., Ltd.	-	N/A	N/A	N/A	N/A	Price comparison and price negotiation	Manufacturing purpose	None

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty (Note)	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Fab				Fu Tsu Construction Co., Ltd. Hantech Engineering Co., Ltd. Hsieh Kun Co., Ltd. Hueng Luei Process Industry Co., Ltd. Ingersoll-Rand Southeast Asia (Pte) Ltd. Taiwan Branch (Singapore) J.C. Yang Architect and Associates JG Environmental Technology Co., Ltd. JJmr-Clean-Air Solution Tech.Services Co., Ltd. Jusun Instruments Co., Ltd. Kedge Construction Co., Ltd. Kinetics Technology Corporation L&K Engineering Co., Ltd. Lead-Fu Industrials Corporation Mandartech Interiors Inc. Marketech International Corp. Mega Union Technology Incorporated Organo Technology Co., Ltd. Ovivo Taiwan Co., Ltd. Pan Asia (Engineers & Constructors) Corporation San Fu Chemical Co., Ltd. Schneider Electric Taiwan Co., Ltd. Shihlin Electric & Engineering Corporation Siemens Limited Solomon Technology Corporation Swift Engineering Co., Ltd. Taiwan Gleno Enterprise Co., Ltd. Taiwan Puritic Corp. TASA Construction Corporation Techgo Industrial Co., Ltd. Trusval Technology Co., Ltd. Tung Kang Steel Structure Corp. Uangyih-Tech Industrial Co., Ltd.								

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty (Note)	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Fab				Unelectra International Corp. United Integrated Services Co., Ltd. Versum Materials Taiwan Co., Ltd. Weltall Technology Corporation Wholetech System Hitech Limited Yang Lung-Shih Architect & Associates Yangtech Engineering Co., Ltd. Yankey Engineering Co., Ltd. Ying Pao Technology Inc. Zhao-Cheng Corp.								

Note: The actual counterparty should be subject to the final purchase order of the Company.

(Concluded)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES OF AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE THREE MONTHS ENDED MARCH 31, 2020

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

Company Name	Related Party	Nature of Relationships	Transaction Details				Abnormal Transaction		Notes/Accounts Payable or Receivable		Note
			Purchases/ Sales	Amount (Foreign Currencies in Thousands)	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance (Foreign Currencies in Thousands)	% to Total	
TSMC	TSMC North America GUC	Subsidiary Associate	Sales	\$ 173,928,051	56	Net 30 days from invoice date (Note)	-	(Note)	\$ 83,162,453	62	
			Sales	1,205,683	-	Net 30 days from the end of the month of when invoice is issued	-	-	227,845	-	
	TSMC China	Subsidiary	Purchases	4,906,928	19	Net 30 days from the end of the month of when invoice is issued	-	-	(1,754,106)	4	
	TSMC Nanjing	Subsidiary	Purchases	2,951,062	12	Net 30 days from the end of the month of when invoice is issued	-	-	(822,594)	2	
	WaferTech	Indirect subsidiary	Purchases	1,999,734	8	Net 30 days from the end of the month of when invoice is issued	-	-	(1,214,925)	3	
	SSMC	Associate	Purchases	972,281	4	Net 30 days from the end of the month of when invoice is issued	-	-	(430,648)	1	
	VIS	Associate	Purchases	742,052	3	Net 30 days from the end of the month of when invoice is issued	-	-	(244,861)	1	
TSMC North America	GUC	Associate of TSMC	Sales	379,471 (US\$ 12,592)	-	Net 30 days from invoice date	-	-	47,973 (US\$ 1,586)	-	
VisEra Tech	Xintec	Associate of TSMC	Sales	215,469	13	Net 30 days from the end of the month of when invoice is issued			151,946	16	

Note: The tenor is 30 days from TSMC's invoice date or determined by the payment terms granted to its clients by TSMC North America.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL

MARCH 31, 2020

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

Company Name	Related Party	Nature of Relationships	Ending Balance (Foreign Currencies in Thousands)	Turnover Days (Note 1)	Overdue		Amounts Received in Subsequent Period	Allowance for Bad Debts
					Amount	Action Taken		
TSMC	TSMC North America	Subsidiary	\$ 84,070,758	43	\$ -	-	\$ -	\$ -
	TSMC Nanjing	Subsidiary	250,773	Note 2	-	-	-	-
	GUC	Associate	227,845	26	-	-	-	-
TSMC China	TSMC Nanjing	The same parent company	23,220,700 (RMB 5,446,777)	Note 2	-	-	-	-
	TSMC	Parent company	1,754,106 (RMB 411,457)	30	-	-	-	-
TSMC Nanjing	TSMC	Parent company	822,594 (RMB 192,954)	35	-	-	-	-
VisEra Tech	Xintec	Associate of TSMC	151,946	58	-	-	-	-
TSMC Technology	TSMC	The ultimate parent of the Company	269,376 (US\$ 8,908)	Note 2	-	-	-	-
WaferTech	TSMC	The ultimate parent of the Company	1,214,925 (US\$ 40,177)	53	574,719 (US\$ 19,006)	-	574,719 (US\$ 19,006)	-

Note 1: The calculation of turnover days excludes other receivables from related parties.

Note 2: The ending balance is primarily consisted of other receivables, which is not applicable for the calculation of turnover days.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS
FOR THE THREE MONTHS ENDED MARCH 31, 2020

(Amounts in Thousands of New Taiwan Dollars)

No.	Company Name	Counterparty	Nature of Relationship (Note 1)	Intercompany Transactions			
				Financial Statements Item	Amount	Terms (Note 2)	Percentage of Consolidated Net Revenue or Total Assets
0	TSMC	TSMC North America	1	Net revenue from sale of goods	\$ 173,928,051	-	56%
				Receivables from related parties	83,162,453	-	4%
				Other receivables from related parties	908,305	-	-
		TSMC Europe	1	Marketing expenses - commission	110,047	-	-
				TSMC China	1	Purchases	4,906,928
		TSMC Nanjing	1	Payables to related parties		1,754,106	-
				Purchases	2,951,062	-	1%
Proceeds from disposal of property, plant and equipment	391,365			-	-		
Other receivables from related parties	250,773			-	-		
TSMC Technology	1	Payables to related parties	822,594	-	-		
		Research and development expenses	627,678	-	-		
1	TSMC China	TSMC Nanjing	3	Payables to related parties	269,376	-	-
				Purchases	1,999,734	-	1%
				Payables to related parties	1,214,925	-	-
				Other receivables from related parties	23,220,700	-	1%

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

No. 3 represents the transactions between subsidiaries.

Note 2: The sales prices and payment terms of intercompany sales are not significantly different from those to third parties. For other intercompany transactions, prices and terms are determined in accordance with mutual agreements.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

NAMES, LOCATIONS, AND RELATED INFORMATION OF INVESTEEES OVER WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE (EXCLUDING INFORMATION ON INVESTMENT IN MAINLAND CHINA)
 FOR THE THREE MONTHS ENDED MARCH 31, 2020
 (Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of March 31, 2020			Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				March 31, 2020 (Foreign Currencies in Thousands)	December 31, 2019 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership	Carrying Value (Foreign Currencies in Thousands)			
TSMC	TSMC Global TSMC Partners	Tortola, British Virgin Islands	Investment activities	\$ 355,162,309	\$ 355,162,309	11	100	\$ 403,318,967	\$ 2,422,114	\$ 2,422,114	Subsidiary
		Tortola, British Virgin Islands	Investing in companies involved in the design, manufacture, and other related business in the semiconductor industry and other investment activities	31,456,130	31,456,130	988,268	100	54,393,446	645,579	645,579	Subsidiary
	VIS	Hsin-Chu, Taiwan	Manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing and design service of masks	10,180,677	10,180,677	464,223	28	9,339,016	1,475,800	400,223	Associate
	SSMC	Singapore	Manufacturing and selling of integrated circuits and other semiconductor devices	5,120,028	5,120,028	314	39	6,784,537	589,283	228,583	Associate
	VisEra Tech	Hsin-Chu, Taiwan	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	5,005,171	5,005,171	253,120	87	5,050,427	584,047	507,771	Subsidiary
	TSMC North America	San Jose, California, U.S.A	Selling and marketing of integrated circuits and other semiconductor devices	333,718	333,718	11,000	100	4,447,030	(160,502)	(160,502)	Subsidiary
	Xintec	Taoyuan, Taiwan	Wafer level chip size packaging and wafer level post passivation interconnection service	1,988,317	1,988,317	111,282	41	1,912,235	160,264	65,899	Associate
	GUC	Hsin-Chu, Taiwan	Researching, developing, manufacturing, testing and marketing of integrated circuits	386,568	386,568	46,688	35	1,310,591	98,742	34,402	Associate
	TSMC Europe	Amsterdam, the Netherlands	Customer service and supporting activities	15,749	15,749	-	100	467,118	8,766	8,766	Subsidiary
	VTAF III	Cayman Islands	Investing in new start-up technology companies	1,318,846	1,318,846	-	98	220,126	(4,118)	(4,036)	Subsidiary
	TSMC Japan	Yokohama, Japan	Customer service and supporting activities	83,760	83,760	6	100	145,721	755	755	Subsidiary
	TSMC JDC	Yokohama, Japan	Engineering support activities	82,080	-	3	100	80,383	(3,443)	(3,443)	Subsidiary
	VTAF II	Cayman Islands	Investing in new start-up technology companies	260,300	260,300	-	98	63,745	(1,043)	(1,022)	Subsidiary
	TSMC Korea	Seoul, Korea	Customer service and supporting activities	13,656	13,656	80	100	39,425	429	429	Subsidiary
TSMC Partners	TSMC Development	Delaware, U.S.A	Investing in companies involved in the manufacturing related business in the semiconductor industry	17,748,443 (US\$ 586,939)	17,748,443 (US\$ 586,939)	-	100	30,530,684 (US\$1,009,646)	454,411 (US\$ 15,078)	Note 2	Subsidiary
	TSMC Technology	Delaware, U.S.A	Engineering support activities	431,874 (US\$ 14,282)	431,874 (US\$ 14,282)	-	100	677,806 (US\$ 22,415)	1,650 (US\$ 55)	Note 2	Subsidiary
	TSMC Canada	Ontario, Canada	Engineering support activities	69,550 (US\$ 2,300)	69,550 (US\$ 2,300)	2,300	100	232,018 (US\$ 7,673)	10,395 (US\$ 345)	Note 2	Subsidiary
	ISDF	Cayman Islands	Investing in new start-up technology companies	-	-	583	97	-	-	Note 2	Subsidiary
	ISDF II	Cayman Islands	Investing in new start-up technology companies	-	-	9,299	97	-	-	Note 2	Subsidiary
VTAF III	Growth Fund	Cayman Islands	Investing in new start-up technology companies	75,711 (US\$ 2,504)	75,711 (US\$ 2,504)	-	100	116,445 (US\$ 3,851)	(301) (US\$ (10))	Note 2	Subsidiary
	Mutual-Pak	New Taipei, Taiwan	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	48,181 (US\$ 1,593)	48,181 (US\$ 1,593)	4,693	28	35,381 (US\$ 1,170)	(11,071) (US\$ (367))	Note 2	Associate

(Continued)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of March 31, 2020			Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				March 31, 2020 (Foreign Currencies in Thousands)	December 31, 2019 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership	Carrying Value (Foreign Currencies in Thousands)			
TSMC Development	WaferTech	Washington, U.S.A	Manufacturing, selling and testing of integrated circuits and other semiconductor devices	\$ -	\$ -	293,637	100	\$ 4,793,735 (US\$ 158,528)	\$ 353,044 (US\$ 11,715)	Note 2	Subsidiary

Note 1: The share of profits/losses of investee includes the effect of unrealized gross profit on intercompany transactions.

Note 2: The share of profits/losses of the investee company is not reflected herein as such amount is already included in the share of profits/losses of the investor company.

(Concluded)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

INFORMATION ON INVESTMENT IN MAINLAND CHINA
FOR THREE MONTHS ENDED MARCH 31, 2020

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

Investee Company	Main Businesses and Products	Total Amount of Paid-in Capital (RMB in Thousands)	Method of Investment	Accumulated Outflow of Investment from Taiwan as of January 1, 2020 (US\$ in Thousands)	Investment Flows		Accumulated Outflow of Investment from Taiwan as of March 31, 2020 (US\$ in Thousands)	Net Income (Losses) of the Investee Company	Percentage of Ownership	Share of Profits/Losses	Carrying Amount as of March 31, 2020	Accumulated Inward Remittance of Earnings as of March 31, 2020
					Outflow (US\$ in Thousands)	Inflow						
TSMC China	Manufacturing, selling, testing and computer-aided design of integrated circuits and other semiconductor devices	\$ 18,939,667 (RMB 4,502,080)	Note 1	\$ 18,939,667 (US\$ 596,000)	\$ -	\$ -	\$ 18,939,667 (US\$ 596,000)	\$ 1,656,216	100%	\$ 1,641,980 (Note 2)	\$ 58,361,341	\$ -
TSMC Nanjing	Manufacturing, selling, testing and computer-aided design of integrated circuits and other semiconductor devices	30,521,412 (RMB 6,650,119)	Note 1	30,521,412 (US\$ 1,000,000)	-	-	30,521,412 (US\$ 1,000,000)	3,013,486	100%	3,062,220 (Note 2)	24,138,538	-

Accumulated Investment in Mainland China as of March 31, 2020 (US\$ in Thousands)	Investment Amounts Authorized by Investment Commission, MOEA (US\$ in Thousands)	Upper Limit on Investment
\$ 49,461,079 (US\$ 1,596,000)	\$ 119,412,667 (US\$ 3,596,000)	\$1,006,217,119 (Note 3)

Note 1: TSMC directly invested US\$596,000 thousand in TSMC China and US\$1,000,000 thousands in TSMC Nanjing.

Note 2: Amount was recognized based on the reviewed financial statements.

Note 3: The upper limit on investment in mainland China is determined by sixty percent (60%) of the Company's consolidated net worth.

Taiwan Semiconductor Manufacturing Company Limited**INFORMATION ON MAJOR SHAREHOLDERS
MARCH 31, 2020**

Shareholders	Shares	
	Total Shares Owned (In Thousands)	Ownership Percentage
ADR-Taiwan Semiconductor Manufacturing Company, Ltd.	5,325,454	20.53%
National Development Fund, Executive Yuan	1,653,710	6.37%