

**Taiwan Semiconductor Manufacturing
Company Limited and Subsidiaries**

**Consolidated Financial Statements for the
Years Ended December 31, 2022 and 2021 and
Independent Auditors' Report**

REPRESENTATION LETTER

The entities that are required to be included in the combined financial statements of Taiwan Semiconductor Manufacturing Company Limited as of and for the year ended December 31, 2022, under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with the International Financial Reporting Standard 10, "Consolidated Financial Statements". In addition, the information required to be disclosed in the combined financial statements is included in the consolidated financial statements. Consequently, Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries do not prepare a separate set of combined financial statements.

Very truly yours,

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED

By

MARK LIU
Chairman

February 14, 2023

INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders
Taiwan Semiconductor Manufacturing Company Limited

Opinion

We have audited the accompanying consolidated financial statements of Taiwan Semiconductor Manufacturing Company Limited and its subsidiaries (the "Company"), which comprise the consolidated balance sheets as of December 31, 2022 and 2021, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2022 and 2021, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and the Standards on Auditing of the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter for the Company's consolidated financial statements for the year ended December 31, 2022 is stated as follows:

Property, plant and equipment (PP&E) – commencement of depreciation related to PP&E classified as equipment under installation and construction in progress (EUI/CIP)

Refer to Notes 4, 5 and 14 to the consolidated financial statements.

The Company's evaluation of when to commence depreciation of EUI/CIP involves determining when the assets are available for their intended use. The criteria the Company uses to determine whether EUI/CIP are available for their intended use involves subjective judgments and assumptions about the conditions necessary for the assets to be capable of operating in the intended manner. Changes in these assumptions could have a significant impact on when depreciation is recognized.

Given the subjectivity in determining the date to commence depreciation of EUI/CIP, performing audit procedures to evaluate the reasonableness of the Company's judgments and assumptions required a high degree of auditor judgment. Consequently, the validity of commencement of depreciation related to PP&E classified as EUI/CIP is identified as a key audit matter.

Our audit procedures related to the evaluation of when to commence depreciation of EUI/CIP included the following, among others:

1. We read the Company's policy and understood the criteria used to determine when to commence depreciation.
2. We tested the effectiveness of the controls over the evaluation of when to commence depreciation of EUI/CIP.
3. We sampled the year-end balance of EUI/CIP and performed the following for each selection:
 - a. Evaluated whether the selection did not meet the criteria specified by the Company for commencement of depreciation.
 - b. Observed the assets and evaluated their status.
4. We sampled and evaluated whether the selection of EUI/CIP met the criteria specified by the Company for commencement of depreciation during the year.
5. We sampled and evaluated whether the selection of EUI/CIP met the criteria specified by the Company for commencement of depreciation subsequent to year end.

Other Matter

We have also audited the parent company only financial statements of Taiwan Semiconductor Manufacturing Company Limited as of and for the years ended December 31, 2022 and 2021 on which we have issued an unmodified opinion.

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

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRS, IAS, IFRIC, and SIC endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China, and for such internal control as management

determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

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

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

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

As part of an audit in accordance with the Standards on Auditing of the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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

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

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

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the year ended December 31, 2022 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audits resulting in this independent auditors' report are Mei Yen Chiang and Shang Chih Lin.



Deloitte & Touche
Taipei, Taiwan
Republic of China

February 14, 2023

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 audit such consolidated financial statements are those generally applied in the Republic of China.

For the convenience of readers, the independent auditors' 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' report and consolidated financial statements shall prevail.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED BALANCE SHEETS (In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2022		December 31, 2021	
	Amount	%	Amount	%
CURRENT ASSETS				
Cash and cash equivalents (Note 6)	\$ 1,342,814,083	27	\$ 1,064,990,192	29
Financial assets at fair value through profit or loss (Note 7)	1,070,398	-	159,048	-
Financial assets at fair value through other comprehensive income (Note 8)	122,998,543	2	119,519,251	3
Financial assets at amortized cost (Note 9)	94,600,219	2	3,773,571	-
Hedging financial assets (Note 10)	2,329	-	13,468	-
Notes and accounts receivable, net (Note 11)	229,755,887	5	197,586,109	5
Receivables from related parties (Note 34)	1,583,958	-	715,324	-
Other receivables from related parties (Note 34)	68,975	-	61,531	-
Inventories (Notes 5 and 12)	221,149,148	4	193,102,321	5
Other financial assets (Note 35)	25,964,428	1	16,630,611	1
Other current assets	12,888,776	-	10,521,481	-
Total current assets	<u>2,052,896,744</u>	<u>41</u>	<u>1,607,072,907</u>	<u>43</u>
NONCURRENT ASSETS				
Financial assets at fair value through other comprehensive income (Note 8)	6,159,200	-	5,887,892	-
Financial assets at amortized cost (Note 9)	35,127,215	1	1,533,391	-
Investments accounted for using equity method (Note 13)	27,641,505	1	21,963,418	1
Property, plant and equipment (Notes 5 and 14)	2,693,836,970	54	1,975,118,704	53
Right-of-use assets (Notes 5 and 15)	41,914,136	1	32,734,537	1
Intangible assets (Notes 5 and 16)	25,999,155	1	26,821,697	1
Deferred income tax assets (Notes 5 and 26)	69,185,842	1	49,153,886	1
Refundable deposits	4,467,022	-	2,624,854	-
Other noncurrent assets	7,551,089	-	2,592,169	-
Total noncurrent assets	<u>2,911,882,134</u>	<u>59</u>	<u>2,118,430,548</u>	<u>57</u>
TOTAL	<u>\$ 4,964,778,878</u>	<u>100</u>	<u>\$ 3,725,503,455</u>	<u>100</u>
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Short-term loans (Notes 17 and 31)	\$ -	-	\$ 114,921,333	3
Financial liabilities at fair value through profit or loss (Note 7)	116,215	-	681,914	-
Hedging financial liabilities (Note 10)	813	-	9,642	-
Accounts payable	54,879,708	1	47,285,603	1
Payables to related parties (Note 34)	1,642,637	-	1,437,186	-
Salary and bonus payable	36,435,509	1	23,802,100	1
Accrued profit sharing bonus to employees and compensation to directors (Note 29)	61,748,574	1	36,524,741	1
Payables to contractors and equipment suppliers	213,499,613	4	145,742,148	4
Cash dividends payable (Note 21)	142,617,093	3	142,617,093	4
Income tax payable (Notes 5 and 26)	120,801,814	3	59,647,152	2
Long-term liabilities - current portion (Notes 18, 19 and 31)	19,313,889	-	4,566,667	-
Accrued expenses and other current liabilities (Notes 5, 15, 22, 31 and 34)	293,170,952	6	162,267,779	4
Total current liabilities	<u>944,226,817</u>	<u>19</u>	<u>739,503,358</u>	<u>20</u>
NONCURRENT LIABILITIES				
Bonds payable (Notes 18 and 31)	834,336,439	17	610,070,652	16
Long-term bank loans (Notes 19 and 31)	4,760,047	-	3,309,131	-
Deferred income tax liabilities (Notes 5 and 26)	1,031,383	-	1,873,877	-
Lease liabilities (Notes 5, 15 and 31)	29,764,097	-	20,764,214	1
Net defined benefit liability (Note 20)	9,321,091	-	11,036,879	-
Guarantee deposits	892,021	-	686,762	-
Others (Note 22)	179,958,116	4	167,525,377	5
Total noncurrent liabilities	<u>1,060,063,194</u>	<u>21</u>	<u>815,266,892</u>	<u>22</u>
Total liabilities	<u>2,004,290,011</u>	<u>40</u>	<u>1,554,770,250</u>	<u>42</u>
EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT				
Capital stock (Notes 4 and 21)	259,303,805	5	259,303,805	7
Capital surplus (Notes 4, 21 and 28)	69,330,328	1	64,761,602	2
Retained earnings (Notes 4 and 21)				
Appropriated as legal capital reserve	311,146,899	6	311,146,899	8
Appropriated as special capital reserve	3,154,310	-	59,304,212	2
Unappropriated earnings	2,323,223,479	47	1,536,378,550	41
	<u>2,637,524,688</u>	<u>53</u>	<u>1,906,829,661</u>	<u>51</u>
Others (Notes 4, 21 and 28)	(20,505,626)	-	(62,608,515)	(2)
Equity attributable to shareholders of the parent	<u>2,945,653,195</u>	<u>59</u>	<u>2,168,286,553</u>	<u>58</u>
NON - CONTROLLING INTERESTS	<u>14,835,672</u>	<u>1</u>	<u>2,446,652</u>	<u>-</u>
Total equity	<u>2,960,488,867</u>	<u>60</u>	<u>2,170,733,205</u>	<u>58</u>
TOTAL	<u>\$ 4,964,778,878</u>	<u>100</u>	<u>\$ 3,725,503,455</u>	<u>100</u>

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)

	2022		2021	
	Amount	%	Amount	%
NET REVENUE (Notes 5, 22, 34 and 39)	\$ 2,263,891,292	100	\$ 1,587,415,037	100
COST OF REVENUE (Notes 5, 12, 29 and 34)	<u>915,536,486</u>	<u>40</u>	<u>767,877,771</u>	<u>48</u>
GROSS PROFIT	<u>1,348,354,806</u>	<u>60</u>	<u>819,537,266</u>	<u>52</u>
OPERATING EXPENSES (Notes 5, 29 and 34)				
Research and development	163,262,208	7	124,734,755	8
General and administrative	53,524,898	2	36,929,588	2
Marketing	<u>9,920,446</u>	<u>1</u>	<u>7,558,591</u>	<u>1</u>
Total operating expenses	<u>226,707,552</u>	<u>10</u>	<u>169,222,934</u>	<u>11</u>
OTHER OPERATING INCOME AND EXPENSES, NET (Notes 14 and 29)	<u>(368,403)</u>	<u>-</u>	<u>(333,435)</u>	<u>-</u>
INCOME FROM OPERATIONS (Note 39)	<u>1,121,278,851</u>	<u>50</u>	<u>649,980,897</u>	<u>41</u>
NON-OPERATING INCOME AND EXPENSES				
Share of profits of associates	7,798,359	-	5,603,084	-
Interest income (Note 23)	22,422,209	1	5,708,765	-
Other income	947,697	-	973,141	-
Foreign exchange gain, net (Note 37)	4,505,784	-	13,662,655	1
Finance costs (Note 24)	(11,749,984)	-	(5,414,218)	-
Other gains and losses, net (Note 25)	<u>(1,012,198)</u>	<u>-</u>	<u>(7,388,010)</u>	<u>-</u>
Total non-operating income and expenses	<u>22,911,867</u>	<u>1</u>	<u>13,145,417</u>	<u>1</u>
INCOME BEFORE INCOME TAX	1,144,190,718	51	663,126,314	42
INCOME TAX EXPENSE (Notes 5 and 26)	<u>127,290,203</u>	<u>6</u>	<u>66,053,180</u>	<u>4</u>
NET INCOME	<u>1,016,900,515</u>	<u>45</u>	<u>597,073,134</u>	<u>38</u>
OTHER COMPREHENSIVE INCOME (LOSS) (Notes 5, 20, 21 and 26)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit obligation	(823,060)	-	242,079	-
Unrealized gain/(loss) on investments in equity instruments at fair value through other comprehensive income	(263,749)	-	1,900,797	-
Loss on hedging instruments	-	-	(41,416)	-
Share of other comprehensive income (loss) of associates	154,457	-	(30,194)	-
Income tax benefit (expense) related to items that will not be reclassified subsequently	<u>733,956</u>	<u>-</u>	<u>(85,269)</u>	<u>-</u>
	<u>(198,396)</u>	<u>-</u>	<u>1,985,997</u>	<u>-</u>

(Continued)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2022		2021	
	Amount	%	Amount	%
Items that may be reclassified subsequently to profit or loss:				
Exchange differences arising on translation of foreign operations	\$ 50,845,614	2	\$ (6,181,830)	(1)
Unrealized loss on investments in debt instruments at fair value through other comprehensive income	(10,102,658)	-	(3,431,791)	-
Gain on hedging instruments	1,329,231	-	131,535	-
Share of other comprehensive income (loss) of associates	550,338	-	(119,997)	-
Income tax benefit (expense) related to items that may be reclassified subsequently	<u>6,036</u>	<u>-</u>	<u>(3,370)</u>	<u>-</u>
	<u>42,628,561</u>	<u>2</u>	<u>(9,605,453)</u>	<u>(1)</u>
Other comprehensive income (loss), net of income tax	<u>42,430,165</u>	<u>2</u>	<u>(7,619,456)</u>	<u>(1)</u>
TOTAL COMPREHENSIVE INCOME	<u>\$ 1,059,330,680</u>	<u>47</u>	<u>\$ 589,453,678</u>	<u>37</u>
NET INCOME ATTRIBUTABLE TO:				
Shareholders of the parent	\$ 1,016,530,249	45	\$ 596,540,013	38
Non-controlling interests	<u>370,266</u>	<u>-</u>	<u>533,121</u>	<u>-</u>
	<u>\$ 1,016,900,515</u>	<u>45</u>	<u>\$ 597,073,134</u>	<u>38</u>
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:				
Shareholders of the parent	\$ 1,059,124,890	47	\$ 588,918,059	37
Non-controlling interests	<u>205,790</u>	<u>-</u>	<u>535,619</u>	<u>-</u>
	<u>\$ 1,059,330,680</u>	<u>47</u>	<u>\$ 589,453,678</u>	<u>37</u>
EARNINGS PER SHARE (NT\$, Note 27)				
Basic earnings per share	<u>\$ 39.20</u>		<u>\$ 23.01</u>	
Diluted earnings per share	<u>\$ 39.20</u>		<u>\$ 23.01</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)

	Equity Attributable to Shareholders of the Parent															
	Capital Stock - Common Stock							Others								
	Shares (In Thousands)	Amount	Capital Surplus	Legal Capital Reserve	Special Capital Reserve	Unappropriated Earnings	Total	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	Treasury Stock	Non-controlling Interests	Total Equity		
BALANCE, JANUARY 1, 2021	25,930,380	\$ 259,303,805	\$ 56,347,243	\$ 311,146,899	\$ 42,259,146	\$ 1,235,280,036	\$ 1,588,686,081	\$ (57,001,627)	\$ 2,321,754	\$ -	\$ -	\$ (54,679,873)	\$ -	\$ 1,849,657,256	\$ 964,743	\$ 1,850,621,999
Appropriations of earnings																
Special capital reserve	-	-	-	-	17,045,066	(17,045,066)	-	-	-	-	-	-	-	-	-	-
Cash dividends to shareholders	-	-	-	-	-	(278,751,590)	(278,751,590)	-	-	-	-	-	-	(278,751,590)	-	(278,751,590)
Total	-	-	-	-	17,045,066	(295,796,656)	(278,751,590)	-	-	-	-	-	-	(278,751,590)	-	(278,751,590)
Net income	-	-	-	-	-	596,540,013	596,540,013	-	-	-	-	-	-	596,540,013	533,121	597,073,134
Other comprehensive income (loss), net of income tax	-	-	-	-	-	167,503	167,503	(6,301,734)	(1,559,790)	72,067	-	(7,789,457)	-	(7,621,954)	2,498	(7,619,456)
Total comprehensive income (loss)	-	-	-	-	-	596,707,516	596,707,516	(6,301,734)	(1,559,790)	72,067	-	(7,789,457)	-	588,918,059	535,619	589,453,678
Disposal of investments in equity instruments at fair value through other comprehensive income	-	-	-	-	-	187,654	187,654	-	(187,654)	-	-	(187,654)	-	-	-	-
Basis adjustment for gain on hedging instruments	-	-	-	-	-	-	-	-	-	48,469	-	48,469	-	48,469	-	48,469
Adjustments to share of changes in equities of associates	-	-	4,796	-	-	-	-	-	-	-	-	-	-	4,796	-	4,796
From difference between the consideration received and the carrying amount of the subsidiaries' net assets during actual disposal	-	-	8,406,282	-	-	-	-	-	-	-	-	-	-	8,406,282	1,045,516	9,451,798
From share of changes in equities of subsidiaries	-	-	(7,891)	-	-	-	-	-	-	-	-	-	-	(7,891)	7,891	-
Donation from shareholders	-	-	11,172	-	-	-	-	-	-	-	-	-	-	11,172	110	11,282
Decrease in non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(107,382)	(107,382)
Effect of acquisition of subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	155
BALANCE, DECEMBER 31, 2021	25,930,380	259,303,805	64,761,602	311,146,899	59,304,212	1,536,378,550	1,906,829,661	(63,303,361)	574,310	120,536	-	(62,608,515)	-	2,168,286,553	2,446,652	2,170,733,205
Appropriations of earnings																
Special capital reserve	-	-	-	-	(56,149,902)	56,149,902	-	-	-	-	-	-	-	-	-	-
Cash dividends to shareholders	-	-	-	-	-	(285,234,185)	(285,234,185)	-	-	-	-	-	-	(285,234,185)	-	(285,234,185)
Total	-	-	-	-	(56,149,902)	(229,084,283)	(285,234,185)	-	-	-	-	-	-	(285,234,185)	-	(285,234,185)
Net income	-	-	-	-	-	1,016,530,249	1,016,530,249	-	-	-	-	-	-	1,016,530,249	370,266	1,016,900,515
Other comprehensive income (loss), net of income tax	-	-	-	-	-	(49,572)	(49,572)	51,560,060	(10,327,421)	1,411,574	-	42,644,213	-	42,594,641	(164,476)	42,430,165
Total comprehensive income (loss)	-	-	-	-	-	1,016,480,677	1,016,480,677	51,560,060	(10,327,421)	1,411,574	-	42,644,213	-	1,059,124,890	205,790	1,059,330,680
Share-based payment arrangements	1,387	13,870	438,029	-	-	-	-	-	-	-	(185,153)	(185,153)	-	266,746	-	266,746
Treasury stock acquired	-	-	-	-	-	-	-	-	-	-	-	(871,566)	(871,566)	-	(871,566)	
Treasury stock retired	(1,387)	(13,870)	(2,989)	-	-	(854,707)	(854,707)	-	-	-	-	871,566	-	-	-	
Disposal of investments in equity instruments at fair value through other comprehensive income	-	-	-	-	-	303,242	303,242	-	(303,242)	-	-	(303,242)	-	-	-	-
Basis adjustment for loss on hedging instruments	-	-	-	-	-	-	-	-	-	(52,929)	-	(52,929)	-	(52,929)	-	(52,929)
Adjustments to share of changes in equities of associates	-	-	4,541	-	-	-	-	-	-	-	-	-	-	4,541	-	4,541
From share of changes in equities of subsidiaries	-	-	4,115,940	-	-	-	-	-	-	-	-	-	-	4,115,940	12,350,219	16,466,159
Donation from shareholders	-	-	13,205	-	-	-	-	-	-	-	-	-	-	13,205	20	13,225
Decrease in non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	-	(167,009)	(167,009)	
BALANCE, DECEMBER 31, 2022	25,930,380	259,303,805	69,330,328	311,146,899	3,154,310	2,323,223,479	2,637,524,688	(11,743,301)	(10,056,353)	1,479,181	(185,153)	(20,505,626)	-	2,945,653,195	14,835,672	2,960,488,867

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)

	2022	2021
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	\$ 1,144,190,718	\$ 663,126,314
Adjustments for:		
Depreciation expense	428,498,179	414,187,700
Amortization expense	8,756,094	8,207,169
Expected credit losses recognized (reversal) on investments in debt instruments	52,351	(2,735)
Finance costs	11,749,984	5,414,218
Share of profits of associates	(7,798,359)	(5,603,084)
Interest income	(22,422,209)	(5,708,765)
Share-based compensation	302,348	7,788
Loss (gain) on disposal or retirement of property, plant and equipment, net	(98,856)	273,627
Loss on disposal or retirement of intangible assets, net	6,004	1,228
Impairment loss on property, plant and equipment	790,740	274,388
Loss (gain) on disposal of investments in debt instruments at fair value through other comprehensive income, net	410,076	(93,229)
Loss (gain) on foreign exchange, net	10,342,706	(16,115,936)
Dividend income	(266,767)	(362,310)
Others	138,827	(414,219)
Changes in operating assets and liabilities:		
Financial instruments at fair value through profit or loss	(1,354,359)	2,649,244
Notes and accounts receivable, net	(32,169,853)	(52,105,823)
Receivables from related parties	(868,634)	(157,193)
Other receivables from related parties	(7,444)	(10,886)
Inventories	(28,046,827)	(55,748,914)
Other financial assets	(1,680,611)	(8,236,897)
Other current assets	(4,450,883)	(3,899,043)
Accounts payable	7,594,105	8,298,319
Payables to related parties	205,451	(670,532)
Salary and bonus payable	12,633,409	3,730,859
Accrued profit sharing bonus to employees and compensation to directors	25,223,833	843,695
Accrued expenses and other current liabilities	46,578,784	84,322,721
Other noncurrent liabilities	101,390,476	154,085,985
Net defined benefit liability	(2,538,848)	(635,116)
Cash generated from operations	<u>1,697,160,435</u>	<u>1,195,658,573</u>
Income taxes paid	<u>(86,561,247)</u>	<u>(83,497,851)</u>
Net cash generated by operating activities	<u>1,610,599,188</u>	<u>1,112,160,722</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of:		
Financial instruments at fair value through profit or loss	(125,540)	-
Financial assets at fair value through other comprehensive income	(54,566,725)	(255,888,679)
Financial assets at amortized cost	(183,125,920)	(3,799,737)
Property, plant and equipment	(1,082,672,130)	(839,195,708)
Intangible assets	(6,954,326)	(9,040,751)
Proceeds from disposal or redemption of:		
Financial assets at fair value through other comprehensive income	44,963,367	254,604,537
Financial assets at amortized cost	62,329,674	9,368,275
Property, plant and equipment	983,358	390,364
Intangible assets	12,636	-

(Continued)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

	2022	2021
Proceeds from return of capital of investments in equity instruments at fair value through other comprehensive income	\$ 2,938	\$ 115,627
Derecognition of hedging financial instruments	1,684,430	276,261
Interest received	18,083,755	5,990,948
Proceeds from government grants - property, plant and equipment	7,046,136	821,312
Proceeds from government grants - others	5,296	6,605
Other dividends received	266,767	362,310
Dividends received from investments accounted for using equity method	2,749,667	2,136,426
Increase in prepayments for leases	-	(1,200,000)
Refundable deposits paid	(2,117,041)	(1,997,337)
Refundable deposits refunded	<u>505,423</u>	<u>683,684</u>
Net cash used in investing activities	<u>(1,190,928,235)</u>	<u>(836,365,863)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Increase (decrease) in short-term loans	(111,959,992)	35,668,397
Proceeds from issuance of bonds	198,293,561	364,592,792
Repayment of bonds	(4,400,000)	(2,600,000)
Proceeds from long-term bank loans	2,670,000	1,510,000
Repayment of long-term bank loans	(166,667)	-
Payments for transaction costs attributable to the issuance of bonds	(414,307)	(737,724)
Treasury stock acquired	(871,566)	-
Repayment of the principal portion of lease liabilities	(2,428,277)	(1,985,338)
Interest paid	(12,218,659)	(3,833,633)
Guarantee deposits received	271,387	469,041
Guarantee deposits refunded	(62,100)	(36,763)
Cash dividends	(285,234,185)	(265,786,399)
Disposal of ownership interests in subsidiaries (without losing control)	-	9,451,798
Donation from shareholders	13,225	11,282
Increase (decrease) in non-controlling interests	<u>16,263,548</u>	<u>(115,015)</u>
Net cash generated by (used in) financing activities	<u>(200,244,032)</u>	<u>136,608,438</u>
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	<u>58,396,970</u>	<u>(7,583,752)</u>
NET INCREASE IN CASH AND CASH EQUIVALENTS	277,823,891	404,819,545
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	<u>1,064,990,192</u>	<u>660,170,647</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 1,342,814,083</u>	<u>\$ 1,064,990,192</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 YEARS ENDED DECEMBER 31, 2022 AND 2021

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

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, sales, 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 approved and authorized for issue by the Board of Directors on February 14, 2023.

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 the accounting policies of TSMC and its subsidiaries (collectively as the "Company").

- b. The IFRSs issued by International Accounting Standards Board (IASB) and endorsed by the FSC with effective date starting 2023

New, Revised or Amended Standards and Interpretations	Effective Date Issued by IASB
Amendments to IAS 1 "Disclosure of Accounting Policies"	January 1, 2023
Amendments to IAS 8 "Definition of Accounting Estimates"	January 1, 2023
Amendments to IAS 12 "Deferred Tax related to Assets and Liabilities arising from a Single Transaction"	January 1, 2023

- c. The IFRSs issued by IASB but not yet endorsed and issued into effect by the FSC

New, Revised or Amended Standards and Interpretations	Effective Date Issued by IASB
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” and “Non-current Liabilities with Covenants”	January 1, 2024

As of the date the accompanying consolidated financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance from the initial adoption of the aforementioned standards or interpretations and related applicable period. The related impact will be disclosed when the Company completes its evaluation.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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 the IFRSs endorsed by the FSC with the effective dates (collectively, “Taiwan-IFRSs”).

Basis of Preparation

The accompanying consolidated financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is generally based on the fair value of the consideration given in exchange for the assets.

Basis of Consolidation

The basis for the consolidated financial statements

The consolidated financial statements incorporate the financial statements of TSMC and entities controlled by TSMC (its subsidiaries).

Income and expenses of subsidiaries acquired or disposed of are included in the consolidated statement of comprehensive income from the effective date of acquisition and up to the effective date of disposal, as appropriate. Total comprehensive income of subsidiaries is attributed to the shareholders of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Company.

All intra-group transactions, balances, income and expenses are eliminated in full on consolidation.

Changes in the Company’s ownership interests in subsidiaries that do not result in the Company losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Company’s interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the

fair value of the consideration paid or received is recognized directly in equity and attributed to shareholders of the parent.

When the Company loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between:

- a. the aggregate of the fair value of consideration received and the fair value of any retained interest at the date when control is lost; and
- b. the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interest.

The Company shall account for all amounts recognized in other comprehensive income in relation to the subsidiary on the same basis as would be required if the Company had directly disposed of the related assets and liabilities.

The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the cost on initial recognition of an investment in an associate.

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
				December 31, 2022	December 31, 2021	
TSMC	TSMC North America	Sales and marketing of integrated circuits and other semiconductor devices	San Jose, California, U.S.A.	100%	100%	-
	TSMC Europe B.V. (TSMC Europe)	Customer service and supporting activities	Amsterdam, the Netherlands	100%	100%	a)
	TSMC Japan Limited (TSMC Japan)	Customer service and supporting activities	Yokohama, Japan	100%	100%	a)
	TSMC Design Technology Japan, Inc. (TSMC JDC)	Engineering support activities	Yokohama, Japan	100%	100%	a)
	TSMC Japan 3DIC R&D Center, Inc. (TSMC 3DIC)	Engineering support activities	Yokohama, Japan	100%	100%	a)
	TSMC Korea Limited (TSMC Korea)	Customer service and supporting activities	Seoul, Korea	100%	100%	a)
	TSMC Partners, Ltd. (TSMC Partners)	Investing in companies involved in the semiconductor design and manufacturing, and other investment activities	Tortola, British Virgin Islands	100%	100%	a)
	TSMC Global, Ltd. (TSMC Global)	Investment activities	Tortola, British Virgin Islands	100%	100%	-
	TSMC China Company Limited (TSMC China)	Manufacturing, sales, testing and computer-aided design of integrated circuits and other semiconductor devices	Shanghai, China	100%	100%	-
	TSMC Nanjing Company Limited (TSMC Nanjing)	Manufacturing, sales, testing and computer-aided design of integrated circuits and other semiconductor devices	Nanjing, China	100%	100%	-
	VisEra Technologies Company Ltd. (VisEra Tech)	Research, design, development, manufacturing, sales, packaging and test of color filter	Hsin-Chu, Taiwan	68%	73%	b)
	TSMC Arizona Corporation (TSMC Arizona)	Manufacturing, sales and testing of integrated circuits and other semiconductor devices	Phoenix, Arizona, U.S.A.	100%	100%	c)
	Japan Advanced Semiconductor Manufacturing, Inc. (JASM)	Manufacturing, sales, testing and computer aided design of integrated circuits and other semiconductor devices	Kumamoto, Japan	71%	100%	a), d)
	VentureTech Alliance Fund II, L.P. (VTAF II)	Investing in technology start-up companies	Cayman Islands	98%	98%	a)
	VentureTech Alliance Fund III, L.P. (VTAF III)	Investing in technology start-up companies	Cayman Islands	98%	98%	a)
	Emerging Fund L.P. (Emerging Fund)	Investing in technology start-up companies	Cayman Islands	99.9%	99.9%	a)

(Continued)

Name of Investor	Name of Investee	Main Businesses and Products	Establishment and Operating Location	Percentage of Ownership		Note
				December 31, 2022	December 31, 2021	
TSMC Partners	TSMC Development, Inc. (TSMC Development)	Investing in companies involved in semiconductor manufacturing	Delaware, U.S.A.	100%	100%	-
	TSMC Technology, Inc. (TSMC Technology)	Engineering support activities	Delaware, U.S.A.	100%	100%	a)
	TSMC Design Technology Canada Inc. (TSMC Canada)	Engineering support activities	Ontario, Canada	100%	100%	a)
TSMC Development	WaferTech, LLC (WaferTech)	Manufacturing, sales and testing of integrated circuits and other semiconductor devices	Washington, U.S.A.	100%	100%	-
VTAF III	Growth Fund Limited (Growth Fund)	Investing in technology start-up companies	Cayman Islands	100%	100%	a)

(Concluded)

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

Note b: VisEra has increased its capital in June 2022. After the increase in capital, TSMC's shareholding in VisEra decreased from 73% to 68%. This transaction was accounted for as an equity transaction since the transaction did not change TSMC's control over VisEra.

Note c: Under the terms of the development agreement entered into between TSMC Arizona and the City of Phoenix, the City of Phoenix commits approximately US\$205 million toward various public infrastructure projects in the area of the proposed manufacturing facility, conditioned on TSMC Arizona's achieving a minimum project scale with defined spending and job-creation thresholds.

Note d: JASM is established in December 2021 and has increased its capital in January 2022. After the increase in capital, TSMC's shareholding in JASM decreased from 100% to 81%. In addition, JASM increased its capital by issuing noncumulative preferred shares and common shares in April 2022, TSMC's shareholding in JASM decreased from 81% to 71% and the proportion of voting right remain 81%. The aforementioned transactions were accounted for as an equity transaction since the transaction did not change TSMC's control over JASM.

Foreign Currencies

The financial statements of each individual consolidated entity were expressed in the currency which reflected its primary economic environment (functional currency). The functional currency of TSMC and presentation currency of the consolidated financial statements are both New Taiwan Dollars (NT\$). In preparing the consolidated financial statements, the operating results and financial positions of each consolidated entity are translated into NT\$.

In preparing the financial statements of each individual consolidated entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Such exchange differences are recognized in profit or loss in the year in which they arise. Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising on the retranslation of non-monetary items are included in profit or loss for the year except for exchange differences arising on the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which case, the exchange differences are also recognized directly in other comprehensive income. Non-monetary items that are measured in terms of historical cost in foreign currencies are not retranslated.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Company's foreign operations are translated into NT\$ using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity (attributed to non-controlling interests as appropriate).

Classification of Current and Noncurrent Assets and Liabilities

Current assets are assets held for trading purposes and assets expected to be converted to cash, sold or consumed within one year from the end of the reporting period. Current liabilities are obligations incurred for trading purposes and obligations expected to be settled within one year from the end of the reporting period. Assets and liabilities that are not classified as current are noncurrent assets and liabilities, respectively.

Cash Equivalents

Cash equivalents, for the purpose of meeting short-term cash commitments, consist of highly liquid time deposits and investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Financial Instruments

Financial assets and liabilities shall be recognized when the Company becomes a party to the contractual provisions of the instruments.

Financial assets and liabilities are initially recognized at fair values. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

Financial Assets

The classification of financial assets depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Regular way purchases or sales of financial assets are recognized and derecognized on a trade date or settlement date basis for which financial assets were classified in the same way, respectively. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

a. Category of financial assets and measurement

Financial assets are classified into the following categories: financial assets at FVTPL, investments in debt instruments and equity instruments at FVTOCI, and financial assets at amortized cost.

1) Financial asset at FVTPL

For certain financial assets which include debt instruments that do not meet the criteria of amortized cost or FVTOCI, it is mandatorily required to measure them at FVTPL. Any gain or loss arising from remeasurement is recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any interest earned on the financial asset.

2) Investments in debt instruments at FVTOCI

Debt instruments with contractual terms specifying that cash flows are solely payments of principal and interest on the principal amount outstanding, together with objective of collecting contractual cash flows and selling the financial assets, are measured at FVTOCI.

Interest income calculated using the effective interest method, foreign exchange gains and losses and impairment gains or losses on investments in debt instruments at FVTOCI are recognized in profit or loss. Other changes in the carrying amount of these debt instruments are recognized in other comprehensive income and will be reclassified to profit or loss when these debt instruments are disposed.

3) Investments in equity instruments at FVTOCI

On initial recognition, the Company may irrevocably designate investments in equity investments that is not held for trading as at FVTOCI.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity.

Dividends on these investments in equity instruments at FVTOCI are recognized in profit or loss when the Company's right to receive the dividends is established, unless the Company's rights clearly represent a recovery of part of the cost of the investment.

4) Measured at amortized cost

Cash and cash equivalents, commercial paper, debt instrument investments, notes and accounts receivable (including related parties), other receivables, refundable deposits and temporary payments (including those classified under other current assets and other noncurrent assets) are measured at amortized cost.

Debt instruments with contractual terms specifying that cash flows are solely payments of principal and interest on the principal amount outstanding, together with objective of holding financial assets in order to collect contractual cash flows, are measured at amortized cost.

Subsequent to initial recognition, financial assets measured at amortized cost are measured at amortized cost, which equals to carrying amount determined by the effective interest method less any impairment loss.

b. Impairment of financial assets

At the end of each reporting period, a loss allowance for expected credit loss is recognized for financial assets at amortized cost (including accounts receivable) and for investments in debt instruments that are measured at FVTOCI.

The loss allowance for accounts receivable is measured at an amount equal to lifetime expected credit losses. For financial assets at amortized cost and investments in debt instruments that are measured at FVTOCI, when the credit risk on the financial instrument has not increased significantly since initial recognition, a loss allowance is recognized at an amount equal to expected credit loss resulting from possible default events of a financial instrument within 12 months after the reporting date. If, on the other hand, there has been a significant increase in credit risk since initial recognition, a loss allowance is recognized at an amount equal to expected credit loss resulting from all possible default events over the expected life of a financial instrument.

The Company recognizes an impairment loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and does not reduce the carrying amount of the financial asset.

c. Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the financial asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the financial asset to another entity.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in a debt instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVTOCI, the cumulative gain or loss that had

been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

Financial Liabilities and Equity Instruments

Classification as debt or equity

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

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

Financial liabilities

Financial liabilities are subsequently measured either at amortized cost using effective interest method or at FVTPL.

Financial liabilities are classified as at fair value through profit or loss when the financial liability is either held for trading or is designated as at fair value through profit or loss.

Financial liabilities at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

Financial liabilities other than those held for trading purposes and designated as at FVTPL are subsequently measured at amortized cost at the end of each reporting period.

Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

Derivative Financial Instruments

Derivative financial instruments are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative financial instrument is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

Hedge Accounting

a. Fair value hedge

The Company designates certain hedging instruments, such as interest rate futures contracts, to partially hedge against the fair value change caused by interest rates fluctuation in the Company's fixed income investments. Changes in the fair value of hedging instruments that are designated and qualify as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged items that are attributable to the hedged risk.

b. Cash flow hedge

The Company designates certain hedging instruments, such as forward contracts, to partially hedge its foreign exchange rate risks or interest rate risks associated with certain highly probable forecast transactions (capital expenditures or issuance of debts). The effective portion of changes in the fair value of hedging instruments is recognized in other comprehensive income. When forecast transactions actually take place, the accumulated gains or losses that were recognized in other comprehensive income are transferred from equity to the initial cost of the hedged items, or reclassified to finance costs of hedged items in the same period or periods during which the hedged expected future cash flows affect profit or loss. The gains or losses from hedging instruments relating to the ineffective portion are recognized immediately in profit or loss.

The Company prospectively discontinues hedge accounting only when the hedging relationship ceases to meet the qualifying criteria; for instance, when the hedging instrument expires or is sold, terminated or exercised.

Inventories

Inventories are stated at the lower of cost or net realizable value. Inventories are recorded at standard cost and adjusted to approximate weighted-average cost at the end of the reporting period. Net realizable value represents the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale.

Investments Accounted for Using Equity Method

Investments accounted for using the equity method are investments in associates.

An associate is an entity over which the Company has significant influence and that is neither a subsidiary nor a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The operating results and assets and liabilities of associates are incorporated in these consolidated financial statements using the equity method of accounting. Under the equity method, an investment in an associate is initially recognized in the consolidated statements of financial position at cost and adjusted thereafter to recognize the Company's share of profit or loss and other comprehensive income of the associate as well as the distribution received. The Company also recognizes its share in the changes in the equities of associates.

Any excess of the cost of acquisition over the Company's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Company's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount. Any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

When the Company subscribes to additional shares in an associate at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Company's proportionate interest in the net assets of the associate. The Company records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus. If the Company's ownership interest is reduced due to the additional subscription to the shares of associate by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive

income in relation to that associate shall be reclassified to profit or loss on the same basis as would be required if the associate had directly disposed of the related assets or liabilities.

When a consolidated entity transacts with an associate, profits and losses resulting from the transactions with the associate are recognized in the Company's consolidated financial statements only to the extent of interests in the associate that are not owned by the Company.

Property, Plant and Equipment

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment. Costs include any incremental costs that are directly attributable to the construction, acquisition of the item of property, plant and equipment or borrowing costs eligible for capitalization.

Property, plant and equipment in the course of construction for production, supply or administrative purposes are carried at cost, less any recognized impairment loss. Such assets are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other identical categories of property, plant and equipment, commences when the assets are available for their intended use.

Depreciation is recognized so as to write off the cost of the assets less their residual values over their useful lives, and it is computed using the straight-line method mainly over the following estimated useful lives: land improvements - 20 years; buildings (assets used by the Company and assets subject to operating leases) - 10 to 20 years; machinery and equipment (assets used by the Company and assets subject to operating leases) - 5 years; and office equipment - 5 years. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis. Land is not depreciated.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

Leases

For a contract that contains a lease component and non-lease component, the Company may elect to account for the lease and non-lease components as a single lease component.

The Company as lessor

Rental income from operating lease is recognized on a straight-line basis over the term of the lease.

The Company as lessee

Except for payments for low-value asset leases and short-term leases (leases of machinery and equipment and others) which are recognized as expenses on a straight-line basis, the Company recognizes right-of-use assets and lease liabilities for all leases at the commencement date of the lease.

Right-of-use assets are measured at cost. The cost of right-of-use assets comprises the initial measurement of lease liabilities adjusted for lease payments and initial direct costs made at or before the commencement date, plus an estimate of costs needed to restore the underlying assets. Subsequent measurement is calculated as cost less accumulated depreciation and accumulated impairment loss and adjusted for changes in lease liabilities as a result of lease term modifications or other related factors. Right-of-use assets are presented separately in the consolidated balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms. If the lease transfers ownership of the underlying assets to the Company by the end of the lease terms or if the cost of right-of-use assets reflects that the Company will exercise a purchase option, the Company depreciates the right-of-use assets from the commencement dates to the end of the useful lives of the underlying assets.

Lease liabilities are measured at the present value of the lease payments. Lease payments comprise fixed payments, variable lease payments which depend on an index or a rate and the exercise price of a purchase option if the Company is reasonably certain to exercise that option. The lease payments are discounted using the lessee's incremental borrowing rates.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, a change in future lease payments resulting from a change in an index or a rate used to determine those payments, or a change in the assessment of an option to purchase an underlying asset, the Company remeasures the lease liabilities with a corresponding adjustment to the right-of-use assets. Lease liabilities are presented on a separate line in the consolidated balance sheets.

Intangible Assets

Goodwill

Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

Other intangible assets

Other separately acquired intangible assets with finite useful lives are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized using the straight-line method over the following estimated useful lives: Technology license fees - the estimated life of the technology or the term of the technology transfer contract; software and system design costs - 3 years or contract period; patent and others - the economic life or contract period. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Impairment of Tangible Assets, Right-of-use Assets and Intangible Assets

Goodwill

Goodwill is not amortized and instead is tested for impairment annually, or more frequently when there is an indication that the cash generating unit may be impaired. For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units or groups of cash-generating units that are expected to benefit from the synergies of the combination. If the recoverable amount of a cash-generating unit is less than its carrying amount, the difference is allocated first to reduce the carrying amount of any goodwill allocated to such cash generating unit and then to the other assets of the cash generating unit pro rata based on the carrying amount of each asset in the cash generating unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

Tangible assets, right-of-use assets and other intangible assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible assets (property, plant and equipment), right-of-use assets and other intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of

the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset or a cash-generating unit is increased to the revised estimate of its recoverable amount, but the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

Revenue Recognition

The Company recognizes revenue when performance obligations are satisfied. The performance obligations are satisfied when customers obtain control of the promised goods, which is generally when the goods are delivered to the customers' specified locations.

Revenue from sale of goods is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. Estimated sales returns and other allowances is generally made and adjusted based on historical experience and the consideration of varying contractual terms to recognize refund liabilities, which is classified under accrued expenses and other current liabilities.

In principle, payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month of when the invoice is issued. Due to the short term nature of the receivables from sale of goods with the immaterial discounted effect, the Company measures them at the original invoice amounts without discounting.

Employee Benefits

Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for service rendered by employees.

Retirement benefits

For defined contribution retirement benefit plans, payments to the benefit plan are recognized as an expense when the employees have rendered service entitling them to the contribution. For defined benefit retirement benefit plans, the cost of providing benefit is recognized based on actuarial calculations.

Defined benefit costs (including service cost, net interest and rereasurement) under the defined benefit retirement benefit plans are determined using the Projected Unit Credit Method. Service cost (including current service cost), and net interest on the net defined benefit liability (asset) are recognized as employee benefits expense in the period they occur. Rereasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which

they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liability represents the actual deficit in the Company's defined benefit plan.

Treasury Stock

Treasury stock represents the outstanding shares that the Company buys back from market, which is stated at cost and shown as a deduction in shareholders' equity. When the Company retires treasury stock, the treasury stock account is reduced and the common stock as well as the capital surplus - additional paid-in capital are reversed on a pro rata basis. When the book value of the treasury stock exceeds the sum of the par value and additional paid-in capital, the difference is charged to capital surplus - treasury stock transactions and to retained earnings for any remaining amount.

Share-based payment arrangements

a. Equity-settled share-based payment arrangements

Restricted shares for employees are expensed on a straight-line basis over the vesting period, based on the fair value at the grant date and the Company's best estimate of the number expected to ultimately vest, with a corresponding increase in other equity - unearned employee benefits.

When restricted shares for employees are issued, other equity - unearned employee benefits is recognized on the grant date, with a corresponding increase in capital surplus - restricted shares for employees. Dividends paid to employees on restricted shares which do not need to be returned if employees resign in the vesting period are recognized as expenses upon the dividend declaration with a corresponding adjustment in retained earnings.

At the end of each reporting period, the Company revises its estimate of the number of restricted shares for employees that are expected to vest. The impact from such revision is recognized in profit or loss so that the cumulative expenses reflect the revised estimate, with a corresponding adjustment to capital surplus - restricted shares for employees.

b. Cash-settled share-based payment arrangements

For cash-settled share-based payments, a liability is recognized for the services acquired, measured at the fair value of the liability incurred. At the end of each reporting period until the liability is settled, and at the date of settlement, the fair value of the liability is remeasured, with any changes in fair value recognized in profit or loss.

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

Current tax

Income tax on unappropriated earnings (excluding earnings from foreign consolidated subsidiaries) is expensed in the year the shareholders approved the appropriation of earnings which is the year subsequent to the year the earnings are generated.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, net operating loss carryforwards and tax credits for research and development expenses to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered. The deferred tax assets which originally not recognized is also reviewed at the end of each reporting period and recognized to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the year in which the liability is settled or the asset is realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively.

Government Grants

Government grants are not recognized until there is reasonable assurance that the Company will comply with the conditions attaching to them and that the grants will be received.

Government grants whose primary condition is that the Company should purchase, construct or otherwise acquire noncurrent assets (mainly including land use right and depreciable assets) are recognized as a deduction from the carrying amount of the related assets and recognized as a reduced depreciation or amortization charge in profit or loss over the contract period or useful lives of the related assets. Government grants that are receivables as compensation for expenses already incurred are deducted from incurred expenses in the period in which they become receivables.

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 the application of the aforementioned Company's accounting policies, the Company is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimate is revised if the revision affects only that year, or in the year of the revision and future years if the revision affects both current and future years.

Critical Accounting Judgments

Revenue Recognition

The Company recognizes revenue when the conditions described in Note 4 are satisfied.

Commencement of Depreciation Related to Property, Plant and Equipment Classified as Equipment under Installation and Construction in Progress (EUI/CIP)

As described in Note 4, commencement of depreciation related to EUI/CIP involves determining when the assets are available for their intended use. The criteria the Company uses to determine whether EUI/CIP are available for their intended use involves subjective judgments and assumptions about the conditions necessary for the assets to be capable of operating in the intended manner.

Judgments on Lease Terms

In determining a lease term, the Company considers all facts and circumstances that create an economic incentive to exercise or not to exercise an option, including any expected changes in facts and circumstances from the commencement date until the exercise date of the option. Main factors considered include contractual terms and conditions covered by the optional periods, and the importance of the underlying asset to the lessee's operations, etc. The lease term is reassessed if a significant change in circumstances that are within the control of the Company occurs.

Key Sources of Estimation and Uncertainty

Estimation of Sales Returns and Allowances

Sales returns and other allowance is estimated and recorded based on historical experience and in consideration of different contractual terms. The amount is deducted from revenue in the same period the related revenue is recorded. The Company periodically reviews the reasonableness of the estimates.

Valuation of Inventory

Inventories are stated at the lower of cost or net realizable value, and the Company uses estimate to determine the net realizable value of inventory at the end of each reporting period.

The Company estimates the net realizable value of inventory for normal waste, obsolescence and unmarketable items at the end of reporting period and then writes down the cost of inventories to net realizable value. The net realizable value of the inventory is determined mainly based on assumptions of future demand within a specific time horizon.

Impairment of Tangible Assets, Right-of-use Assets and Intangible Assets Other than Goodwill

In the process of evaluating the potential impairment of tangible assets, right-of-use assets and intangible assets other than goodwill, the Company determines the independent cash flows, useful lives, expected future revenue and expenses related to the specific asset groups with the consideration of the nature of

semiconductor industry. Any change in these estimates based on changed economic conditions or business strategies could result in significant impairment charges or reversal in future years.

Realization of Deferred Income Tax Assets

Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which those deferred tax assets can be utilized. Assessment of the realization of the deferred tax assets requires subjective judgment and estimate, including the future revenue growth and profitability, tax holidays, the amount of tax credits can be utilized and feasible tax planning strategies. Any changes in the global economic environment, the industry trends and relevant laws and regulations could result in significant adjustments to the deferred tax assets.

Determination of Lessees' Incremental Borrowing Rates

In determining a lessee's incremental borrowing rate used in discounting lease payments, the Company mainly takes into account the market risk-free rates, the estimated lessee's credit spreads and secured status in a similar economic environment.

6. CASH AND CASH EQUIVALENTS

	December 31, 2022	December 31, 2021
Cash and deposits in banks	\$1,329,291,394	\$1,058,808,104
Commercial paper	9,566,430	-
Government bonds	2,451,570	906,743
Repurchase agreements	1,133,310	5,275,345
Corporate bonds	<u>371,379</u>	<u>-</u>
	<u>\$1,342,814,083</u>	<u>\$1,064,990,192</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

	December 31, 2022	December 31, 2021
<u>Financial assets</u>		
Mandatorily measured at FVTPL		
Forward exchange contracts	\$ 947,546	\$ 159,048
Convertible bonds	<u>122,852</u>	<u>-</u>
	<u>\$ 1,070,398</u>	<u>\$ 159,048</u>
<u>Financial liabilities</u>		
Held for trading		
Forward exchange contracts	<u>\$ 116,215</u>	<u>\$ 681,914</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>December 31, 2022</u>		
Sell NT\$	January 2023 to March 2023	NT\$ 79,610,590
Sell US\$	January 2023 to March 2023	US\$ 752,486
Sell RMB	January 2023 to March 2023	RMB 1,448,371
<u>December 31, 2021</u>		
Sell NT\$	January 2022 to March 2022	NT\$ 132,734,482
Sell US\$	January 2022 to March 2022	US\$ 2,009,148

8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	December 31, 2022	December 31, 2021
Investments in debt instruments at FVTOCI		
Corporate bonds	\$ 66,116,166	\$ 57,253,161
Agency bonds/Agency mortgage-backed securities	28,399,890	32,070,114
Government bonds	18,929,924	21,345,794
Asset-backed securities	<u>9,274,697</u>	<u>8,660,424</u>
	<u>122,720,677</u>	<u>119,329,493</u>
Investments in equity instruments at FVTOCI		
Non-publicly traded equity investments	6,159,200	5,887,892
Publicly traded stocks	<u>277,866</u>	<u>189,758</u>
	<u>6,437,066</u>	<u>6,077,650</u>
	<u>\$ 129,157,743</u>	<u>\$ 125,407,143</u>
Current	\$ 122,998,543	\$ 119,519,251
Noncurrent	<u>6,159,200</u>	<u>5,887,892</u>
	<u>\$ 129,157,743</u>	<u>\$ 125,407,143</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 consolidated statements of cash flows. All of the dividends are mainly from investments held at the end of the reporting period.

For the years ended December 31, 2022 and 2021, as non-publicly traded investees were acquired and the Company adjusted its investment portfolio, equity investments designated at FVTOCI were divested for NT\$561,600 thousand and NT\$628,711 thousand, respectively. The related other equity-unrealized gain/loss on financial assets at FVTOCI of NT\$303,242 thousand and NT\$185,993 thousand were transferred to increase retained earnings, respectively.

As of December 31, 2022 and 2021, the cumulative loss allowance for expected credit loss of NT\$37,783 thousand and NT\$33,209 thousand was recognized under investments in debt instruments at FVTOCI, respectively. Refer to Note 33 for information relating to the credit risk management and expected credit loss.

9. FINANCIAL ASSETS AT AMORTIZED COST

	December 31, 2022	December 31, 2021
Corporate bonds	\$ 81,041,056	\$ 5,310,039
Commercial paper	48,742,817	-
Less: Allowance for impairment loss	<u>(56,439)</u>	<u>(3,077)</u>
	<u>\$ 129,727,434</u>	<u>\$ 5,306,962</u>
Current	\$ 94,600,219	\$ 3,773,571
Noncurrent	<u>35,127,215</u>	<u>1,533,391</u>
	<u>\$ 129,727,434</u>	<u>\$ 5,306,962</u>

Refer to Note 33 for information relating to credit risk management and expected credit loss for financial assets at amortized cost.

10. HEDGING FINANCIAL INSTRUMENTS

	December 31, 2022	December 31, 2021
<u>Financial assets- current</u>		
Fair value hedges		
Interest rate futures contracts	\$ 2,329	\$ -
Cash flow hedges		
Forward interest rate contracts	<u>-</u>	<u>13,468</u>
	<u>\$ 2,329</u>	<u>\$ 13,468</u>
<u>Financial liabilities- current</u>		
Fair value hedges		
Interest rate futures contracts	<u>\$ 813</u>	<u>\$ 9,642</u>
<u>Fair value hedge</u>		

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 value of the interest rate futures contracts and the value of the hedged financial assets 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 during the hedging period. Amount of hedge ineffectiveness recognized in profit or loss is classified under other gains and losses, net.

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

December 31, 2022

Hedging Instruments	Contract Amount (US\$ in Thousands)	Maturity
Interest rate futures contracts - US Treasury futures	US\$ 74,300	March 2023

Hedged Items	Asset Carrying Amount	Accumulated Amount of Fair Value Hedge Adjustments
Financial assets at FVTOCI	\$ 4,008,179	\$ (1,516)

December 31, 2021

Hedging Instruments	Contract Amount (US\$ in Thousands)	Maturity
Interest rate futures contracts - US Treasury futures	US\$ 53,900	March 2022

Hedged Items	Asset Carrying Amount	Accumulated Amount of Fair Value Hedge Adjustments
Financial assets at FVTOCI	\$ 4,079,274	\$ 9,642

The effect for the years ended December 31, 2022 and 2021 is detailed below:

Hedging Instruments/Hedged Items	Change in Value Used for Calculating Hedge Ineffectiveness Years Ended December 31	
	2022	2021
Hedging Instruments		
Interest rate futures contracts - US Treasury futures	\$ 283,995	\$ 148,817
Hedged Items		
Financial assets at FVTOCI	<u>(283,995)</u>	<u>(148,817)</u>
	<u>\$ -</u>	<u>\$ -</u>

Cash flow hedge

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

On the basis of economic relationships, the Company expects that the value of forward contracts and the value of hedged transactions will change in opposite directions in response to movements in foreign exchange rates or interest 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 contracts. No other sources of ineffectiveness emerged from these hedging relationships during the hedging period. For the years ended December 31, 2022 and 2021, refer to Note 21(d) for gain or loss arising from changes in the fair value of hedging instruments, the amount transferred to initial carrying amount of hedged items and the amount reclassified to finance costs of hedged items.

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

December 31, 2021

Hedging Instruments	Contract Amount (In Thousands)	Maturity	Balance in Other Equity (Continuing Hedges)
Forward interest rate contracts	US\$ 328,000	January 2022	\$ 128,165

The effect for the years ended December 31, 2022 and 2021 is detailed below:

Hedging Instruments/Hedged Items	Change in Value Used for Calculating Hedge Ineffectiveness	
	Years Ended December 31	
	2022	2021
Hedging Instruments		
Forward exchange contracts (capital expenditures)	\$ _____ -	\$ (41,416)
Forward interest rate contracts (issuance of debts)	\$ 1,379,119	\$ 132,508
Hedged Items		
Forecast transaction (capital expenditures)	\$ _____ -	\$ 41,416
Forecast transaction (issuance of debts)	\$ (1,379,119)	\$ (132,508)

11. NOTES AND ACCOUNTS RECEIVABLE, NET

	December 31, 2022	December 31, 2021
At amortized cost		
Notes and accounts receivable	\$ 222,761,927	\$ 193,733,220
Less: Loss allowance	(331,646)	(347,020)
	222,430,281	193,386,200
At FVTOCI	7,325,606	4,199,909
	<u>\$ 229,755,887</u>	<u>\$ 197,586,109</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

	December 31, 2022	December 31, 2021
Not past due	\$ 205,053,142	\$ 191,740,045
Past due		
Past due within 30 days	24,516,277	6,186,814
Past due over 31 days	518,114	6,270
Less: Loss allowance	<u>(331,646)</u>	<u>(347,020)</u>
	<u>\$ 229,755,887</u>	<u>\$ 197,586,109</u>

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

Movements of the loss allowance for accounts receivable

	Years Ended December 31	
	2022	2021
Balance, beginning of year	\$ 347,020	\$ 246,626
Provision (Reversal)	(15,449)	100,408
Effect of exchange rate changes	<u>75</u>	<u>(14)</u>
Balance, end of year	<u>\$ 331,646</u>	<u>\$ 347,020</u>

For the years ended December 31, 2022 and 2021, the changes in loss allowance were mainly due to the variations in the balance of accounts receivable of different risk levels.

12. INVENTORIES

	December 31, 2022	December 31, 2021
Finished goods	\$ 54,818,402	\$ 32,562,750
Work in process	125,661,912	137,700,402
Raw materials	20,389,115	11,111,122
Supplies and spare parts	<u>20,279,719</u>	<u>11,728,047</u>
	<u>\$ 221,149,148</u>	<u>\$ 193,102,321</u>

Write-down of inventories to net realizable value and reversal of write-down of inventories resulting from the increase in net realizable value were included in the cost of revenue during reporting period. The amounts are illustrated below:

	Years Ended December 31	
	2022	2021
Inventory losses	<u>\$ 4,689,112</u>	<u>\$ 533,034</u>

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	
			December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Vanguard International Semiconductor Corporation (VIS)	Manufacturing, sales, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing and design service of masks	Hsinchu, Taiwan	\$ 13,492,653	\$ 10,613,127	28%	28%
Systems on Silicon Manufacturing Company Pte Ltd. (SSMC)	Manufacturing and sales of integrated circuits and other semiconductor devices	Singapore	8,934,731	6,795,699	39%	39%
Xintec Inc. (Xintec)	Wafer level chip size packaging and wafer level post passivation interconnection service	Taoyuan, Taiwan	3,528,417	3,046,961	41%	41%
Global Unichip Corporation (GUC)	Researching, developing, manufacturing, testing and marketing of integrated circuits	Hsinchu, Taiwan	1,666,651	1,484,683	35%	35%
Mutual-Pak Technology Co., Ltd. (Mutual-Pak)	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	New Taipei, Taiwan	<u>19,053</u>	<u>22,948</u>	28%	28%
			<u>\$ 27,641,505</u>	<u>\$ 21,963,418</u>		

As of December 31, 2022 and 2021, no investments in associates are individually material to the Company. Please refer to the consolidated statements of comprehensive income for recognition of share of both profit (loss) and other comprehensive income (loss) of associates that are not individually material.

The market prices of the associates' ownership held by the Company 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	December 31, 2022	December 31, 2021
VIS	<u>\$ 35,977,321</u>	<u>\$ 73,347,312</u>
GUC	<u>\$ 29,926,918</u>	<u>\$ 27,359,085</u>
Xintec	<u>\$ 10,716,449</u>	<u>\$ 15,913,315</u>

14. PROPERTY, PLANT AND EQUIPMENT

	December 31, 2022	December 31, 2021
Assets used by the Company	\$2,693,815,688	\$1,975,113,974
Assets subject to operating leases	<u>21,282</u>	<u>4,730</u>
	<u>\$2,693,836,970</u>	<u>\$1,975,118,704</u>

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, 2022	\$ 6,488,230	\$ 576,597,777	\$ 3,984,749,236	\$ 76,154,170	\$ 593,155,733	\$ 5,237,145,146
Additions	816,366	59,443,801	330,782,690	10,325,337	738,523,914	1,139,892,108
Disposals or retirements	-	(236,765)	(25,846,536)	(1,709,151)	-	(27,792,452)
Transfers to assets subject to operating leases	-	-	(65,779)	-	-	(65,779)
Effect of exchange rate changes	357,221	1,242,136	6,322,919	257,684	5,162,961	13,342,921
Balance at December 31, 2022	<u>\$ 7,661,817</u>	<u>\$ 637,046,949</u>	<u>\$ 4,295,942,530</u>	<u>\$ 85,028,040</u>	<u>\$ 1,336,842,608</u>	<u>\$ 6,362,521,944</u>
<u>Accumulated depreciation and impairment</u>						
Balance at January 1, 2022	\$ 499,826	\$ 306,165,242	\$ 2,903,539,441	\$ 51,826,663	\$ -	\$ 3,262,031,172
Additions	1,402	35,982,373	380,216,160	9,216,278	-	425,416,213
Disposals or retirements	-	(225,637)	(24,706,719)	(1,708,639)	-	(26,640,995)
Transfers to assets subject to operating leases	-	-	(40,266)	-	-	(40,266)
Impairment	-	-	-	-	790,740	790,740
Effect of exchange rate changes	54,933	1,016,381	5,872,264	205,814	-	7,149,392
Balance at December 31, 2022	<u>\$ 556,161</u>	<u>\$ 342,938,359</u>	<u>\$ 3,264,880,880</u>	<u>\$ 59,540,116</u>	<u>\$ 790,740</u>	<u>\$ 3,668,706,256</u>
Carrying amounts at December 31, 2022	<u>\$ 7,105,656</u>	<u>\$ 294,108,590</u>	<u>\$ 1,031,061,650</u>	<u>\$ 25,487,924</u>	<u>\$ 1,336,051,868</u>	<u>\$ 2,693,815,688</u>
<u>Cost</u>						
Balance at January 1, 2021	\$ 3,942,625	\$ 522,447,474	\$ 3,607,005,732	\$ 68,862,648	\$ 223,965,360	\$ 4,426,223,839
Additions	2,587,183	53,971,271	401,659,011	7,642,962	369,545,869	835,406,296
Disposals or retirements	-	(41,143)	(26,192,191)	(333,385)	-	(26,566,719)
Transfers from assets subject to operating leases	-	35,478	1,443,590	-	-	1,479,068
Transfers to assets subject to operating leases	-	-	(244,579)	-	-	(244,579)
Effect of exchange rate changes	(41,578)	184,697	1,077,673	(18,055)	(355,496)	847,241
Balance at December 31, 2021	<u>\$ 6,488,230</u>	<u>\$ 576,597,777</u>	<u>\$ 3,984,749,236</u>	<u>\$ 76,154,170</u>	<u>\$ 593,155,733</u>	<u>\$ 5,237,145,146</u>
<u>Accumulated depreciation and impairment</u>						
Balance at January 1, 2021	\$ 506,129	\$ 271,799,471	\$ 2,555,529,969	\$ 43,802,332	\$ -	\$ 2,871,637,901
Additions	1,329	34,331,645	368,777,680	8,373,282	-	411,483,936
Disposals or retirements	-	(36,527)	(22,230,098)	(332,557)	-	(22,599,182)
Transfers from assets subject to operating leases	-	15,066	436,816	-	-	451,882
Transfers to assets subject to operating leases	-	-	(68,279)	-	-	(68,279)
Impairment	-	-	274,388	-	-	274,388
Effect of exchange rate changes	(7,632)	55,587	818,965	(16,394)	-	850,526
Balance at December 31, 2021	<u>\$ 499,826</u>	<u>\$ 306,165,242</u>	<u>\$ 2,903,539,441</u>	<u>\$ 51,826,663</u>	<u>\$ -</u>	<u>\$ 3,262,031,172</u>
Carrying amounts at December 31, 2021	<u>\$ 5,988,404</u>	<u>\$ 270,432,535</u>	<u>\$ 1,081,209,795</u>	<u>\$ 24,327,507</u>	<u>\$ 593,155,733</u>	<u>\$ 1,975,113,974</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 2022 and 2021, the Company recognized an impairment loss of NT\$790,740 thousand and NT\$274,388 thousand for certain machinery and equipment that were assessed to have no future use, and the recoverable amount of the aforementioned assets were nil. Such impairment loss was recognized in other operating income and expenses.

Information about capitalized interest is set out in Note 24.

15. LEASE ARRANGEMENTS

a. Right-of-use assets

	December 31, 2022	December 31, 2021
<u>Carrying amounts</u>		
Land	\$ 38,525,856	\$ 29,778,636
Buildings	3,356,700	2,918,133
Machinery and equipment	2,965	3,474
Office equipment	<u>28,615</u>	<u>34,294</u>
	<u>\$ 41,914,136</u>	<u>\$ 32,734,537</u>
	Years Ended December 31	
	2022	2021
Additions to right-of-use assets	<u>\$ 12,610,664</u>	<u>\$ 7,769,782</u>
Depreciation of right-of-use assets		
Land	\$ 2,119,828	\$ 1,825,712
Buildings	928,726	707,856
Machinery and equipment	863	539
Office equipment	<u>23,588</u>	<u>22,091</u>
	<u>\$ 3,073,005</u>	<u>\$ 2,556,198</u>

b. Lease liabilities

	December 31, 2022	December 31, 2021
<u>Carrying amounts</u>		
Current portion (classified under accrued expenses and other current liabilities)	\$ 2,603,504	\$ 2,176,451
Noncurrent portion	<u>29,764,097</u>	<u>20,764,214</u>
	<u>\$ 32,367,601</u>	<u>\$ 22,940,665</u>

Ranges of discount rates for lease liabilities are as follows:

	December 31, 2022	December 31, 2021
Land	0.39%-2.30%	0.39%-2.14%
Buildings	0.39%-5.63%	0.39%-3.88%
Machinery and equipment	0.71%	0.71%
Office equipment	0.28%-4.71%	0.28%-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.

d. Other lease information

	Years Ended December 31	
	2022	2021
Expenses relating to short-term leases	<u>\$ 4,731,087</u>	<u>\$ 5,250,279</u>
Total cash outflow for leases	<u>\$ 7,618,290</u>	<u>\$ 7,510,762</u>

16. INTANGIBLE ASSETS

	Goodwill	Technology License Fees	Software and System Design Costs	Patent and Others	Total
<u>Cost</u>					
Balance at January 1, 2022	\$ 5,379,164	\$ 23,533,959	\$ 43,650,957	\$ 11,497,309	\$ 84,061,389
Additions	-	2,253,095	5,078,967	203,030	7,535,092
Disposals or retirements	-	(29,991)	(66,261)	-	(96,252)
Effect of exchange rate changes	<u>412,657</u>	<u>1,956</u>	<u>12,131</u>	<u>1,553</u>	<u>428,297</u>
Balance at December 31, 2022	<u>\$ 5,791,821</u>	<u>\$ 25,759,019</u>	<u>\$ 48,675,794</u>	<u>\$ 11,701,892</u>	<u>\$ 91,928,526</u>
<u>Accumulated amortization and impairment</u>					
Balance at January 1, 2022	\$ -	\$ 14,912,293	\$ 34,121,578	\$ 8,205,821	\$ 57,239,692
Additions	-	2,793,539	4,774,522	1,188,033	8,756,094
Disposals or retirements	-	(11,351)	(66,261)	-	(77,612)
Effect of exchange rate changes	<u>-</u>	<u>1,956</u>	<u>8,555</u>	<u>686</u>	<u>11,197</u>
Balance at December 31, 2022	<u>\$ -</u>	<u>\$ 17,696,437</u>	<u>\$ 38,838,394</u>	<u>\$ 9,394,540</u>	<u>\$ 65,929,371</u>
Carrying amounts at December 31, 2022	<u>\$ 5,791,821</u>	<u>\$ 8,062,582</u>	<u>\$ 9,837,400</u>	<u>\$ 2,307,352</u>	<u>\$ 25,999,155</u>
<u>Cost</u>					
Balance at January 1, 2021	\$ 5,436,602	\$ 22,161,712	\$ 36,238,967	\$ 11,277,701	\$ 75,114,982
Additions	-	1,372,806	7,726,168	219,504	9,318,478
Disposals or retirements	-	-	(318,736)	-	(318,736)
Effect of exchange rate changes	<u>(57,438)</u>	<u>(559)</u>	<u>4,558</u>	<u>104</u>	<u>(53,335)</u>
Balance at December 31, 2021	<u>\$ 5,379,164</u>	<u>\$ 23,533,959</u>	<u>\$ 43,650,957</u>	<u>\$ 11,497,309</u>	<u>\$ 84,061,389</u>
<u>Accumulated amortization and impairment</u>					
Balance at January 1, 2021	\$ -	\$ 12,226,066	\$ 30,111,759	\$ 7,008,978	\$ 49,346,803
Additions	-	2,686,786	4,323,860	1,196,523	8,207,169
Disposals or retirements	-	-	(317,508)	-	(317,508)
Effect of exchange rate changes	<u>-</u>	<u>(559)</u>	<u>3,467</u>	<u>320</u>	<u>3,228</u>
Balance at December 31, 2021	<u>\$ -</u>	<u>\$ 14,912,293</u>	<u>\$ 34,121,578</u>	<u>\$ 8,205,821</u>	<u>\$ 57,239,692</u>
Carrying amounts at December 31, 2021	<u>\$ 5,379,164</u>	<u>\$ 8,621,666</u>	<u>\$ 9,529,379</u>	<u>\$ 3,291,488</u>	<u>\$ 26,821,697</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 rates of 8.7% and 8.0% in its test of impairment as of December 31, 2022 and 2021, respectively, to reflect the relevant specific risk in the cash-generating unit.

For the years ended December 31, 2022 and 2021, the Company did not recognize any impairment loss on goodwill.

17. SHORT-TERM LOANS

	December 31, 2021
Unsecured loans	
Amount	<u>\$ 114,921,333</u>
Loan content	
EUR (in thousands)	\$ 3,652,935
Annual interest rate	(0.73)%-0%
Maturity date	Due by June 2022

18. BONDS PAYABLE

	December 31, 2022	December 31, 2021
Domestic unsecured bonds	\$ 379,526,000	\$ 312,448,000
Overseas unsecured bonds	476,051,500	304,414,000
Less: Discounts on bonds payable	(3,141,061)	(2,391,348)
Less: Current portion	<u>(18,100,000)</u>	<u>(4,400,000)</u>
	<u>\$ 834,336,439</u>	<u>\$ 610,070,652</u>

The major terms of domestic unsecured bonds are as follows:

<u>Issuance</u>	<u>Tranche</u>	<u>Issuance Period</u>	<u>Total Amount</u>	<u>Coupon Rate</u>	<u>Repayment and Interest Payment</u>
NT\$ unsecured bonds					
101-3	-	October 2012 to October 2022	\$ 4,400,000	1.53%	Bullet repayment; interest payable annually
101-4	C	January 2013 to January 2023	3,000,000	1.49%	The same as above
102-1	C	February 2013 to February 2023	3,600,000	1.50%	The same as above
102-2	B	July 2013 to July 2023	3,500,000	1.70%	The same as above

(Continued)

Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
102-4	D	September 2013 to March 2021	\$ 2,600,000	1.85%	Bullet repayment; interest payable annually (interest for the six months prior to maturity will accrue on the basis of actual days and be repayable at maturity)
	E	September 2013 to March 2023	5,400,000	2.05%	The same as above
	F	September 2013 to September 2023	2,600,000	2.10%	Bullet repayment; interest payable annually
109-1	A	March 2020 to March 2025	3,000,000	0.58%	The same as above
	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
109-2	A	April 2020 to April 2025	5,900,000	0.52%	The same as above
	B	April 2020 to April 2027	10,400,000	0.58%	The same as above
	C	April 2020 to April 2030	5,300,000	0.60%	The same as above
109-3	A	May 2020 to May 2025	4,500,000	0.55%	The same as above
	B	May 2020 to May 2027	7,500,000	0.60%	The same as above
	C	May 2020 to May 2030	2,400,000	0.64%	The same as above
109-4	A	July 2020 to July 2025	5,700,000	0.58%	Two equal installments in last two years; interest payable annually
	B	July 2020 to July 2027	6,300,000	0.65%	The same as above
	C	July 2020 to July 2030	1,900,000	0.67%	The same as above
109-5	A	September 2020 to September 2025	4,800,000	0.50%	The same as above
	B	September 2020 to September 2027	8,000,000	0.58%	The same as above
	C	September 2020 to September 2030	2,800,000	0.60%	The same as above
109-6 (Green bond)	A	December 2020 to December 2025	1,600,000	0.40%	The same as above
	B	December 2020 to December 2027	5,600,000	0.44%	The same as above
	C	December 2020 to December 2030	4,800,000	0.48%	The same as above

(Continued)

Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
109-7	A	December 2020 to December 2025	\$ 1,900,000	0.36%	Two equal installments in last two years; interest payable annually
	B	December 2020 to December 2027	10,200,000	0.41%	The same as above
	C	December 2020 to December 2030	6,400,000	0.45%	The same as above
110-1	A	March 2021 to March 2026	4,800,000	0.50%	Bullet repayment; interest payable annually
	B	March 2021 to March 2028	11,400,000	0.55%	The same as above
	C	March 2021 to March 2031	4,900,000	0.60%	The same as above
110-2	A	May 2021 to May 2026	5,200,000	0.50%	The same as above
	B	May 2021 to May 2028	8,400,000	0.58%	The same as above
	C	May 2021 to May 2031	5,600,000	0.65%	The same as above
110-3	A	June 2021 to June 2026	6,900,000	0.52%	The same as above
	B	June 2021 to June 2028	7,900,000	0.58%	The same as above
	C	June 2021 to June 2031	4,900,000	0.65%	The same as above
110-4	A	August 2021 to August 2025	4,000,000	0.485%	The same as above
	B	August 2021 to August 2026	8,000,000	0.50%	The same as above
	C	August 2021 to August 2028	5,400,000	0.55%	The same as above
	D	August 2021 to August 2031	4,200,000	0.62%	The same as above
110-6	A	October 2021 to April 2026	3,200,000	0.535%	The same as above
	B	October 2021 to October 2026	6,900,000	0.54%	The same as above
	C	October 2021 to October 2028	4,600,000	0.60%	The same as above
	D	October 2021 to October 2031	1,600,000	0.62%	The same as above
110-7	A	December 2021 to December 2026	7,700,000	0.65%	The same as above
	B	December 2021 to June 2027	3,500,000	0.675%	The same as above
	C	December 2021 to December 2028	5,500,000	0.72%	The same as above
111-1 (Green bond)	A	January 2022 to January 2027	2,100,000	0.63%	The same as above
	B	January 2022 to January 2029	3,300,000	0.72%	The same as above

(Continued)

Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
111-2	A	March 2022 to September 2026	\$ 3,000,000	0.84%	Bullet repayment; interest payable annually
	B	March 2022 to March 2027	9,600,000	0.85%	The same as above
	C	March 2022 to March 2029	1,600,000	0.90%	The same as above
111-3 (Green bond)	-	May 2022 to May 2027	6,100,000	1.50%	The same as above
111-4 (Green bond)	A	July 2022 to July 2026	1,200,000	1.60%	The same as above
	B	July 2022 to July 2027	10,100,000	1.70%	The same as above
	C	July 2022 to July 2029	1,200,000	1.75%	The same as above
	D	July 2022 to July 2032	1,400,000	1.95%	The same as above
111-5	A	August 2022 to June 2027	2,000,000	1.65%	The same as above
	B	August 2022 to August 2027	8,900,000	1.65%	The same as above
	C	August 2022 to August 2029	2,200,000	1.65%	The same as above
	D	August 2022 to August 2032	2,500,000	1.82%	The same as above
111-6 (Green bond)	A	October 2022 to October 2027	5,700,000	1.75%	The same as above
	B	October 2022 to October 2029	1,000,000	1.80%	The same as above
	C	October 2022 to October 2032	3,500,000	2.00%	The same as above

(Concluded)

Issuance	Tranche	Issuance Period	Total Amount (US\$ in Thousands)	Coupon Rate	Repayment and Interest Payment
<u>US\$ unsecured bonds</u>					
109-1	-	September 2020 to September 2060	US\$1,000,000	2.70%	Bullet repayment (callable on the 5th anniversary of the issue date and every anniversary thereafter); interest payable annually
110-5	-	September 2021 to September 2051	1,000,000	3.10%	The same as above

The major terms of overseas unsecured bonds are as follows:

Issuance Period	Total Amount (US\$ in Thousands)	Coupon Rate	Repayment and Interest Payment
September 2020 to September 2025	US\$1,000,000	0.75%	Bullet repayment (callable at any time, in whole or in part, at the relevant redemption price according to relevant agreements); interest payable semi-annually
September 2020 to September 2027	750,000	1.00%	The same as above
September 2020 to September 2030	1,250,000	1.375%	The same as above
April 2021 to April 2026	1,100,000	1.25%	The same as above
April 2021 to April 2028	900,000	1.75%	The same as above
April 2021 to April 2031	1,500,000	2.25%	The same as above
October 2021 to October 2026	1,250,000	1.75%	The same as above
October 2021 to October 2031	1,250,000	2.50%	The same as above
October 2021 to October 2041	1,000,000	3.125%	The same as above
October 2021 to October 2051	1,000,000	3.25%	The same as above
April 2022 to April 2027	1,000,000	3.875%	The same as above
April 2022 to April 2029	500,000	4.125%	The same as above
April 2022 to April 2032	1,000,000	4.25%	The same as above
April 2022 to April 2052	1,000,000	4.50%	The same as above
July 2022 to July 2027	400,000	4.375%	The same as above
July 2022 to July 2032	600,000	4.625%	The same as above

19. LONG-TERM BANK LOANS

	December 31, 2022	December 31, 2021
Unsecured loans	\$ 6,013,333	\$ 3,510,000
Less: Discounts on government grants	(39,397)	(34,202)
Less: Current portion	<u>(1,213,889)</u>	<u>(166,667)</u>
	<u>\$ 4,760,047</u>	<u>\$ 3,309,131</u>
Loan content		
Annual interest rate	1.03%-1.23%	0.40%-0.90%
Maturity date	Due by December 2027	Due by September 2026

The long-term bank loans of the Company are with preferential interest rates subsidized by the government, and the loans are used to fund capital expenditure qualifying for the subsidy.

20. RETIREMENT BENEFIT PLANS

a. Defined contribution plans

The plan under the R.O.C. Labor Pension Act (the “Act”) is deemed a defined contribution plan. Pursuant to the Act, TSMC and VisEra Tech have made monthly contributions equal to 6% of each employee’s monthly salary to employees’ pension accounts. Furthermore, TSMC North America, TSMC China, TSMC Nanjing, TSMC Arizona, TSMC Europe, TSMC Canada, TSMC Technology and JASM also make monthly contributions at certain percentages of the basic salary of their employees. Accordingly, the Company recognized expenses of NT\$4,550,387 thousand and NT\$3,711,010 thousand for the years ended December 31, 2022 and 2021, respectively.

b. Defined benefit plans

TSMC has defined benefit plans under the R.O.C. Labor Standards Law that provide benefits based on an employee’s length of service and average monthly salary for the six-month period prior to retirement. The Company contributes an amount equal to 2% of salaries paid each month to their respective pension funds (the Funds), which are administered by the Labor Pension Fund Supervisory Committee (the Committee) and deposited in the Committee’s name in the Bank of Taiwan. Before the end of each year, the Company assesses the balance in the Funds. If the amount of the balance in the Funds is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company is required to fund the difference in one appropriation that should be made before the end of March of the next year. The Funds are operated and managed by the government’s designated authorities; as such, the Company does not have any right to intervene in the investments of the Funds.

Amounts recognized in respect of these defined benefit plans were as follows:

	Years Ended December 31	
	2022	2021
Current service cost	\$ 134,376	\$ 145,289
Net interest expense	<u>74,265</u>	<u>47,196</u>
Components of defined benefit costs recognized in profit or loss	<u>208,641</u>	<u>192,485</u>
Remeasurement on the net defined benefit liability:		
Return on plan assets (excluding amounts included in net interest expense)	(429,948)	(73,298)
Actuarial loss arising from experience adjustments	1,413,760	94,278
Actuarial loss arising from changes in demographic assumptions	-	277,454
Actuarial gain arising from changes in financial assumptions	<u>(160,752)</u>	<u>(540,513)</u>
Components of defined benefit costs recognized in other comprehensive income	<u>823,060</u>	<u>(242,079)</u>
Total	<u>\$ 1,031,701</u>	<u>\$ (49,594)</u>

The pension costs of the aforementioned defined benefit plans were recognized in profit or loss by the following categories:

	Years Ended December 31	
	2022	2021
Cost of revenue	\$ 135,125	\$ 124,548
Research and development expenses	55,632	52,801
General and administrative expenses	15,129	12,430
Marketing expenses	<u>2,755</u>	<u>2,706</u>
	<u>\$ 208,641</u>	<u>\$ 192,485</u>

The amounts arising from the defined benefit obligation of the Company were as follows:

	December 31, 2022	December 31, 2021
Present value of defined benefit obligation	\$ 17,483,951	\$ 16,585,442
Fair value of plan assets	<u>(8,162,860)</u>	<u>(5,548,563)</u>
Net defined benefit liability	<u>\$ 9,321,091</u>	<u>\$ 11,036,879</u>

Movements in the present value of the defined benefit obligation were as follows:

	Years Ended December 31	
	2022	2021
Balance, beginning of year	\$ 16,585,442	\$ 16,980,277
Current service cost	134,376	145,289
Interest expense	120,791	66,664
Remeasurement:		
Actuarial loss arising from experience adjustments	1,413,760	94,278
Actuarial loss arising from changes in demographic assumptions	-	277,454
Actuarial gain arising from changes in financial assumptions	(160,752)	(540,513)
Benefits paid from plan assets	(585,343)	(431,817)
Benefits paid directly by the Company	<u>(24,323)</u>	<u>(6,190)</u>
Balance, end of year	<u>\$ 17,483,951</u>	<u>\$ 16,585,442</u>

Movements in the fair value of the plan assets were as follows:

	Years Ended December 31	
	2022	2021
Balance, beginning of year	\$ 5,548,563	\$ 5,066,203
Interest income	46,526	19,468
Remeasurement:		
Return on plan assets (excluding amounts included in net interest expense)	429,948	73,298
Contributions from employer	2,723,166	821,411
Benefits paid from plan assets	<u>(585,343)</u>	<u>(431,817)</u>
Balance, end of year	<u>\$ 8,162,860</u>	<u>\$ 5,548,563</u>

The fair value of the plan assets by major categories at the end of reporting period was as follows:

	December 31, 2022	December 31, 2021
Cash	\$ 1,337,893	\$ 1,000,961
Equity instruments	4,696,909	2,951,835
Debt instruments	<u>2,128,058</u>	<u>1,595,767</u>
	<u>\$ 8,162,860</u>	<u>\$ 5,548,563</u>

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The principal assumptions of the actuarial valuation were as follows:

	<u>Measurement Date</u>	
	December 31, 2022	December 31, 2021
Discount rate	1.80%	0.75%
Future salary increase rate	4.00%	3.00%

Through the defined benefit plans under the R.O.C. Labor Standards Law, the Company is exposed to the following risks:

- 1) Investment risk: The pension funds are invested in equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the government's designated authorities or under the mandated management. However, under the R.O.C. Labor Standards Law, the rate of return on assets shall not be less than the average interest rate on a two-year time deposit published by the local banks and the government is responsible for any shortfall in the event that the rate of return is less than the required rate of return.
- 2) Interest risk: A decrease in the government bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the debt investments of the plan assets.

Assuming a hypothetical decrease in interest rate at the end of the reporting period contributed to a decrease of 0.5% (and not below 0.0%) in the discount rate and all other assumptions were held constant, the present value of the defined benefit obligation would increase by NT\$766,692 thousand and NT\$780,460 thousand as of December 31, 2022 and 2021, respectively.

- 3) Salary risk: The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

Assuming the expected salary rate increases by 0.5% at the end of the reporting period and all other assumptions were held constant, the present value of the defined benefit obligation would increase by NT\$746,933 thousand and NT\$759,527 thousand as of December 31, 2022 and 2021, respectively.

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

Furthermore, in presenting the above sensitivity analysis, the present value of the defined benefit obligation has been calculated using the projected unit credit method at the end of the reporting period, which is the same as that applied in calculating the defined benefit obligation liability.

The Company expects to make contributions of NT\$2,832,093 thousand to the defined benefit plans in the next year starting from December 31, 2022. The weighted average duration of the defined benefit obligation is 9 years.

21. EQUITY

a. Capital stock

	December 31, 2022	December 31, 2021
Authorized shares (in thousands)	<u>28,050,000</u>	<u>28,050,000</u>
Authorized capital	<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>
Issued capital	<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.

On March 1, 2022, the Company issued employee restricted stocks awards (RSAs) for its employees in a total of 1,387 thousand shares with a par value of NT\$10 each. The aforementioned issuance of new shares was approved by the relevant authority and the registration has been completed. Refer to Note 28 for the information on RSAs.

On May 10, 2022, TSMC's Board of Directors resolved to cancel 1,387 thousand treasury shares. Refer to Note 21(e) for the information.

As of the end of reporting period, 1,063,847 thousand ADSs of TSMC were traded on the NYSE. The number of common shares represented by the ADSs was 5,319,234 thousand shares (one ADS represents five common shares).

b. Capital surplus

The categories of uses and the sources of capital surplus based on regulations were as follows:

	December 31, 2022	December 31, 2021
<u>May be used to offset a deficit, distributed as cash dividends, or transferred to share capital</u>		
Additional paid-in capital	\$ 24,183,645	\$ 24,184,939
From merger	22,803,291	22,804,510
From convertible bonds	8,892,371	8,892,847
From difference between the consideration received and the carrying amount of the subsidiaries' net assets during actual disposal	8,406,282	8,406,282
Donations - donated by shareholders	11,275	11,275

(Continued)

	December 31, 2022	December 31, 2021
<u>May only be used to offset a deficit</u>		
From share of changes in equities of subsidiaries	\$ 4,229,892	\$ 113,952
From share of changes in equities of associates	311,863	307,322
Donations - unclaimed dividend	53,680	40,475
<u>May not be used for any purpose</u>		
Employee restricted shares	<u>438,029</u>	<u>-</u>
	<u>\$ 69,330,328</u>	<u>\$ 64,761,602</u>
		(Concluded)

If such capital surplus is distributed as transferred to share capital, it is limited to a certain percentage of the Company's paid-in capital each year.

c. Retained earnings and dividend policy

TSMC's Articles of Incorporation provide 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. 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 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 legal capital 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, 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 appropriations of 2022, 2021 and 2020 quarterly earnings have been approved by TSMC's Board of Directors in its meeting, respectively. The appropriations and cash dividends per share were as follows:

Resolution Date of TSMC's Board of Directors in its meeting	Fourth Quarter of 2022 February 14, 2023	Third Quarter of 2022 November 8, 2022	Second Quarter of 2022 August 9, 2022	First Quarter of 2022 May 10, 2022
Special capital reserve	<u>\$ 17,166,163</u>	<u>\$ (31,910,353)</u>	<u>\$ (12,002,798)</u>	<u>\$ (15,541,054)</u>
Cash dividends to shareholders	<u>\$ 71,308,546</u>	<u>\$ 71,308,547</u>	<u>\$ 71,308,546</u>	<u>\$ 71,308,546</u>
Cash dividends per share (NT\$)	<u>\$ 2.75</u>	<u>\$ 2.75</u>	<u>\$ 2.75</u>	<u>\$ 2.75</u>

Resolution Date of TSMC's Board of Directors in its meeting	Fourth Quarter of 2021	Third Quarter of 2021	Second Quarter of 2021	First Quarter of 2021
	February 15, 2022	November 9, 2021	August 10, 2021	June 9, 2021
Special capital reserve	\$ 3,304,303	\$ 710,169	\$ 10,201,220	\$ (6,287,050)
Cash dividends to shareholders	\$ 71,308,546	\$ 71,308,547	\$ 71,308,546	\$ 71,308,546
Cash dividends per share (NT\$)	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.75
Resolution Date of TSMC's Board of Directors in its meeting	Fourth Quarter of 2020	Third Quarter of 2020	Second Quarter of 2020	First Quarter of 2020
	February 9, 2021	November 10, 2020	August 11, 2020	May 12, 2020
Special capital reserve	\$ 12,420,727	\$ 5,501,351	\$ 11,884,457	\$ (2,694,841)
Cash dividends to shareholders	\$ 64,825,951	\$ 64,825,951	\$ 64,825,951	\$ 64,825,951
Cash dividends per share (NT\$)	\$ 2.5	\$ 2.5	\$ 2.5	\$ 2.5

The special capital reserve for 2022 is to be presented for approval in TSMC's shareholders' meeting to be held on June 6, 2023 (expected).

d. Others

Changes in others were as follows:

	Year Ended December 31, 2022				
	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 year	\$ (63,303,361)	\$ 574,310	\$ 120,536	\$ -	\$ (62,608,515)
Exchange differences arising on translation of foreign operations	51,009,722	-	-	-	51,009,722
Unrealized gain (loss) on financial assets at FVTOCI					
Equity instruments	-	(263,380)	-	-	(263,380)
Debt instruments	-	(10,513,643)	-	-	(10,513,643)
Cumulative unrealized gain (loss) of equity instruments transferred to retained earnings due to disposal	-	(303,242)	-	-	(303,242)
Cumulative unrealized gain (loss) of debt instruments transferred to profit or loss due to disposal	-	410,076	-	-	410,076
Loss allowance adjustments from debt instruments	-	909	-	-	909
Gain (loss) arising on changes in the fair value of hedging instruments	-	-	1,329,231	-	1,329,231
Transferred to initial carrying amount of hedged items	-	-	(52,929)	-	(52,929)
Issuance of shares				(451,899)	(451,899)
Share-based payment expenses recognized				266,746	266,746
Share of other comprehensive income (loss) of associates	550,338	38,696	76,307	-	665,341
Income tax effect	-	(79)	6,036	-	5,957
Balance, end of year	\$ (11,743,301)	\$ (10,056,353)	\$ 1,479,181	\$ (185,153)	\$ (20,505,626)

	Year Ended December 31, 2021				
	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 year	\$ (57,001,627)	\$ 2,321,754	\$ -	\$ -	\$ (54,679,873)
Exchange differences arising on translation of foreign operations	(6,181,737)	-	-	-	(6,181,737)
Unrealized gain (loss) on financial assets at FVTOCI					
Equity instruments	-	1,898,206	-	-	1,898,206
Debt instruments	-	(3,339,796)	-	-	(3,339,796)
Cumulative unrealized gain (loss) of equity instruments transferred to retained earnings due to disposal	-	(187,654)	-	-	(187,654)
Cumulative unrealized gain (loss) of debt instruments transferred to profit or loss due to disposal	-	(93,229)	-	-	(93,229)
Loss allowance adjustments from debt instruments	-	1,234	-	-	1,234
Gain (loss) arising on changes in the fair value of hedging instruments	-	-	90,119	-	90,119
Transferred to initial carrying amount of hedged items	-	-	48,469	-	48,469
Share of other comprehensive income (loss) of associates	(119,997)	30,015	(14,682)	-	(104,664)
Income tax effect	-	(56,220)	(3,370)	-	(59,590)
Balance, end of year	<u>\$ (63,303,361)</u>	<u>\$ 574,310</u>	<u>\$ 120,536</u>	<u>\$ -</u>	<u>\$ (62,608,515)</u>

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

e. Treasury stock

For TSMC's shareholders' interests, TSMC's Board of Directors approved a share buyback program on February 15, 2022 to repurchase 1,387 thousand shares. TSMC has completed this share buyback program during the first quarter of 2022. On May 10, 2022, TSMC's Board of Directors resolved to cancel the 1,387 thousand shares and set May 10, 2022 as the record date for capital reduction. The registration for share cancellation was completed on May 20, 2022.

22. NET REVENUE

a. Disaggregation of revenue from contracts with customers

Product	Years Ended December 31	
	2022	2021
Wafer	\$ 1,991,855,947	\$ 1,405,300,273
Others	<u>272,035,345</u>	<u>182,114,764</u>
	<u>\$ 2,263,891,292</u>	<u>\$ 1,587,415,037</u>

Geography	Years Ended December 31	
	2022	2021
Taiwan	\$ 210,470,783	\$ 203,963,760
United States	1,493,328,765	1,015,996,424
China	245,168,746	164,552,063
Europe, the Middle East and Africa	123,767,140	89,010,064
Japan	119,099,336	71,920,856
Others	<u>72,056,522</u>	<u>41,971,870</u>
	<u>\$2,263,891,292</u>	<u>\$1,587,415,037</u>

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

Platform	Years Ended December 31	
	2022	2021
High Performance Computing	\$ 932,383,729	\$ 587,780,144
Smartphone	888,879,250	695,091,191
Internet of Things	196,114,987	133,005,979
Automotive	116,380,987	67,076,353
Digital Consumer Electronics	56,158,772	55,577,223
Others	<u>73,973,567</u>	<u>48,884,147</u>
	<u>\$2,263,891,292</u>	<u>\$1,587,415,037</u>

Resolution	Years Ended December 31	
	2022	2021
5-nanometer	\$ 508,689,881	\$ 262,327,365
7-nanometer	535,153,763	440,383,100
10-nanometer	24,871	659,989
16-nanometer	258,544,274	191,058,940
20-nanometer	8,853,291	5,668,752
28-nanometer	206,611,955	153,066,563
40/45-nanometer	145,546,243	103,413,639
65-nanometer	93,288,614	66,467,903
90-nanometer	40,184,169	32,260,288
0.11/0.13 micron	57,992,328	40,558,534
0.15/0.18 micron	110,571,222	86,700,287
0.25 micron and above	<u>26,395,336</u>	<u>22,734,913</u>
Wafer revenue	<u>\$1,991,855,947</u>	<u>\$1,405,300,273</u>

b. Contract balances

	December 31, 2022	December 31, 2021	January 1, 2021
Contract liabilities (classified under accrued expenses and other current liabilities)	<u>\$ 70,806,617</u>	<u>\$ 39,762,588</u>	<u>\$ 13,775,088</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\$38,433,111 thousand and NT\$11,590,400 thousand for the years ended December 31, 2022 and 2021, respectively.

c. Temporary receipts from customers

	December 31, 2022	December 31, 2021
Current portion (classified under accrued expenses and other current liabilities)	\$ 107,723,580	\$ 30,612,702
Noncurrent portion (classified under other noncurrent liabilities)	<u>168,399,207</u>	<u>155,381,485</u>
	<u>\$ 276,122,787</u>	<u>\$ 185,994,187</u>

The Company's temporary receipts from customer are payments made by customers to the Company to retain the Company's capacity. When the terms and conditions set forth in the agreements are subsequently satisfied, the treatment of temporary receipts, either by refund or by accounts receivable offsetting, will be determined by mutual consent.

d. Refund liabilities

Estimated sales returns and other allowances is made and adjusted based on historical experience and the consideration of varying contractual terms. As of December 31, 2022 and 2021, the aforementioned refund liabilities amounted to NT\$ 53,078,351 thousand and NT\$41,038,041 thousand (classified under accrued expenses and other current liabilities), respectively.

23. INTEREST INCOME

	Years Ended December 31	
	2022	2021
Interest income		
Bank deposits	\$ 17,831,257	\$ 2,834,838
Financial assets at FVTOCI	2,582,341	2,192,470
Financial assets at amortized cost	<u>2,008,611</u>	<u>681,457</u>
	<u>\$ 22,422,209</u>	<u>\$ 5,708,765</u>

24. FINANCE COSTS

	Years Ended December 31	
	2022	2021
Interest expense		
Corporate bonds	\$ 14,116,112	\$ 5,202,999
Lease liabilities	267,050	193,324
Bank loans	32,017	17,546
Others	1,673	349
Less: Capitalized interest under property, plant and equipment	<u>(2,666,868)</u>	<u>-</u>
	<u>\$ 11,749,984</u>	<u>\$ 5,414,218</u>

Information about capitalized interest is as follows:

	Years Ended December 31, 2022
Capitalization rate	0.56%-3.36%

25. OTHER GAINS AND LOSSES, NET

	Years Ended December 31	
	2022	2021
Gain (loss) on disposal of financial assets, net		
Investments in debt instruments at FVTOCI	\$ (410,076)	\$ 93,229
Loss on financial instruments at FVTPL, net		
Mandatorily measured at FVTPL	(622,537)	(7,973,667)
The reversal (accrual) of expected credit loss of financial assets		
Investments in debt instruments at FVTOCI	(909)	(1,234)
Financial assets at amortized cost	(51,442)	3,969
Other gains, net	<u>72,766</u>	<u>489,693</u>
	<u>\$ (1,012,198)</u>	<u>\$ (7,388,010)</u>

26. INCOME TAX

- a. Income tax expense recognized in profit or loss

Income tax expense consisted of the following:

	Years Ended December 31	
	2022	2021
Current income tax expense		
Current tax expense recognized in the current year	\$ 147,685,403	\$ 88,844,915
Income tax adjustments on prior years	(563,555)	207,801
Other income tax adjustments	<u>206,136</u>	<u>152,232</u>
	<u>147,327,984</u>	<u>89,204,948</u>
Deferred income tax benefit		
The origination and reversal of temporary differences	(24,714,488)	(17,530,023)
Investment tax credits	<u>4,676,707</u>	<u>(5,621,745)</u>
	<u>(20,037,781)</u>	<u>(23,151,768)</u>
Income tax expense recognized in profit or loss	<u>\$ 127,290,203</u>	<u>\$ 66,053,180</u>

A reconciliation of income before income tax and income tax expense recognized in profit or loss was as follows:

	Years Ended December 31	
	2022	2021
Income before tax	<u>\$1,144,190,718</u>	<u>\$ 663,126,314</u>
Income tax expense at the statutory rate	\$ 231,799,774	\$ 134,613,312
Tax effect of adjusting items:		
Nondeductible items in determining taxable income	12,286,136	11,261,407
Tax-exempt income	(157,955,934)	(89,852,940)
Additional income tax under the Alternative Minimum Tax Act	61,578,020	32,852,688
The origination and reversal of temporary differences	(24,714,488)	(17,530,023)
Income tax credits	<u>4,654,114</u>	<u>(5,651,297)</u>
	127,647,622	65,693,147
Income tax adjustments on prior years	(563,555)	207,801
Other income tax adjustments	<u>206,136</u>	<u>152,232</u>
Income tax expense recognized in profit or loss	<u>\$ 127,290,203</u>	<u>\$ 66,053,180</u>

For the years ended December 31, 2022 and 2021, the Company applied a tax rate of 20% for entities subject to the R.O.C. Income Tax Law; for other jurisdictions, taxes are calculated using the applicable tax rate for each individual jurisdiction.

b. Deferred income tax balance

The analysis of deferred income tax assets and liabilities was as follows:

	December 31, 2022	December 31, 2021
<u>Deferred income tax assets</u>		
Temporary differences		
Depreciation	\$ 45,299,310	\$ 34,720,661
Refund liability	12,089,451	5,986,173
Unrealized exchange losses	5,782,345	-
Unrealized loss on inventories	2,305,328	898,998
Net defined benefit liability	1,722,005	1,237,086
Investment tax credits	945,038	5,621,745
Deferred compensation cost	361,241	373,983
Others	<u>681,124</u>	<u>315,240</u>
	<u>\$ 69,185,842</u>	<u>\$ 49,153,886</u>
<u>Deferred income tax liabilities</u>		
Temporary differences		
Unrealized exchange gains	\$ -	\$ (706,311)
Others	<u>(1,031,383)</u>	<u>(1,167,566)</u>
	<u>\$ (1,031,383)</u>	<u>\$ (1,873,877)</u>

Year Ended December 31, 2022					
Balance, Beginning of Year	Recognized in			Effect of Exchange Rate Changes	Balance, End of Year
	Profit or Loss	Other Comprehensive Income			
<u>Deferred income tax assets</u>					
Temporary differences					
Depreciation	\$ 34,720,661	\$ 10,552,264	\$ -	\$ 26,385	\$ 45,299,310
Refund liability	5,986,173	6,100,849	-	2,429	12,089,451
Unrealized exchange losses	-	5,782,345	-	-	5,782,345
Unrealized loss on inventories	898,998	1,402,241	-	4,089	2,305,328
Net defined benefit liability	1,237,086	(249,116)	734,035	-	1,722,005
Investment tax credits	5,621,745	(4,676,707)	-	-	945,038
Deferred compensation cost	373,983	(48,180)	-	35,438	361,241
Others	315,240	334,801	(79)	31,162	681,124
	<u>\$ 49,153,886</u>	<u>\$ 19,198,497</u>	<u>\$ 733,956</u>	<u>\$ 99,503</u>	<u>\$ 69,185,842</u>

Deferred income tax liabilities

Temporary differences					
Unrealized exchange gains	\$ (706,311)	\$ 706,311	\$ -	\$ -	\$ -
Others	(1,167,566)	132,973	6,036	(2,826)	(1,031,383)
	<u>\$ (1,873,877)</u>	<u>\$ 839,284</u>	<u>\$ 6,036</u>	<u>\$ (2,826)</u>	<u>\$ (1,031,383)</u>

Year Ended December 31, 2021					
Balance, Beginning of Year	Recognized in			Effect of Exchange Rate Changes	Balance, End of Year
	Profit or Loss	Other Comprehensive Income			
<u>Deferred income tax assets</u>					
Temporary differences					
Depreciation	\$ 19,354,383	\$ 15,365,737	\$ -	\$ 541	\$ 34,720,661
Refund liability	3,755,131	2,231,450	-	(408)	5,986,173
Investment tax credits	-	5,621,745	-	-	5,621,745
Net defined benefit liability	1,341,960	(75,825)	(29,049)	-	1,237,086
Unrealized loss on inventories	858,463	41,061	-	(526)	898,998
Deferred compensation cost	330,340	49,113	-	(5,470)	373,983
Others	317,907	59,045	(56,220)	(5,492)	315,240
	<u>\$ 25,958,184</u>	<u>\$ 23,292,326</u>	<u>\$ (85,269)</u>	<u>\$ (11,355)</u>	<u>\$ 49,153,886</u>
<u>Deferred income tax liabilities</u>					
Temporary differences					
Unrealized exchange gains	\$ (866,495)	\$ 160,184	\$ -	\$ -	\$ (706,311)
Others	(863,446)	(300,742)	(3,370)	(8)	(1,167,566)
	<u>\$ (1,729,941)</u>	<u>\$ (140,558)</u>	<u>\$ (3,370)</u>	<u>\$ (8)</u>	<u>\$ (1,873,877)</u>

- c. The deductible temporary differences for which no deferred income tax assets have been recognized

As of December 31, 2022 and 2021, the aggregate deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT\$26,790,935 thousand and NT\$66,431,255 thousand, respectively.

d. Unused tax-exemption information

As of the end of reporting period, the profits generated from the following project of TSMC are exempt from income tax for a five-year period:

	Tax-exemption Period
Construction and expansion of 2009 by TSMC	2018 to 2022

e. The information of unrecognized deferred income tax liabilities associated with investments

As of December 31, 2022 and 2021, the aggregate taxable temporary differences associated with investments in subsidiaries not recognized as deferred income tax liabilities amounted to NT\$222,682,649 thousand and NT\$177,552,831 thousand, respectively.

f. Income tax examination

The tax authorities have examined income tax returns of TSMC through 2020. All investment tax credit adjustments assessed by the tax authorities have been recognized accordingly.

27. EARNINGS PER SHARE

	Years Ended December 31	
	2022	2021
Basic EPS	<u>\$ 39.20</u>	<u>\$ 23.01</u>
Diluted EPS	<u>\$ 39.20</u>	<u>\$ 23.01</u>

EPS is computed as follows:

	Years Ended December 31	
	2022	2021
Basic EPS		
Net income available to common shareholders of the parent	<u>\$1,016,530,249</u>	<u>\$ 596,540,013</u>
Weighted average number of common shares outstanding used in the computation of basic EPS (in thousands)	<u>25,929,190</u>	<u>25,930,380</u>
Basic EPS (in dollars)	<u>\$ 39.20</u>	<u>\$ 23.01</u>
Diluted EPS		
Net income available to common shareholders of the parent	<u>\$1,016,530,249</u>	<u>\$ 596,540,013</u>
Weighted average number of common shares outstanding used in the computation of basic EPS (in thousands)	25,929,190	25,930,380
Effects of all dilutive potential common shares (in thousands)	<u>193</u>	<u>-</u>
Weighted average number of common shares used in the computation of diluted EPS (in thousands)	<u>25,929,383</u>	<u>25,930,380</u>
Diluted EPS (in dollars)	<u>\$ 39.20</u>	<u>\$ 23.01</u>

28. SHARE-BASED PAYMENT ARRANGEMENTS

a. Equity-settled share-based payment- RSAs

The RSAs in each year are as follows:

	<u>2022 RSAs</u>	<u>2021 RSAs</u>
Resolution Date of TSMC's shareholders in its meeting	June 8, 2022	July 26, 2021
Resolution Date of TSMC's Board of Directors in its meeting	February 14, 2023	February 15, 2022
Issuance of stocks (in thousands)	2,110	1,387
Eligible employees	Executive officers and non-executive officers	Executive officers
Grant date/Issuance date	March 1, 2023	March 1, 2022

Vesting conditions of the aforementioned arrangement are as follow:

- 1) The RSAs granted to eligible employees can only be vested if
 - the employee remains employed by the Company on the last date of each vesting period;
 - during the vesting period, the employee may not breach any agreement with the Company or violate the Company's work rules; and
 - certain employee performance metrics and TSMC's business performance metrics are met.
- 2) The maximum percentage of granted RSAs that may be vested each year shall be as follows: one-year anniversary of the grant: 50%; two-year anniversary of the grant: 25%; and three-year anniversary of the grant: 25%; provided that the actual percentage and number of the RSAs to be vested in each year will be calculated based on the achievement of TSMC's business performance metrics.
- 3) For eligible executive officers of TSMC: The maximum number of RSAs that may be vested in each year will be set as 110%, among which 100% will be subject to a calculation based on TSMC's relative Total Shareholder Return ("TSR", including capital gains and dividends) achievement to determine the number of RSAs to be vested; this number will be further subject to a modifier to increase or decrease up to 10% based on the Compensation Committee's (rename to Compensation and People Development Committee from February 14, 2023) evaluation of TSMC's Environmental, Social, and Governance ("ESG") achievements. The number of shares so calculated should be rounded down to the nearest integral.

TSMC's TSR relative to the TSR of S&P 500 IT Index	Ratio of Shares to be Vested
Above the Index by X percentage points	50% + X * 2.5%, with the maximum of 100%
Equal to the Index	50%
Below the Index by X percentage points	50% - X * 2.5%, with the minimum of 0%

- 4) For eligible employees who are not executive officers of the Company: The number of RSAs to be vested in each year will be calculated in accordance with the below table based on TSMC's audited consolidated financial statements for the year prior to the vesting year. The number of shares so calculated should be rounded down to the nearest integral.

	Threshold	Target	Weight	Ratio of Shares to be Vested
Revenue Growth Rate	10%	15%	1/3	< Threshold: 0 % = Threshold: 50% ≥ Target: 100% Between threshold and target: as calculated by interpolation method
Gross Margin	50%	53%	1/3	
Return on Equity	20%	25%	1/3	

- 5) Restrictions imposed on the employees' rights in the RSAs before the vesting conditions are fulfilled:

- During each vesting period, no employee granted RSAs, except for inheritance, may sell, pledge, transfer, give to another person, create any encumbrance on, or otherwise dispose of, any shares under the unvested RSAs.
- Before the vesting conditions are fulfilled, the attendance, proposal rights, speech rights, voting rights and etc. shall be exercised by the engaged trustee/custodian on the employee's behalf. Any other shareholder rights including but not limited to the entitlement to any distribution regarding dividends, bonuses and capital reserve, and the subscription right of the new shares issued for any capital increase, are the same as those of holders of common shares of TSMC.

- 6) Details of granted 2021 RSAs are as follows:

	<u>2021 RSAs</u> <u>Number of</u> <u>Stocks</u> <u>(In Thousands)</u>
Balance, beginning of year	-
Issuance of stocks	<u>1,387</u>
Balance, end of year	<u>1,387</u>
Weighted-average fair value of RSAs (in dollars)	<u>\$ 325.81</u>

The 2021 RSAs is measured at fair value at grant date by using the binominal tree approach. Relevant information is as follows:

	<u>2021 RSAs</u> <u>March 1, 2022</u>
Stock price at grant date (in dollars)	\$ 604
Expected price volatility	25.34%-28.28%
Expected option life	1-3 years
Risk-free interest rate	0.57%

Refer to Note 29 for the compensation costs of the 2021 RSAs recognized by TSMC.

On February 14, 2023, TSMC's Board of Directors approved the issuance of RSAs for year 2023 of no more than 6,249 thousand common shares. The grants will be made free of charge. The actual number of shares to be issued will be resolved by the Board of Directors after the RSAs is approved at the shareholders' meeting and by the competent authority.

b. Cash-settled share-based payment arrangements

The cash-settled share-based payment arrangements in each year are as follows:

	<u>2022 Plan</u>	<u>2021 Plan</u>
Resolution Date of TSMC's Board of Directors in its meeting	February 14, 2023	February 15, 2022
Issuance of units (in thousands) (Note)	400	236
Grant date	March 1, 2023	March 1, 2022

Note: One unit of the right represents a right to the market value of one TSMC's common share when vested.

The vesting conditions and the ratio of units to be vested for key management personnel of the plan are the same as the aforementioned RSAs.

The fair value of compensation costs for the cash-settled share-based payment was measured by using binominal tree approach and will be measured at each reporting period until settlement. Relevant information is as follows:

	<u>Years Ended December 31, 2022</u>	<u>2021 Plan</u>
Stock price at measurement date (in dollars)	\$ 451	
Expected price volatility	28.80%-32.19%	
Expected option life	1-3 years	
Risk-free interest rate	1.09%	

Refer to Note 29 for the compensation costs of the cash-settled share-based payment recognized by TSMC. The liabilities under cash-settled share-based payment arrangement amounted to NT\$30,757 thousand as of the end of reporting period.

29. ADDITIONAL INFORMATION OF EXPENSES BY NATURE

	<u>Years Ended December 31</u>	
	<u>2022</u>	<u>2021</u>
a. Depreciation of property, plant and equipment and right-of-use assets		
Recognized in cost of revenue	\$ 399,638,755	\$ 386,103,923
Recognized in operating expenses	28,850,463	27,936,211
Recognized in other operating income and expenses	<u>8,961</u>	<u>147,566</u>
	<u>\$ 428,498,179</u>	<u>\$ 414,187,700</u>
b. Amortization of intangible assets		
Recognized in cost of revenue	\$ 6,086,246	\$ 5,574,246
Recognized in operating expenses	<u>2,669,848</u>	<u>2,632,923</u>
	<u>\$ 8,756,094</u>	<u>\$ 8,207,169</u>

	Years Ended December 31	
	2022	2021
c. Employee benefits expenses		
Post-employment benefits		
Defined contribution plans	\$ 4,550,387	\$ 3,711,010
Defined benefit plans	<u>208,641</u>	<u>192,485</u>
	<u>4,759,028</u>	<u>3,903,495</u>
Share-based payments		
Equity-settled	302,348	7,788
Cash-settled	<u>32,704</u>	<u>-</u>
	<u>335,052</u>	<u>7,788</u>
Other employee benefits	<u>234,367,880</u>	<u>161,035,865</u>
	<u>\$ 239,461,960</u>	<u>\$ 164,947,148</u>
Employee benefits expense summarized by function		
Recognized in cost of revenue	\$ 139,361,369	\$ 98,012,833
Recognized in operating expenses	<u>100,100,591</u>	<u>66,934,315</u>
	<u>\$ 239,461,960</u>	<u>\$ 164,947,148</u>

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:

	Years Ended December 31	
	2022	2021
Profit sharing bonus to employees	<u>\$ 60,702,047</u>	<u>\$ 35,601,449</u>

TSMC's profit sharing bonus to employees and compensation to directors for 2022, 2021 and 2020 had been approved by the Board of Directors of TSMC, as illustrated below:

	Years Ended December 31		
Resolution Date of TSMC's Board of Directors in its meeting	2022	2021	2020
	February 14, 2023	February 15, 2022	February 9, 2021
Profit sharing bonus to employees	<u>\$ 60,702,047</u>	<u>\$ 35,601,449</u>	<u>\$ 34,753,184</u>
Compensation to directors	<u>\$ 690,128</u>	<u>\$ 487,537</u>	<u>\$ 509,753</u>

There is no significant difference between the aforementioned approved amounts and the amounts charged against earnings of 2022, 2021 and 2020, 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.

30. GOVERNMENT GRANTS

Subsidiaries such as JASM and TSMC Nanjing received subsidies from the governments of Japan and China, respectively, for local plants setup and operation, which were mainly used to subsidize the purchase costs of property, plant and equipment as well as partial costs and expenses incurred from plant construction and production. For the years ended December 31, 2022 and 2021, TSMC received a total of NT\$7,051,432 thousand and NT\$827,917 thousand as government grants respectively.

31. CASH FLOW INFORMATION

a. Non-cash transactions

	Years Ended December 31	
	2022	2021
Additions of financial assets at FVTOCI	\$ 45,126,181	\$ 253,613,917
Exchange of equity instruments	-	(106,185)
Changes in accrued expenses and other current liabilities	<u>9,440,544</u>	<u>2,380,947</u>
Payments for acquisition of financial assets at FVTOCI	<u>\$ 54,566,725</u>	<u>\$ 255,888,679</u>
Disposal of financial assets at FVTOCI	\$ 43,130,926	\$ 251,201,439
Changes in other financial assets	1,832,441	3,509,283
Exchange of equity instruments	<u>-</u>	<u>(106,185)</u>
Proceeds from disposal of financial assets at FVTOCI	<u>\$ 44,963,367</u>	<u>\$ 254,604,537</u>
Additions of property, plant and equipment	\$ 1,139,892,108	\$ 835,406,296
Changes in other financial assets	5,730,104	1,933,965
Exchange of assets	(275,564)	(3,256,517)
Changes in payables to contractors and equipment suppliers	(60,638,244)	5,153,380
Changes in accrued expenses and other current liabilities	630,594	-
Transferred to initial carrying amount of hedged items	-	(41,416)
Capitalized interests	<u>(2,666,868)</u>	<u>-</u>
Payments for acquisition of property, plant and equipment	<u>\$ 1,082,672,130</u>	<u>\$ 839,195,708</u>
Additions of intangible assets	\$ 7,535,092	\$ 9,318,478
Changes in other financial assets	7,584	2,950
Changes in accrued expenses and other current liabilities	<u>(588,350)</u>	<u>(280,677)</u>
Payments for acquisition of intangible assets	<u>\$ 6,954,326</u>	<u>\$ 9,040,751</u>

b. Reconciliation of liabilities arising from financing activities

	Balance as of January 1, 2022	Financing Cash Flow	Non-cash Changes			Balance as of December 31, 2022
			Foreign Exchange Movement	Leases Modifications	Other Changes (Note)	
Short-term loans	\$ 114,921,333	\$(111,959,992)	\$ (2,372,053)	\$ -	\$ (589,288)	\$ -
Bonds payable	614,470,652	193,479,254	44,183,113	-	303,420	852,436,439
Long-term bank loans	3,475,798	2,503,333	-	-	(5,195)	5,973,936
Lease liabilities	<u>22,940,665</u>	<u>(2,690,784)</u>	<u>137,196</u>	<u>11,713,474</u>	<u>267,050</u>	<u>32,367,601</u>
Total	<u>\$ 755,808,448</u>	<u>\$ 81,331,811</u>	<u>\$ 41,948,256</u>	<u>\$ 11,713,474</u>	<u>\$ (24,013)</u>	<u>\$ 890,777,976</u>

	Balance as of January 1, 2021	Financing Cash Flow	Non-cash Changes			Balance as of December 31, 2021
			Foreign Exchange Movement	Leases Modifications	Other Changes (Note)	
Short-term loans	\$ 88,559,026	\$ 35,668,397	\$ (8,777,416)	\$ -	\$ (528,674)	\$ 114,921,333
Bonds payable	256,705,084	361,255,068	(3,646,920)	-	157,420	614,470,652
Long-term bank loans	1,967,611	1,510,000	-	-	(1,813)	3,475,798
Lease liabilities	<u>22,388,674</u>	<u>(2,178,297)</u>	<u>(82,377)</u>	<u>2,619,341</u>	<u>193,324</u>	<u>22,940,665</u>
Total	<u>\$ 369,620,395</u>	<u>\$ 396,255,168</u>	<u>\$ (12,506,713)</u>	<u>\$ 2,619,341</u>	<u>\$ (179,743)</u>	<u>\$ 755,808,448</u>

Note: Other changes include discounts on short-term loans, amortization of bonds payable, amortization of long-term bank loan interest subsidy and financial cost of lease liabilities.

32. CAPITAL MANAGEMENT

The Company requires significant amounts of capital to build and expand its production facilities and acquire additional equipment. In consideration of the industry dynamics, the Company manages its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, capital expenditures, research and development activities, dividend payments, debt service requirements and other business requirements associated with its existing operations over the next 12 months.

33. FINANCIAL INSTRUMENTS

a. Categories of financial instruments

	December 31, 2022	December 31, 2021
Financial assets		
FVTPL (Note 1)	\$ 1,070,398	\$ 159,048
FVTOCI (Note 2)	136,483,349	129,607,052
Hedging financial assets	2,329	13,468
Amortized cost (Note 3)	<u>1,727,306,556</u>	<u>1,283,715,674</u>
	<u>\$1,864,862,632</u>	<u>\$ 1,413,495,242</u>
Financial liabilities		
FVTPL (Note 4)	\$ 116,215	\$ 681,914
Hedging financial liabilities	813	9,642
Amortized cost (Note 5)	<u>1,669,270,659</u>	<u>1,355,957,244</u>
	<u>\$1,669,387,687</u>	<u>\$1,356,648,800</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, refundable deposits and temporary payments (including those classified under other current assets and other noncurrent assets).

Note 4: Held for trading.

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

b. Financial risk management objectives

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 the Audit Committees (rename to Audit and Risk Committee from February 14, 2023) and/or Board of Directors in accordance with procedures required by relevant regulations or internal controls. During the implementation of such plans, the Company 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

Substantially all the Company's sales are denominated in U.S. dollars and over half of its capital expenditures are denominated in currencies other than NT dollars, primarily in U.S. dollars, Japanese yen and Euros. As a result, any significant fluctuations to its disadvantage in the exchanges 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 dollars. 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. 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 years ended December 31, 2022 and 2021, a hypothetical adverse foreign currency exchange rate change of 10% would have decreased its net income by NT\$1,704,553 thousand and NT\$1,435,346 thousand, respectively, after taking into account hedges and offsetting positions.

Interest rate risk

The Company is exposed to interest rate risks primarily in relation 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 debt.

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, which are classified as financial assets at FVTOCI, and may have

their fair value adversely affected due to a rise in interest rates. At the same time, if interest rates fall, cash and cash equivalents as well as floating-rate securities may generate less interest income than expected. The Company has entered and may in the future enter into interest rate derivatives to partially hedge the interest rate risk on its fixed income investments and anticipated debt issuance. However, these hedges can offset only a limited portion of the financial impact from movements 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 Company's other comprehensive income by NT\$3,831,326 thousand and NT\$3,767,071 thousand for the years ended December 31, 2022 and 2021, respectively.

All of the Company's short-term debt is floating-rate, hence a rise in interest rates may result in higher interest expense than expected. The majority of the Company's long-term debt is fixed-rate and measured at amortized cost and as such, changes in interest rates would not affect future cash flows or 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 years ended December 31, 2022 and 2021, the other comprehensive income would have decreased by NT\$631,530 thousand and NT\$595,766 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 accounts receivable, 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 accounts receivable are from its customers worldwide. The majority of the Company's outstanding accounts receivable are not covered by collaterals or guarantees. While the Company has procedures to monitor and manage credit risk exposure on accounts receivable, 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 December 31, 2022 and 2021, the Company's ten largest customers accounted for 82% and 79% 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 invested securities since initial

recognition by reviewing changes in external credit ratings, financial market conditions and material information of the issuers.

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 is investment grade on valuation date	12 months expected credit loss	0-0.09%
Doubtful	Credit rating is non-investment grade on valuation date	Lifetime expected credit loss-not credit impaired	-
In default	Credit rating is CC or below on valuation date	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	-

For the years ended December 31, 2022 and 2021, the expected credit loss increased NT\$57,936 thousand and decreased NT\$3,293 thousand, respectively. The changes were mainly due to increased investment amount and adjusted investment portfolio.

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 equivalents, financial assets at FVTOCI-current, financial assets at amortized cost-current and sufficient cost-efficient funding.

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>December 31, 2022</u>					
<u>Non-derivative financial liabilities</u>					
Accounts payable (including related parties)	\$ 56,522,345	\$ -	\$ -	\$ -	\$ 56,522,345
Payables to contractors and equipment suppliers	213,499,613	-	-	-	213,499,613
Accrued expenses and other current liabilities	219,587,908	-	-	-	219,587,908
Bonds payable	34,668,909	94,869,159	320,211,460	625,049,539	1,074,799,067
Long-term bank loans	1,278,130	3,533,152	1,360,549	-	6,171,831
Lease liabilities (including those classified under accrued expenses and other current liabilities) (Note)	2,999,840	5,367,809	4,754,007	22,589,117	35,710,773
Others	-	166,266,718	10,518,481	783,182	177,568,381
	<u>528,556,745</u>	<u>270,036,838</u>	<u>336,844,497</u>	<u>648,421,838</u>	<u>1,783,859,918</u>

(Continued)

	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years	Total
<u>December 31, 2022</u>					
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	\$ 103,617,399	\$ -	\$ -	\$ -	\$ 103,617,399
Inflows	<u>(104,600,085)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(104,600,085)</u>
	<u>(982,686)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(982,686)</u>
	<u>\$ 527,574,059</u>	<u>\$ 270,036,838</u>	<u>\$ 336,844,497</u>	<u>\$ 648,421,838</u>	<u>\$ 1,782,877,232</u>
<u>December 31, 2021</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 114,767,034	\$ -	\$ -	\$ -	\$ 114,767,034
Accounts payable (including related parties)	48,722,789	-	-	-	48,722,789
Payables to contractors and equipment suppliers	145,742,148	-	-	-	145,742,148
Accrued expenses and other current liabilities	120,240,359	-	-	-	120,240,359
Bonds payable	13,580,628	42,801,397	191,458,126	506,504,958	754,345,109
Long-term bank loans	183,671	2,217,112	1,153,900	-	3,554,683
Lease liabilities (including those classified under accrued expenses and other current liabilities) (Note)	2,371,568	3,896,249	3,385,295	14,649,235	24,302,347
Others	<u>-</u>	<u>164,991,929</u>	<u>-</u>	<u>-</u>	<u>164,991,929</u>
	<u>445,608,197</u>	<u>213,906,687</u>	<u>195,997,321</u>	<u>521,154,193</u>	<u>1,376,666,398</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	187,708,035	-	-	-	187,708,035
Inflows	<u>(187,631,930)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(187,631,930)</u>
	<u>76,105</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>76,105</u>
	<u>\$ 445,684,302</u>	<u>\$ 213,906,687</u>	<u>\$ 195,997,321</u>	<u>\$ 521,154,193</u>	<u>\$ 1,376,742,503</u> (Concluded)

Note: Information about the maturity analysis for lease liabilities more than 5 years:

	5-10 Years	10-15 Years	15-20 Years	More Than 20 Years	Total
<u>December 31, 2022</u>					
Lease liabilities	<u>\$ 10,241,734</u>	<u>\$ 7,329,012</u>	<u>\$ 4,233,886</u>	<u>\$ 784,485</u>	<u>\$ 22,589,117</u>
<u>December 31, 2021</u>					
Lease liabilities	<u>\$ 7,513,939</u>	<u>\$ 5,043,067</u>	<u>\$ 1,972,740</u>	<u>\$ 119,489</u>	<u>\$ 14,649,235</u>

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).

The timing of transfers between levels within the fair value hierarchy is at the end of reporting period.

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:

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
<u>Financial assets at FVTPL</u>				
Mandatorily measured at FVTPL				
Forward exchange contracts	\$ -	\$ 947,546	\$ -	\$ 947,546
Convertible bonds	-	-	122,852	122,852
	<u>\$ -</u>	<u>\$ 947,546</u>	<u>\$ 122,852</u>	<u>\$ 1,070,398</u>
<u>Financial assets at FVTOCI</u>				
Investments in debt instruments				
Corporate bonds	\$ -	\$ 66,116,166	\$ -	\$ 66,116,166
Agency bonds/Agency mortgage-backed securities	-	28,399,890	-	28,399,890
Government bonds	18,845,577	84,347	-	18,929,924
Asset-backed securities	-	9,274,697	-	9,274,697
Investments in equity instruments				
Non-publicly traded equity investments	-	-	6,159,200	6,159,200
Publicly traded stocks	277,866	-	-	277,866
Notes and accounts receivable, net	-	7,325,606	-	7,325,606
	<u>\$ 19,123,443</u>	<u>\$ 111,200,706</u>	<u>\$ 6,159,200</u>	<u>\$ 136,483,349</u>
<u>Hedging financial assets</u>				
Fair value hedges				
Interest rate futures contracts	<u>\$ 2,329</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 2,329</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>\$ -</u>	<u>\$ 116,215</u>	<u>\$ -</u>	<u>\$ 116,215</u>
<u>Hedging financial liabilities</u>				
Fair value hedges				
Interest rate futures contracts	<u>\$ 813</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 813</u>

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
<u>Financial assets at FVTPL</u>				
Mandatorily measured at FVTPL				
Forward exchange contracts	\$ -	\$ 159,048	\$ -	\$ 159,048
<u>Financial assets at FVTOCI</u>				
Investments in debt instruments				
Corporate bonds	\$ -	\$ 57,253,161	\$ -	\$ 57,253,161
Agency bonds/Agency mortgage-backed securities	-	32,070,114	-	32,070,114
Government bonds	21,267,002	78,792	-	21,345,794
Asset-backed securities	-	8,660,424	-	8,660,424
Investments in equity instruments				
Non-publicly traded equity investments	-	-	5,887,892	5,887,892
Publicly traded stocks	189,758	-	-	189,758
Notes and accounts receivable, net	-	4,199,909	-	4,199,909
	<u>\$ 21,456,760</u>	<u>\$ 102,262,400</u>	<u>\$ 5,887,892</u>	<u>\$ 129,607,052</u>
<u>Hedging financial assets</u>				
Cash flow hedges				
Forward interest rate contracts	\$ -	\$ 13,468	\$ -	\$ 13,468
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	\$ -	\$ 681,914	\$ -	\$ 681,914
<u>Hedging financial liabilities</u>				
Fair value hedges				
Interest rate futures contracts	\$ 9,642	\$ -	\$ -	\$ 9,642

Reconciliation of Level 3 fair value measurements of financial assets

The financial assets measured at Level 3 fair value were equity investments classified as financial assets at FVTOCI and financial assets at FVTPL. Reconciliations for the years ended December 31, 2022 and 2021 are as follows:

	Years Ended December 31	
	2022	2021
Balance, beginning of year	\$ 5,887,892	\$ 4,514,940
Additions	715,612	319,177
Recognized in other comprehensive income or loss	(373,263)	1,821,762
Disposals and proceeds from return of capital of investments	(359,506)	(700,224)
Transfers out of level 3 (Note)	(139,770)	-
Effect of exchange rate changes	<u>551,087</u>	<u>(67,763)</u>
Balance, end of year	<u>\$ 6,282,052</u>	<u>\$ 5,887,892</u>

Note: The transfer from level 3 to level 1 is because quoted prices (unadjusted) in active markets data became available for the equity investments.

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 and government bonds are determined by quoted market prices provided by third party pricing services.
- The fair values of forward contracts are measured using forward rates and discount rates derived from quoted market prices.
- The fair value of accounts receivable 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 (excluding those trading on the Emerging Stock Board) 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 December 31, 2022 and 2021, the Company uses unobservable inputs derived from discount for lack of marketability of 10%. When other inputs remain equal, the fair value will decrease by NT\$48,704 thousand and NT\$51,372 thousand, respectively, 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 prior transaction prices.

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 financial assets and liabilities which are not required to be measured at fair value:

	<u>December 31, 2022</u>	
	<u>Carrying Amount</u>	<u>Level 2 Fair Value</u>
<u>Financial assets</u>		
Financial assets at amortized costs		
Corporate bonds	\$ 80,994,958	\$ 80,236,142
Commercial paper	<u>48,732,476</u>	<u>48,882,028</u>
	<u>\$ 129,727,434</u>	<u>\$ 129,118,170</u>
<u>Financial liabilities</u>		
Financial liabilities at amortized costs		
Bonds payable	<u>\$ 852,436,439</u>	<u>\$ 765,301,535</u>

	<u>December 31, 2021</u>	
	Carrying Amount	Level 2 Fair Value
<u>Financial assets</u>		
Financial assets at amortized costs		
Corporate bonds	<u>\$ 5,306,962</u>	<u>\$ 5,317,957</u>
<u>Financial liabilities</u>		
Financial liabilities at amortized costs		
Bonds payable	<u>\$ 614,470,652</u>	<u>\$ 613,514,692</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 value of commercial paper is determined by the present value of future cash flows based on the discounted curves that are derived from the quoted market prices.

34. 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

b. Net revenue

		<u>Years Ended December 31</u>	
		<u>2022</u>	<u>2021</u>
<u>Item</u>	<u>Related Party Categories</u>		
Net revenue from sale of goods	Associates	<u>\$ 15,351,465</u>	<u>\$ 8,475,908</u>

c. Purchases

	Years Ended December 31	
	2022	2021

Related Party Categories

Associates	<u>\$ 6,423,913</u>	<u>\$ 7,569,787</u>
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d. Receivables from related parties

	December 31, 2022	December 31, 2021
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<u>Item</u>	<u>Related Party Name</u>		
Receivables from related parties	GUC	\$ 1,471,351	\$ 597,836
	Xintec	<u>112,607</u>	<u>117,488</u>
		<u>\$ 1,583,958</u>	<u>\$ 715,324</u>
Other receivables from related parties	SSMC	\$ 68,277	\$ 50,375
	VIS	669	11,156
	Others	<u>29</u>	<u>-</u>
		<u>\$ 68,975</u>	<u>\$ 61,531</u>

e. Payables to related parties

	December 31, 2022	December 31, 2021
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<u>Item</u>	<u>Related Party Name</u>		
Payables to related parties	Xintec	\$ 1,047,452	\$ 725,325
	SSMC	385,979	349,211
	VIS	190,587	357,151
	Others	<u>18,619</u>	<u>5,499</u>
		<u>\$ 1,642,637</u>	<u>\$ 1,437,186</u>

f. Accrued expenses and other current liabilities

	December 31, 2022	December 31, 2021
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<u>Item</u>	<u>Related Party Categories</u>		
Contract liabilities	Associates	<u>\$ 1,075,659</u>	<u>\$ 726,350</u>

g. Others

		<u>Years Ended December 31</u>	
		2022	2021
<u>Item</u>	<u>Related Party Categories</u>		
Manufacturing expenses	Associates	<u>\$ 6,011,522</u>	<u>\$ 5,459,919</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.

h. Compensation of key management personnel

The compensation to directors and other key management personnel were as follows:

	<u>Years Ended December 31</u>	
	2022	2021
Short-term employee benefits	\$ 4,369,097	\$ 2,886,786
Post-employment benefits	3,013	2,900
Share-based payments	<u>286,227</u>	<u>-</u>
	<u>\$ 4,658,337</u>	<u>\$ 2,889,686</u>

The compensation to directors and other key management personnel were determined by the Compensation Committee (renamed to Compensation and People Development Committee from February 14, 2023) of TSMC in accordance with the individual performance and market trends.

35. PLEDGED ASSETS

The Company provided certificate of deposits recorded in other financial assets as collateral mainly for building construction, building lease agreements and energy purchase agreements. As of December 31, 2022 and 2021, the aforementioned other financial assets amounted to NT\$129,138 thousand and NT\$210,235 thousand, respectively.

36. 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 the end of reporting period, 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 the end of reporting period.

- c. In September 2022, Daedalus Prime LLC ("Daedalus") filed complaints in the U.S. International Trade Commission ("ITC") and the U.S. District Court for the Eastern District of Texas alleging that TSMC, TSMC North America, and other companies infringe four U.S. patents. The ITC instituted an investigation in October 2022. The outcome cannot be determined and we cannot make a reliable estimate of the contingent liability at this time.
- d. TSMC entered into long-term purchase agreements of materials and supplies and agreements of waste disposal with multiple suppliers. The relative minimum fulfillment quantity and price are specified in the agreements.
- e. TSMC entered into a long-term purchase agreement of equipment. The relative fulfillment quantity and price are specified in the agreement.
- f. TSMC entered into long-term energy purchase agreements with multiple suppliers. The relative fulfillment period, quantity and price are specified in the agreements.
- g. Amounts available under unused letters of credit as of December 31, 2022 and 2021 were NT\$383,974 thousand and NT\$136,710 thousand, respectively.
- h. The Company entrusted financial institutions to open performance guarantee mainly for import and export of goods, lease agreement and energy purchase agreement. As of December 31, 2022 and 2021, the aforementioned guarantee amounted to NT\$7,623,262 thousand and NT\$4,954,798 thousand, respectively.

37. 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>December 31, 2022</u>			
<u>Financial assets</u>			
Monetary items			
USD	\$ 15,214,896	30.713	\$ 467,295,097
EUR	8,375	32.838	275,006
			(Continued)

	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Carrying Amount (In Thousands)
EUR	\$ 29,161	7.432(Note 2)	\$ 957,587
JPY	133,034,271	0.2331	31,010,288
<u>Financial liabilities</u>			
Monetary items			
USD	15,190,659	30.713	466,550,704
EUR	2,375,378	32.838	78,002,647
JPY	134,608,488	0.2331	31,377,239
<u>December 31, 2021</u>			
<u>Financial assets</u>			
Monetary items			
USD	11,445,396	27.674	316,739,883
USD	2,023,233	6.379(Note 3)	55,990,951
EUR	14,964	31.460	470,776
EUR	40,326	7.252(Note 2)	1,268,665
JPY	10,921,880	0.2414	2,636,542
<u>Financial liabilities</u>			
Monetary items			
USD	11,958,503	27.674	330,939,620
EUR	3,539,320	31.460	111,347,020
JPY	112,456,908	0.2414	27,147,098 (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 Euro could be exchanged.

Note 3: 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 years ended December 31, 2022 and 2021, 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.

38. 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 shareholders

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.

39. OPERATING SEGMENTS INFORMATION

- a. Operating segments, segment revenue and operating results

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, sales, 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.

b. Geographic and major customers' information were as follows:

1) Geographic information

Noncurrent Assets	December 31, 2022	December 31, 2021
Taiwan	\$2,510,238,722	\$1,953,007,722
United States	153,137,833	41,208,723
China	90,349,673	41,895,164
Europe, the Middle East and Africa	140,709	143,916
Japan	15,432,491	1,011,043
Others	<u>1,922</u>	<u>539</u>
	<u>\$2,769,301,350</u>	<u>\$2,037,267,107</u>

Noncurrent assets include property, plant and equipment, right-of-use assets, intangible assets and other noncurrent assets.

2) Major customers representing at least 10% of net revenue

	Years Ended December 31			
	2022		2021	
	Amount	%	Amount	%
Customer A	\$ 529,649,200	23	\$ 405,402,955	26
Customer B	NA (Note)	NA	153,740,831	10

Note: Revenue less than 10% of the Company's net revenue.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

FINANCINGS PROVIDED

FOR THE YEAR ENDED DECEMBER 31, 2022

(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 2)	Ending Balance (Foreign Currencies in Thousands) (Note 2)	Amount Actually Drawn (Foreign Currencies in Thousands)	Interest Rate	Nature for Financing	Transaction Amounts	Reason for Financing	Allowance for Bad Debt	Collateral		Financing Limits for Each Borrowing Company (Note 1)	Financing Company's Total Financing Amount Limits (Note 1)
													Item	Value		
1	TSMC China	TSMC Nanjing	Other receivables from related parties	Yes	\$ 74,200,110 (RMB 8,800,000)& (USD 1,150,000)	\$ 74,200,110 (RMB 8,800,000)& (USD 1,150,000)	\$ 45,211,510 (RMB 7,800,000)& (USD 350,000)	0.75%-1.50%	The need for short-term and long-term financing	\$ -	Operating capital	\$ -	-	\$ -	\$ 87,432,993	\$ 87,432,993

Note 1: The aggregate amount available for lending to TSMC Nanjing from TSMC China shall not exceed the net worth of TSMC China.

Note 2: 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

ENDORSEMENTS/GUARANTEES PROVIDED
FOR THE YEAR ENDED DECEMBER 31, 2022

(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 (Notes 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	\$ 736,413,299	\$ 2,555,730 (US\$ 83,213)	\$ 2,555,730 (US\$ 83,213)	\$ 2,555,730 (US\$ 83,213)	\$ -	0.09%	\$ 736,413,299	Yes	No	No
		TSMC Global	Subsidiary	736,413,299	230,347,500 (US\$ 7,500,000)	230,347,500 (US\$ 7,500,000)	230,347,500 (US\$ 7,500,000)	-	7.82%	736,413,299	Yes	No	No
		TSMC Arizona	Subsidiary	736,413,299	369,551,715 (US\$12,032,420)	369,551,715 (US\$12,032,420)	246,699,701 (US\$ 8,032,420)	-	12.55%	736,413,299	Yes	No	No
1	TSMC Japan	TSMC JDC	The same parent company	336,399	307,692 (JPY 1,320,000)	307,692 (JPY 1,320,000)	307,692 (JPY 1,320,000)	-	0.01%	336,399	No	No	No

Note 1: The total amount of the endorsement/guarantee provided by TSMC to TSMC North America, TSMC Global and TSMC Arizona shall not exceed twenty-five percent (25%) of TSMC's net worth.

Note 2: The total amount of the endorsement/guarantee provided by TSMC Japan to TSMC JDC shall not exceed two hundred and fifty percent (250%) of TSMC Japan'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

December 31, 2022

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

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC	<u>Commercial paper</u>							
	Taiwan Power Company	-	Financial assets at amortized cost	2,950	\$ 29,335,729	N/A	\$ 29,421,735	
	CPC Corporation, Taiwan	-	"	750	7,458,936	N/A	7,481,537	
	Nan Ya Plastics Corporation	-	"	450	4,476,301	N/A	4,492,086	
	Formosa Petrochemical Corporation	-	"	300	2,985,385	N/A	2,994,951	
	Formosa Chemicals & Fibre Corporation	-	"	250	2,485,666	N/A	2,494,159	
	Formosa Plastics Corporation	-	"	200	1,990,459	N/A	1,997,560	
	<u>Non-publicly traded equity investments</u>							
	Shin-Etsu Handotai Taiwan Co., Ltd.	-	Financial assets at fair value through other comprehensive income	10,500	473,508	7	473,508	
	United Industrial Gases Co., Ltd.	-	"	21,230	443,461	10	443,461	
Global Investment Holding Inc.	-	"	10,442	97,772	6	97,772		
Crimson Asia Capital	-	"	-	-	1	-		
TSMC Partners	<u>Non-publicly traded equity investments</u>							
	Shanghai Walden Venture Capital Enterprise	-	Financial assets at fair value through other comprehensive income	-	US\$ 26,441	6	US\$ 26,441	
	China Walden Venture Investments II, L.P.	-	"	-	US\$ 18,454	9	US\$ 18,454	
	China Walden Venture Investments III, L.P.	-	"	-	US\$ 13,602	4	US\$ 13,602	
	Tela Innovations	-	"	6,942	-	22	-	
Movella Inc.	-	"	6,333	-	9	-		
TSMC Global	<u>Corporate bond</u>							
	Morgan Stanley	-	Financial assets at fair value through other comprehensive income	-	US\$ 83,242	N/A	US\$ 83,242	
	Bank of America Corporation	-	"	-	US\$ 76,626	N/A	US\$ 76,626	
	Citigroup Inc.	-	"	-	US\$ 61,493	N/A	US\$ 61,493	
	Wells Fargo & Company	-	"	-	US\$ 59,735	N/A	US\$ 59,735	
	The Goldman Sachs Group, Inc.	-	"	-	US\$ 51,439	N/A	US\$ 51,439	
	JPMorgan Chase & Co.	-	"	-	US\$ 50,629	N/A	US\$ 50,629	
	Mitsubishi UFJ Financial Group, Inc.	-	"	-	US\$ 32,949	N/A	US\$ 32,949	
	HSBC Holdings plc	-	"	-	US\$ 32,402	N/A	US\$ 32,402	
	AbbVie Inc.	-	"	-	US\$ 27,892	N/A	US\$ 27,892	
	Sumitomo Mitsui Financial Group, Inc.	-	"	-	US\$ 27,658	N/A	US\$ 27,658	
	Banco Santander, S.A.	-	"	-	US\$ 26,257	N/A	US\$ 26,257	
	Metropolitan Life Global Funding I	-	"	-	US\$ 24,408	N/A	US\$ 24,408	
	Athene Global Funding	-	"	-	US\$ 23,191	N/A	US\$ 23,191	
	Oracle Corporation	-	"	-	US\$ 21,865	N/A	US\$ 21,865	
	Royal Bank of Canada	-	"	-	US\$ 21,423	N/A	US\$ 21,423	
	Principal Life Global Funding II	-	"	-	US\$ 19,768	N/A	US\$ 19,768	
The Toronto-Dominion Bank	-	"	-	US\$ 19,510	N/A	US\$ 19,510		
Equitable Financial Life Global Funding	-	"	-	US\$ 18,979	N/A	US\$ 18,979		
BNP Paribas SA	-	"	-	US\$ 18,931	N/A	US\$ 18,931		

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Nordea Bank Abp	-	Financial assets at fair value through other comprehensive income	-	US\$ 18,263	N/A	US\$ 18,263	
	Fédération des caisses Desjardins du Québec	-	"	-	US\$ 18,086	N/A	US\$ 18,086	
	Sumitomo Mitsui Trust Bank, Limited	-	"	-	US\$ 17,158	N/A	US\$ 17,158	
	Guardian Life Global Funding	-	"	-	US\$ 16,412	N/A	US\$ 16,412	
	Mizuho Financial Group, Inc.	-	"	-	US\$ 16,169	N/A	US\$ 16,169	
	Deutsche Bank AG - New York Branch	-	"	-	US\$ 16,038	N/A	US\$ 16,038	
	Hyundai Capital America	-	"	-	US\$ 15,807	N/A	US\$ 15,807	
	Volkswagen Group of America Finance, LLC	-	"	-	US\$ 15,613	N/A	US\$ 15,613	
	Nationwide Building Society	-	"	-	US\$ 15,375	N/A	US\$ 15,375	
	NatWest Markets Plc	-	"	-	US\$ 15,314	N/A	US\$ 15,314	
	Bank of Montreal	-	"	-	US\$ 15,224	N/A	US\$ 15,224	
	Protective Life Global Funding	-	"	-	US\$ 15,045	N/A	US\$ 15,045	
	BPCE SA	-	"	-	US\$ 14,691	N/A	US\$ 14,691	
	Capital One Financial Corporation	-	"	-	US\$ 14,125	N/A	US\$ 14,125	
	ING Groep N.V.	-	"	-	US\$ 14,050	N/A	US\$ 14,050	
	NTT Finance Corporation	-	"	-	US\$ 13,744	N/A	US\$ 13,744	
	Svenska Handelsbanken AB (publ)	-	"	-	US\$ 13,508	N/A	US\$ 13,508	
	Société Générale Société anonyme	-	"	-	US\$ 13,327	N/A	US\$ 13,327	
	The Bank of Nova Scotia	-	"	-	US\$ 12,914	N/A	US\$ 12,914	
	Credit Suisse AG, New York Branch	-	"	-	US\$ 12,688	N/A	US\$ 12,688	
	Apple Inc.	-	"	-	US\$ 12,233	N/A	US\$ 12,233	
	Macquarie Group Limited	-	"	-	US\$ 11,654	N/A	US\$ 11,654	
	Santander UK Group Holdings plc	-	"	-	US\$ 11,628	N/A	US\$ 11,628	
	Credit Agricole SA London Branch	-	"	-	US\$ 11,611	N/A	US\$ 11,611	
	Toyota Motor Credit Corporation	-	"	-	US\$ 11,609	N/A	US\$ 11,609	
	Standard Chartered PLC	-	"	-	US\$ 11,541	N/A	US\$ 11,541	
	UBS Group AG	-	"	-	US\$ 11,473	N/A	US\$ 11,473	
	The Bank of New York Mellon Corporation	-	"	-	US\$ 11,282	N/A	US\$ 11,282	
	Barclays PLC	-	"	-	US\$ 11,263	N/A	US\$ 11,263	
	Fifth Third Bancorp	-	"	-	US\$ 10,917	N/A	US\$ 10,917	
	National Securities Clearing Corporation	-	"	-	US\$ 10,878	N/A	US\$ 10,878	
	Banque Fédérative du Crédit Mutuel Société anonyme	-	"	-	US\$ 10,738	N/A	US\$ 10,738	
	Lloyds Banking Group plc	-	"	-	US\$ 10,533	N/A	US\$ 10,533	
	AT&T Inc.	-	"	-	US\$ 10,528	N/A	US\$ 10,528	
	S&P Global Inc.	-	"	-	US\$ 10,246	N/A	US\$ 10,246	
	Nomura Holdings, Inc.	-	"	-	US\$ 10,195	N/A	US\$ 10,195	
	U.S. Bancorp	-	"	-	US\$ 9,781	N/A	US\$ 9,781	
	Verizon Communications Inc.	-	"	-	US\$ 9,765	N/A	US\$ 9,765	
	Citizens Bank, National Association	-	"	-	US\$ 9,364	N/A	US\$ 9,364	
	Enel Finance International N.V.	-	"	-	US\$ 9,104	N/A	US\$ 9,104	
	Roper Technologies, Inc.	-	"	-	US\$ 9,035	N/A	US\$ 9,035	
	Equifax Inc.	-	"	-	US\$ 8,925	N/A	US\$ 8,925	
	Equinor ASA	-	"	-	US\$ 8,832	N/A	US\$ 8,832	
	Amazon.com, Inc.	-	"	-	US\$ 8,820	N/A	US\$ 8,820	
	Merck & Co., Inc.	-	"	-	US\$ 8,616	N/A	US\$ 8,616	
	Bristol-Myers Squibb Company	-	"	-	US\$ 8,441	N/A	US\$ 8,441	
	GSK Consumer Healthcare Capital US LLC	-	"	-	US\$ 8,314	N/A	US\$ 8,314	
	AIG Global Funding	-	"	-	US\$ 8,209	N/A	US\$ 8,209	
	New York Life Global Funding	-	"	-	US\$ 8,192	N/A	US\$ 8,192	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	American Express Company	-	Financial assets at fair value through other comprehensive income	-	US\$ 8,037	N/A	US\$ 8,037	
	Truist Financial Corporation	-	"	-	US\$ 7,851	N/A	US\$ 7,851	
	International Bank for Reconstruction and Development KfW	-	"	-	US\$ 7,608	N/A	US\$ 7,608	
	UnitedHealth Group Incorporated	-	"	-	US\$ 7,594	N/A	US\$ 7,594	
	AstraZeneca Finance LLC	-	"	-	US\$ 7,504	N/A	US\$ 7,504	
	Canadian Imperial Bank of Commerce	-	"	-	US\$ 7,477	N/A	US\$ 7,477	
	Inter-American Development Bank	-	"	-	US\$ 7,443	N/A	US\$ 7,443	
	Suncorp-Metway Limited	-	"	-	US\$ 7,346	N/A	US\$ 7,346	
	Great-West Lifeco U.S. Finance 2020, Lp	-	"	-	US\$ 7,315	N/A	US\$ 7,315	
	Lowe's Companies, Inc.	-	"	-	US\$ 7,287	N/A	US\$ 7,287	
	Northwestern Mutual Global Funding	-	"	-	US\$ 7,135	N/A	US\$ 7,135	
	Chevron Corporation	-	"	-	US\$ 6,853	N/A	US\$ 6,853	
	Fidelity National Information Services, Inc.	-	"	-	US\$ 6,838	N/A	US\$ 6,838	
	AstraZeneca PLC	-	"	-	US\$ 6,619	N/A	US\$ 6,619	
	Prudential Funding Corp.	-	"	-	US\$ 6,500	N/A	US\$ 6,500	
	John Deere Capital Corporation	-	"	-	US\$ 6,447	N/A	US\$ 6,447	
	Intuit Inc.	-	"	-	US\$ 6,437	N/A	US\$ 6,437	
	Cargill, Incorporated	-	"	-	US\$ 6,421	N/A	US\$ 6,421	
	Daimler Trucks Finance North America LLC	-	"	-	US\$ 6,378	N/A	US\$ 6,378	
	Roche Holdings, Inc.	-	"	-	US\$ 6,367	N/A	US\$ 6,367	
	The East Ohio Gas Company	-	"	-	US\$ 6,339	N/A	US\$ 6,339	
	Jackson National Life Global Funding	-	"	-	US\$ 6,333	N/A	US\$ 6,333	
	Danske Bank A/S	-	"	-	US\$ 6,283	N/A	US\$ 6,283	
	Ameren Corporation	-	"	-	US\$ 6,149	N/A	US\$ 6,149	
	Huntington Bancshares Incorporated	-	"	-	US\$ 5,960	N/A	US\$ 5,960	
	Discover Bank (New Castle, Delaware)	-	"	-	US\$ 5,865	N/A	US\$ 5,865	
	Exxon Mobil Corporation	-	"	-	US\$ 5,864	N/A	US\$ 5,864	
	Swedbank AB (publ)	-	"	-	US\$ 5,749	N/A	US\$ 5,749	
	Fox Corporation	-	"	-	US\$ 5,733	N/A	US\$ 5,733	
	ANZ New Zealand (Int'l) Limited	-	"	-	US\$ 5,630	N/A	US\$ 5,630	
	Exelon Corporation	-	"	-	US\$ 5,604	N/A	US\$ 5,604	
	Take-Two Interactive Software, Inc.	-	"	-	US\$ 5,591	N/A	US\$ 5,591	
	Macquarie Bank Limited	-	"	-	US\$ 5,576	N/A	US\$ 5,576	
	Scentre Group Trust 1	-	"	-	US\$ 5,541	N/A	US\$ 5,541	
	WEC Energy Group, Inc.	-	"	-	US\$ 5,525	N/A	US\$ 5,525	
	WPP Finance 2010	-	"	-	US\$ 5,498	N/A	US\$ 5,498	
	Huntington National Bank	-	"	-	US\$ 5,459	N/A	US\$ 5,459	
	Intercontinental Exchange, Inc.	-	"	-	US\$ 5,415	N/A	US\$ 5,415	
	UBS AG, London Branch	-	"	-	US\$ 5,388	N/A	US\$ 5,388	
	Pacific Life Global Funding II	-	"	-	US\$ 5,387	N/A	US\$ 5,387	
	Siemens Financieringsmaatschappij N.V.	-	"	-	US\$ 5,359	N/A	US\$ 5,359	
	The Charles Schwab Corporation	-	"	-	US\$ 5,302	N/A	US\$ 5,302	
	Alabama Power Company	-	"	-	US\$ 5,292	N/A	US\$ 5,292	
	Pioneer Natural Resources Company	-	"	-	US\$ 5,263	N/A	US\$ 5,263	
	ASB Bank Limited	-	"	-	US\$ 5,254	N/A	US\$ 5,254	
	Cox Communications, Inc.	-	"	-	US\$ 5,239	N/A	US\$ 5,239	
	Intel Corporation	-	"	-	US\$ 5,112	N/A	US\$ 5,112	
	Nutrien Ltd.	-	"	-	US\$ 5,109	N/A	US\$ 5,109	
		-	"	-	US\$ 5,048	N/A	US\$ 5,048	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				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 Company	-	Financial assets at fair value through other comprehensive income	-	US\$ 5,017	N/A	US\$ 5,017	
	Fiserv, Inc.	-	"	-	US\$ 4,999	N/A	US\$ 4,999	
	Five Corners Funding Trust	-	"	-	US\$ 4,958	N/A	US\$ 4,958	
	Penske Truck Leasing Co., L.P.	-	"	-	US\$ 4,774	N/A	US\$ 4,774	
	CVS Health Corporation	-	"	-	US\$ 4,750	N/A	US\$ 4,750	
	CGI Inc.	-	"	-	US\$ 4,713	N/A	US\$ 4,713	
	Brookfield Finance Inc.	-	"	-	US\$ 4,601	N/A	US\$ 4,601	
	Thermo Fisher Scientific Inc.	-	"	-	US\$ 4,558	N/A	US\$ 4,558	
	Virginia Electric and Power Company	-	"	-	US\$ 4,468	N/A	US\$ 4,468	
	NextEra Energy Capital Holdings, Inc.	-	"	-	US\$ 4,439	N/A	US\$ 4,439	
	W. P. Carey Inc.	-	"	-	US\$ 4,414	N/A	US\$ 4,414	
	HP Inc.	-	"	-	US\$ 4,388	N/A	US\$ 4,388	
	CenterPoint Energy, Inc.	-	"	-	US\$ 4,342	N/A	US\$ 4,342	
	CNH Industrial Capital LLC	-	"	-	US\$ 4,260	N/A	US\$ 4,260	
	Comcast Corporation	-	"	-	US\$ 4,232	N/A	US\$ 4,232	
	Bank of New Zealand	-	"	-	US\$ 4,231	N/A	US\$ 4,231	
	Eversource Energy	-	"	-	US\$ 4,185	N/A	US\$ 4,185	
	Brighthouse Financial Global Funding	-	"	-	US\$ 4,100	N/A	US\$ 4,100	
	Mercedes-Benz Finance North America LLC	-	"	-	US\$ 4,089	N/A	US\$ 4,089	
	Korea Electric Power Corporation	-	"	-	US\$ 4,037	N/A	US\$ 4,037	
	Florida Power & Light Company	-	"	-	US\$ 4,026	N/A	US\$ 4,026	
	Dollar General Corporation	-	"	-	US\$ 4,005	N/A	US\$ 4,005	
	F&G Global Funding	-	"	-	US\$ 4,003	N/A	US\$ 4,003	
	7-Eleven, Inc.	-	"	-	US\$ 3,981	N/A	US\$ 3,981	
	Element Fleet Management Corp.	-	"	-	US\$ 3,873	N/A	US\$ 3,873	
	CNO Global Funding	-	"	-	US\$ 3,858	N/A	US\$ 3,858	
	Coca-Cola Europacific Partners PLC	-	"	-	US\$ 3,837	N/A	US\$ 3,837	
	AvalonBay Communities, Inc.	-	"	-	US\$ 3,831	N/A	US\$ 3,831	
	European Bank for Reconstruction and Development	-	"	-	US\$ 3,802	N/A	US\$ 3,802	
	Mondelez International, Inc.	-	"	-	US\$ 3,696	N/A	US\$ 3,696	
	B.A.T. International Finance p.l.c.	-	"	-	US\$ 3,619	N/A	US\$ 3,619	
	Appalachian Power Company	-	"	-	US\$ 3,618	N/A	US\$ 3,618	
	Public Storage	-	"	-	US\$ 3,506	N/A	US\$ 3,506	
	V.F. Corporation	-	"	-	US\$ 3,503	N/A	US\$ 3,503	
	Monongahela Power Company	-	"	-	US\$ 3,415	N/A	US\$ 3,415	
	DNB Bank ASA	-	"	-	US\$ 3,407	N/A	US\$ 3,407	
	Ryder System, Inc.	-	"	-	US\$ 3,399	N/A	US\$ 3,399	
	Truist Bank	-	"	-	US\$ 3,397	N/A	US\$ 3,397	
	BorgWarner Inc.	-	"	-	US\$ 3,392	N/A	US\$ 3,392	
	OGE Energy Corp.	-	"	-	US\$ 3,390	N/A	US\$ 3,390	
	Welltower Inc.	-	"	-	US\$ 3,389	N/A	US\$ 3,389	
	HSBC Bank Canada	-	"	-	US\$ 3,351	N/A	US\$ 3,351	
	Kimco Realty Corporation	-	"	-	US\$ 3,348	N/A	US\$ 3,348	
	Diageo Capital plc	-	"	-	US\$ 3,339	N/A	US\$ 3,339	
	Ross Stores, Inc.	-	"	-	US\$ 3,275	N/A	US\$ 3,275	
	Sprint Spectrum Co Llc	-	"	-	US\$ 3,248	N/A	US\$ 3,248	
	SMBC Aviation Capital Finance DAC	-	"	-	US\$ 3,222	N/A	US\$ 3,222	
	U.S. Bancorp.	-	"	-	US\$ 3,205	N/A	US\$ 3,205	
	Pfizer Inc.	-	"	-	US\$ 3,174	N/A	US\$ 3,174	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Highmark Inc.	-	Financial assets at fair value through other comprehensive income	-	US\$ 3,171	N/A	US\$ 3,171	
	Dominion Energy, Inc.	-	"	-	US\$ 3,167	N/A	US\$ 3,167	
	Verisk Analytics, Inc.	-	"	-	US\$ 3,163	N/A	US\$ 3,163	
	Realty Income Corporation	-	"	-	US\$ 3,162	N/A	US\$ 3,162	
	ERAC USA Finance LLC	-	"	-	US\$ 3,112	N/A	US\$ 3,112	
	Anheuser-Busch Companies, LLC	-	"	-	US\$ 3,035	N/A	US\$ 3,035	
	Xcel Energy Inc.	-	"	-	US\$ 3,029	N/A	US\$ 3,029	
	Simon Property Group, L.P.	-	"	-	US\$ 3,018	N/A	US\$ 3,018	
	ONE Gas, Inc.	-	"	-	US\$ 3,012	N/A	US\$ 3,012	
	Public Service Enterprise Group Incorporated	-	"	-	US\$ 2,996	N/A	US\$ 2,996	
	The Western Union Company	-	"	-	US\$ 2,983	N/A	US\$ 2,983	
	Gilead Sciences, Inc.	-	"	-	US\$ 2,970	N/A	US\$ 2,970	
	CNA Financial Corporation	-	"	-	US\$ 2,950	N/A	US\$ 2,950	
	MPLX LP	-	"	-	US\$ 2,941	N/A	US\$ 2,941	
	Atmos Energy Corporation	-	"	-	US\$ 2,934	N/A	US\$ 2,934	
	Johnson & Johnson	-	"	-	US\$ 2,914	N/A	US\$ 2,914	
	Rio Tinto Finance (USA) Limited	-	"	-	US\$ 2,908	N/A	US\$ 2,908	
	Oncor Electric Delivery Company LLC	-	"	-	US\$ 2,905	N/A	US\$ 2,905	
	Nestlé Holdings, Inc.	-	"	-	US\$ 2,905	N/A	US\$ 2,905	
	Air Lease Corporation	-	"	-	US\$ 2,895	N/A	US\$ 2,895	
	Avangrid, Inc.	-	"	-	US\$ 2,861	N/A	US\$ 2,861	
	Southern California Gas Company	-	"	-	US\$ 2,848	N/A	US\$ 2,848	
	Parker-Hannifin Corporation	-	"	-	US\$ 2,768	N/A	US\$ 2,768	
	TORONTO-DOMINION BANK/THE	-	"	-	US\$ 2,768	N/A	US\$ 2,768	
	Coöperatieve Rabobank U.A.	-	"	-	US\$ 2,767	N/A	US\$ 2,767	
	Novartis Capital Corporation	-	"	-	US\$ 2,734	N/A	US\$ 2,734	
	Baxalta Incorporated	-	"	-	US\$ 2,728	N/A	US\$ 2,728	
	PPL Electric Utilities Corporation	-	"	-	US\$ 2,718	N/A	US\$ 2,718	
	Amazon.com, Inc	-	"	-	US\$ 2,691	N/A	US\$ 2,691	
	Ameriprise Financial, Inc.	-	"	-	US\$ 2,677	N/A	US\$ 2,677	
	B.A.T Capital Corporation	-	"	-	US\$ 2,671	N/A	US\$ 2,671	
	Hewlett Packard Enterprise Company	-	"	-	US\$ 2,635	N/A	US\$ 2,635	
	Ventas Realty, Limited Partnership	-	"	-	US\$ 2,600	N/A	US\$ 2,600	
	Eastern Energy Gas Holdings, LLC	-	"	-	US\$ 2,598	N/A	US\$ 2,598	
	Chevron Phillips Chemical Company LLC	-	"	-	US\$ 2,579	N/A	US\$ 2,579	
	Mondelez International Holdings Netherlands B.V.	-	"	-	US\$ 2,577	N/A	US\$ 2,577	
	Masco Corporation	-	"	-	US\$ 2,519	N/A	US\$ 2,519	
	GA Global Funding Trust	-	"	-	US\$ 2,484	N/A	US\$ 2,484	
	Baxter International Inc.	-	"	-	US\$ 2,469	N/A	US\$ 2,469	
	NBN Co Limited	-	"	-	US\$ 2,461	N/A	US\$ 2,461	
	M&T Bank Corporation	-	"	-	US\$ 2,459	N/A	US\$ 2,459	
	Air Products and Chemicals, Inc.	-	"	-	US\$ 2,447	N/A	US\$ 2,447	
	International Business Machines Corporation	-	"	-	US\$ 2,445	N/A	US\$ 2,445	
	Nuveen Finance, LLC	-	"	-	US\$ 2,437	N/A	US\$ 2,437	
	Cigna Corporation	-	"	-	US\$ 2,426	N/A	US\$ 2,426	
	The PNC Financial Services Group, Inc.	-	"	-	US\$ 2,424	N/A	US\$ 2,424	
	Santander UK plc	-	"	-	US\$ 2,417	N/A	US\$ 2,417	
	Pinnacle West Capital Corporation	-	"	-	US\$ 2,397	N/A	US\$ 2,397	
	Bayer US Finance II LLC	-	"	-	US\$ 2,374	N/A	US\$ 2,374	

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Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	AutoZone, Inc.	-	Financial assets at fair value through other comprehensive income	-	US\$ 2,373	N/A	US\$ 2,373	
	CRH America, Inc.	-	"	-	US\$ 2,371	N/A	US\$ 2,371	
	Phillips 66	-	"	-	US\$ 2,352	N/A	US\$ 2,352	
	American Electric Power Company, Inc.	-	"	-	US\$ 2,343	N/A	US\$ 2,343	
	Workday, Inc.	-	"	-	US\$ 2,333	N/A	US\$ 2,333	
	CMS Energy Corporation	-	"	-	US\$ 2,324	N/A	US\$ 2,324	
	Magellan Midstream Partners, L.P.	-	"	-	US\$ 2,299	N/A	US\$ 2,299	
	Georgia Power Company	-	"	-	US\$ 2,281	N/A	US\$ 2,281	
	Texas Instruments Incorporated	-	"	-	US\$ 2,279	N/A	US\$ 2,279	
	Chevron U.S.A. Inc.	-	"	-	US\$ 2,262	N/A	US\$ 2,262	
	USAA Capital Corp.	-	"	-	US\$ 2,242	N/A	US\$ 2,242	
	Reynolds American Inc.	-	"	-	US\$ 2,228	N/A	US\$ 2,228	
	BOC Aviation Limited	-	"	-	US\$ 2,223	N/A	US\$ 2,223	
	O'Reilly Automotive, Inc.	-	"	-	US\$ 2,223	N/A	US\$ 2,223	
	RGA Global Funding	-	"	-	US\$ 2,216	N/A	US\$ 2,216	
	Yara International ASA	-	"	-	US\$ 2,215	N/A	US\$ 2,215	
	National Australia Bank - New York Branch	-	"	-	US\$ 2,200	N/A	US\$ 2,200	
	NiSource Inc.	-	"	-	US\$ 2,178	N/A	US\$ 2,178	
	Berkshire Hathaway Inc.	-	"	-	US\$ 2,161	N/A	US\$ 2,161	
	Empower Finance 2020, LP	-	"	-	US\$ 2,129	N/A	US\$ 2,129	
	Union Pacific Corporation	-	"	-	US\$ 2,082	N/A	US\$ 2,082	
	Health Care Service Corporation, a Mutual Legal Reserve Company	-	"	-	US\$ 2,065	N/A	US\$ 2,065	
	Georgia-Pacific LLC	-	"	-	US\$ 2,028	N/A	US\$ 2,028	
	General Electric Company	-	"	-	US\$ 1,991	N/A	US\$ 1,991	
	The Sherwin-Williams Company	-	"	-	US\$ 1,967	N/A	US\$ 1,967	
	Mead Johnson Nutrition Company	-	"	-	US\$ 1,961	N/A	US\$ 1,961	
	Magna International Inc.	-	"	-	US\$ 1,956	N/A	US\$ 1,956	
	Reliance Standard Life Global Funding II	-	"	-	US\$ 1,948	N/A	US\$ 1,948	
	Public Service Electric and Gas Company	-	"	-	US\$ 1,948	N/A	US\$ 1,948	
	Tucson Electric Power Company	-	"	-	US\$ 1,918	N/A	US\$ 1,918	
	Gulf Power Company	-	"	-	US\$ 1,884	N/A	US\$ 1,884	
	National Rural Utilities Cooperative Finance Corporation	-	"	-	US\$ 1,881	N/A	US\$ 1,881	
	Duke Energy Corporation	-	"	-	US\$ 1,871	N/A	US\$ 1,871	
	Olympus Corporation	-	"	-	US\$ 1,860	N/A	US\$ 1,860	
	Otis Worldwide Corporation	-	"	-	US\$ 1,859	N/A	US\$ 1,859	
	Kinder Morgan, Inc.	-	"	-	US\$ 1,787	N/A	US\$ 1,787	
	Shinhan Financial Group Co., Ltd.	-	"	-	US\$ 1,785	N/A	US\$ 1,785	
	NBK SPC Limited	-	"	-	US\$ 1,754	N/A	US\$ 1,754	
	Mitsubishi Corporation	-	"	-	US\$ 1,752	N/A	US\$ 1,752	
	Sydney Airport Finance Company Pty Ltd.	-	"	-	US\$ 1,733	N/A	US\$ 1,733	
	Caterpillar Financial Services Corporation	-	"	-	US\$ 1,726	N/A	US\$ 1,726	
	Kentucky Utilities Company	-	"	-	US\$ 1,717	N/A	US\$ 1,717	
	Wipro IT Services LLC	-	"	-	US\$ 1,674	N/A	US\$ 1,674	
	Enbridge Inc.	-	"	-	US\$ 1,672	N/A	US\$ 1,672	
	Infor, Inc.	-	"	-	US\$ 1,670	N/A	US\$ 1,670	
	Evergy Kansas Central, Inc.	-	"	-	US\$ 1,658	N/A	US\$ 1,658	
	DTE Energy Company	-	"	-	US\$ 1,647	N/A	US\$ 1,647	
	Tyson Foods, Inc.	-	"	-	US\$ 1,624	N/A	US\$ 1,624	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Quest Diagnostics Incorporated	-	Financial assets at fair value through other comprehensive income	-	US\$ 1,601	N/A	US\$ 1,601	
	Gulfstream Natural Gas System, L.L.C.	-	"	-	US\$ 1,595	N/A	US\$ 1,595	
	NatWest Group plc	-	"	-	US\$ 1,594	N/A	US\$ 1,594	
	Burlington Northern Santa Fe, LLC	-	"	-	US\$ 1,591	N/A	US\$ 1,591	
	Berkshire Hathaway Energy Company	-	"	-	US\$ 1,587	N/A	US\$ 1,587	
	Walmart Inc.	-	"	-	US\$ 1,583	N/A	US\$ 1,583	
	University of California	-	"	-	US\$ 1,578	N/A	US\$ 1,578	
	CSL Finance plc	-	"	-	US\$ 1,577	N/A	US\$ 1,577	
	Raytheon Technologies Corporation	-	"	-	US\$ 1,576	N/A	US\$ 1,576	
	AIA Group Limited	-	"	-	US\$ 1,554	N/A	US\$ 1,554	
	Midwest Connector Capital Company LLC	-	"	-	US\$ 1,551	N/A	US\$ 1,551	
	eBay Inc.	-	"	-	US\$ 1,532	N/A	US\$ 1,532	
	UBS AG (LONDON BRANCH)	-	"	-	US\$ 1,522	N/A	US\$ 1,522	
	Emerson Electric Co.	-	"	-	US\$ 1,508	N/A	US\$ 1,508	
	MetLife, Inc.	-	"	-	US\$ 1,507	N/A	US\$ 1,507	
	Westpac Banking Corporation	-	"	-	US\$ 1,503	N/A	US\$ 1,503	
	Glencore Funding LLC	-	"	-	US\$ 1,493	N/A	US\$ 1,493	
	APA Infrastructure Limited	-	"	-	US\$ 1,483	N/A	US\$ 1,483	
	Brookfield Finance LLC	-	"	-	US\$ 1,473	N/A	US\$ 1,473	
	CK Hutchison International (19) Limited	-	"	-	US\$ 1,465	N/A	US\$ 1,465	
	Amcort Flexibles North America Inc.	-	"	-	US\$ 1,461	N/A	US\$ 1,461	
	Microchip Technology Incorporated	-	"	-	US\$ 1,458	N/A	US\$ 1,458	
	Commonwealth Bank of Australia	-	"	-	US\$ 1,452	N/A	US\$ 1,452	
	UBS Group Funding (Jersey) Ltd.	-	"	-	US\$ 1,443	N/A	US\$ 1,443	
	Marsh & McLennan Companies, Inc.	-	"	-	US\$ 1,427	N/A	US\$ 1,427	
	The Southern Company	-	"	-	US\$ 1,423	N/A	US\$ 1,423	
	NSTAR Electric Company	-	"	-	US\$ 1,420	N/A	US\$ 1,420	
	Duke Energy Florida, LLC	-	"	-	US\$ 1,419	N/A	US\$ 1,419	
	Marathon Petroleum Corporation	-	"	-	US\$ 1,411	N/A	US\$ 1,411	
	Essex Portfolio, L.P.	-	"	-	US\$ 1,409	N/A	US\$ 1,409	
	Alimentation Couche-Tard Inc.	-	"	-	US\$ 1,389	N/A	US\$ 1,389	
	ITC Holdings Corp.	-	"	-	US\$ 1,353	N/A	US\$ 1,353	
	Alliant Energy Finance, LLC	-	"	-	US\$ 1,321	N/A	US\$ 1,321	
	Eastern Gas Transmission and Storage, Inc.	-	"	-	US\$ 1,299	N/A	US\$ 1,299	
	NetApp, Inc.	-	"	-	US\$ 1,265	N/A	US\$ 1,265	
	Amphenol Corporation	-	"	-	US\$ 1,256	N/A	US\$ 1,256	
	PACCAR Financial Corp.	-	"	-	US\$ 1,227	N/A	US\$ 1,227	
	State Of Tennessee	-	"	-	US\$ 1,225	N/A	US\$ 1,225	
	Met Tower Global Funding	-	"	-	US\$ 1,223	N/A	US\$ 1,223	
	Elevance Health Inc.	-	"	-	US\$ 1,215	N/A	US\$ 1,215	
	Andrew W. Mellon Foundation, The	-	"	-	US\$ 1,208	N/A	US\$ 1,208	
	American Honda Finance Corporation	-	"	-	US\$ 1,174	N/A	US\$ 1,174	
	Corebridge Financial, Inc.	-	"	-	US\$ 1,167	N/A	US\$ 1,167	
	Banco Bilbao Vizcaya Argentaria, S.A.	-	"	-	US\$ 1,162	N/A	US\$ 1,162	
	The Curators of the University of Missouri	-	"	-	US\$ 1,080	N/A	US\$ 1,080	
	Ferguson Finance PLC	-	"	-	US\$ 1,077	N/A	US\$ 1,077	
	Nucor Corporation	-	"	-	US\$ 1,067	N/A	US\$ 1,067	
	Baker Hughes Holdings LLC	-	"	-	US\$ 1,038	N/A	US\$ 1,038	
	State Street Corporation	-	"	-	US\$ 1,035	N/A	US\$ 1,035	

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Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Enterprise Products Operating LLC	-	Financial assets at fair value through other comprehensive income	-	US\$ 1,028	N/A	US\$ 1,028	
	IBERDROLA INTL BV	-	"	-	US\$ 1,015	N/A	US\$ 1,015	
	The Cleveland Electric Illuminating Company	-	"	-	US\$ 1,005	N/A	US\$ 1,005	
	Baltimore Gas and Electric Company	-	"	-	US\$ 993	N/A	US\$ 993	
	Sinopec Group Overseas Development (2014) Ltd.	-	"	-	US\$ 993	N/A	US\$ 993	
	Entergy Mississippi, LLC	-	"	-	US\$ 989	N/A	US\$ 989	
	Foxconn (Far East) Limited	-	"	-	US\$ 987	N/A	US\$ 987	
	MassMutual Global Funding II	-	"	-	US\$ 987	N/A	US\$ 987	
	BBVA México, S.A., Institución de Banca Múltiple, Grupo Financiero BBVA México	-	"	-	US\$ 985	N/A	US\$ 985	
	Denver City & County Housing Authority	-	"	-	US\$ 973	N/A	US\$ 973	
	Pricoa Global Funding I	-	"	-	US\$ 963	N/A	US\$ 963	
	Kansas City Southern	-	"	-	US\$ 940	N/A	US\$ 940	
	Suntory Holdings Limited	-	"	-	US\$ 939	N/A	US\$ 939	
	Shire Acquisitions Investments Ireland Designated Activity Company	-	"	-	US\$ 919	N/A	US\$ 919	
	Unilever Capital Corporation	-	"	-	US\$ 873	N/A	US\$ 873	
	KeyBank National Association	-	"	-	US\$ 864	N/A	US\$ 864	
	QNB Finance Ltd.	-	"	-	US\$ 859	N/A	US\$ 859	
	AmerisourceBergen Corporation	-	"	-	US\$ 834	N/A	US\$ 834	
	Hormel Foods Corporation	-	"	-	US\$ 820	N/A	US\$ 820	
	BMW US Capital, LLC	-	"	-	US\$ 797	N/A	US\$ 797	
	Palm Beach County, Florida	-	"	-	US\$ 795	N/A	US\$ 795	
	Sinopec Capital (2013) Ltd.	-	"	-	US\$ 795	N/A	US\$ 795	
	BHP Billiton Finance (USA) Limited	-	"	-	US\$ 795	N/A	US\$ 795	
	TransCanada PipeLines Limited	-	"	-	US\$ 787	N/A	US\$ 787	
	Oregon Health & Science University	-	"	-	US\$ 772	N/A	US\$ 772	
	Tencent Holdings Limited	-	"	-	US\$ 749	N/A	US\$ 749	
	Niagara Mohawk Power Corporation	-	"	-	US\$ 745	N/A	US\$ 745	
	CubeSmart, L.P.	-	"	-	US\$ 735	N/A	US\$ 735	
	The Walt Disney Company	-	"	-	US\$ 732	N/A	US\$ 732	
	Southern Power Company	-	"	-	US\$ 718	N/A	US\$ 718	
	Visa Inc.	-	"	-	US\$ 717	N/A	US\$ 717	
	Canadian Natural Resources Limited	-	"	-	US\$ 700	N/A	US\$ 700	
	Sky Limited	-	"	-	US\$ 684	N/A	US\$ 684	
	Hyundai Capital Services, Inc.	-	"	-	US\$ 652	N/A	US\$ 652	
	State Of Washington	-	"	-	US\$ 645	N/A	US\$ 645	
	Abbott Laboratories	-	"	-	US\$ 643	N/A	US\$ 643	
	Sodexo, Inc.	-	"	-	US\$ 640	N/A	US\$ 640	
	Norsk Hydro ASA	-	"	-	US\$ 639	N/A	US\$ 639	
	Stryker Corporation	-	"	-	US\$ 635	N/A	US\$ 635	
	Automatic Data Processing, Inc.	-	"	-	US\$ 626	N/A	US\$ 626	
	Bell Canada, Inc.	-	"	-	US\$ 617	N/A	US\$ 617	
	Keurig Dr Pepper Inc.	-	"	-	US\$ 594	N/A	US\$ 594	
	QUALCOMM Incorporated	-	"	-	US\$ 592	N/A	US\$ 592	
	Republic Services, Inc.	-	"	-	US\$ 578	N/A	US\$ 578	
	Florida Hurricane Catastrophe Fund Finance Corporation	-	"	-	US\$ 572	N/A	US\$ 572	
	Lincoln National Corporation	-	"	-	US\$ 571	N/A	US\$ 571	
	Port of Morrow	-	"	-	US\$ 565	N/A	US\$ 565	
	American Water Capital Corp.	-	"	-	US\$ 558	N/A	US\$ 558	

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Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Fifth Third Bank, National Association	-	Financial assets at fair value through other comprehensive income	-	US\$ 549	N/A	US\$ 549	
	Duke Energy Progress, LLC	-	"	-	US\$ 544	N/A	US\$ 544	
	Shell International Finance B.V.	-	"	-	US\$ 524	N/A	US\$ 524	
	American International Group, Inc.	-	"	-	US\$ 518	N/A	US\$ 518	
	Intesa Sanpaolo S.p.A.	-	"	-	US\$ 510	N/A	US\$ 510	
	Arizona Public Service Company	-	"	-	US\$ 501	N/A	US\$ 501	
	ConocoPhillips Company	-	"	-	US\$ 499	N/A	US\$ 499	
	State of Hawaii	-	"	-	US\$ 498	N/A	US\$ 498	
	United Parcel Service, Inc.	-	"	-	US\$ 493	N/A	US\$ 493	
	Skandinaviska Enskilda Banken AB (publ)	-	"	-	US\$ 491	N/A	US\$ 491	
	Gsk Consumer Healthcare Capital Uk Plc	-	"	-	US\$ 476	N/A	US\$ 476	
	Trane Technologies Luxembourg Finance S.A.	-	"	-	US\$ 472	N/A	US\$ 472	
	Genuine Parts Company	-	"	-	US\$ 467	N/A	US\$ 467	
	Altria Group, Inc.	-	"	-	US\$ 466	N/A	US\$ 466	
	McCormick & Company, Incorporated	-	"	-	US\$ 466	N/A	US\$ 466	
	Ecolab Inc.	-	"	-	US\$ 465	N/A	US\$ 465	
	DENSO Corporation	-	"	-	US\$ 435	N/A	US\$ 435	
	Brazos Higher Education Authority Inc	-	"	-	US\$ 429	N/A	US\$ 429	
	PayPal Holdings, Inc.	-	"	-	US\$ 407	N/A	US\$ 407	
	The Home Depot, Inc.	-	"	-	US\$ 406	N/A	US\$ 406	
	Target Corporation	-	"	-	US\$ 404	N/A	US\$ 404	
	National Australia Bank Limited	-	"	-	US\$ 397	N/A	US\$ 397	
	Aetna Inc.	-	"	-	US\$ 396	N/A	US\$ 396	
	Boston Properties Limited Partnership	-	"	-	US\$ 394	N/A	US\$ 394	
	University of Massachusetts Building Authority	-	"	-	US\$ 387	N/A	US\$ 387	
	Comerica Bank	-	"	-	US\$ 384	N/A	US\$ 384	
	Entergy Corporation	-	"	-	US\$ 379	N/A	US\$ 379	
	Aflac Incorporated	-	"	-	US\$ 377	N/A	US\$ 377	
	Banco del Estado de Chile	-	"	-	US\$ 377	N/A	US\$ 377	
	McKesson Corporation	-	"	-	US\$ 374	N/A	US\$ 374	
	Sierra Pacific Power Company	-	"	-	US\$ 372	N/A	US\$ 372	
	Honeywell International Inc.	-	"	-	US\$ 370	N/A	US\$ 370	
	NIKE, Inc.	-	"	-	US\$ 359	N/A	US\$ 359	
	PepsiCo, Inc.	-	"	-	US\$ 357	N/A	US\$ 357	
	First Republic Bank	-	"	-	US\$ 349	N/A	US\$ 349	
	The Norinchukin Bank	-	"	-	US\$ 349	N/A	US\$ 349	
	Principal Financial Group, Inc.	-	"	-	US\$ 348	N/A	US\$ 348	
	Rabobank Nederland - New York Branch	-	"	-	US\$ 334	N/A	US\$ 334	
	Amgen Inc.	-	"	-	US\$ 310	N/A	US\$ 310	
	Philip Morris International Inc.	-	"	-	US\$ 297	N/A	US\$ 297	
	Mid-America Apartments, L.P.	-	"	-	US\$ 295	N/A	US\$ 295	
	The Allstate Corporation	-	"	-	US\$ 293	N/A	US\$ 293	
	Alabama State Federal Aid Highway Finance Authority	-	"	-	US\$ 292	N/A	US\$ 292	
	TotalEnergies Capital International	-	"	-	US\$ 287	N/A	US\$ 287	
	BOC Aviation (USA) Corporation	-	"	-	US\$ 285	N/A	US\$ 285	
	Aptiv PLC	-	"	-	US\$ 282	N/A	US\$ 282	
	Salesforce, Inc.	-	"	-	US\$ 282	N/A	US\$ 282	
	Barclays Bank PLC	-	"	-	US\$ 270	N/A	US\$ 270	
	Johnson Controls International plc	-	"	-	US\$ 269	N/A	US\$ 269	

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Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	QatarEnergy	-	Financial assets at fair value through other comprehensive income	-	US\$ 266	N/A	US\$ 266	
	Sales Tax Securitization Corporation Of Chicago	-	"	-	US\$ 250	N/A	US\$ 250	
	Equitable Holdings, Inc.	-	"	-	US\$ 243	N/A	US\$ 243	
	Starbucks Corporation	-	"	-	US\$ 237	N/A	US\$ 237	
	E. I. du Pont de Nemours and Company	-	"	-	US\$ 227	N/A	US\$ 227	
	Waste Management, Inc.	-	"	-	US\$ 224	N/A	US\$ 224	
	Entergy Louisiana, LLC	-	"	-	US\$ 218	N/A	US\$ 218	
	Children's Hospital Of Orange County	-	"	-	US\$ 214	N/A	US\$ 214	
	The Pennsylvania State University	-	"	-	US\$ 206	N/A	US\$ 206	
	Martin Marietta Materials, Inc.	-	"	-	US\$ 205	N/A	US\$ 205	
	Riverside County Infrastructure Financing Authority	-	"	-	US\$ 198	N/A	US\$ 198	
	Deere & Company	-	"	-	US\$ 192	N/A	US\$ 192	
	Saudi Arabian Oil Company	-	"	-	US\$ 192	N/A	US\$ 192	
	Los Angeles Department of Water and Power, California	-	"	-	US\$ 191	N/A	US\$ 191	
	NongHyup Bank	-	"	-	US\$ 187	N/A	US\$ 187	
	Hoover Alabama Board Of Education	-	"	-	US\$ 175	N/A	US\$ 175	
	Dormitory Authority of the State of New York	-	"	-	US\$ 154	N/A	US\$ 154	
	Oregon Education Districts	-	"	-	US\$ 152	N/A	US\$ 152	
	Electricité de France S.A.	-	"	-	US\$ 96	N/A	US\$ 96	
	Beth Israel Deaconess Medical Center, Inc.	-	"	-	US\$ 85	N/A	US\$ 85	
	Pima County, Arizona	-	"	-	US\$ 76	N/A	US\$ 76	
	State of Wisconsin	-	"	-	US\$ 61	N/A	US\$ 61	
	Aon Corporation	-	"	-	US\$ 51	N/A	US\$ 51	
	Huntington Beach California	-	"	-	US\$ 49	N/A	US\$ 49	
	Nueces County	-	"	-	US\$ 24	N/A	US\$ 24	
	The Goldman Sachs Group, Inc.	-	Financial assets at amortized cost	-	US\$ 440,655	N/A	US\$ 436,003	
	Citigroup Global Markets Inc.	-	"	-	US\$ 349,886	N/A	US\$ 347,251	
	Bank of America Corporation	-	"	-	US\$ 324,757	N/A	US\$ 323,371	
	JPMorgan Chase & Co.	-	"	-	US\$ 280,213	N/A	US\$ 278,222	
	Wells Fargo & Company	-	"	-	US\$ 274,713	N/A	US\$ 273,120	
	Citigroup Inc.	-	"	-	US\$ 174,540	N/A	US\$ 174,301	
	Citigroup Global Markets Holdings Inc.	-	"	-	US\$ 149,951	N/A	US\$ 146,964	
	Goldman Sachs Finance Corp International Ltd.	-	"	-	US\$ 149,870	N/A	US\$ 146,872	
	Morgan Stanley	-	"	-	US\$ 60,207	N/A	US\$ 60,267	
	Jpmorgan LLC	-	"	-	US\$ 49,984	N/A	US\$ 49,077	
	Banco Bilbao Vizcaya Argentaria, S.A.	-	"	-	US\$ 10,534	N/A	US\$ 10,440	
	Hyundai Capital Services, Inc.	-	"	-	US\$ 9,278	N/A	US\$ 9,068	
	Great-West Lifeco U.S. Finance 2020, Lp	-	"	-	US\$ 9,233	N/A	US\$ 8,994	
	Nomura Holdings, Inc.	-	"	-	US\$ 9,197	N/A	US\$ 9,009	
	Fédération des caisses Desjardins du Québec	-	"	-	US\$ 9,165	N/A	US\$ 8,997	
	UBS Group AG	-	"	-	US\$ 9,104	N/A	US\$ 9,061	
	Sumitomo Mitsui Trust Bank, Limited	-	"	-	US\$ 9,057	N/A	US\$ 8,910	
	Deutsche Bank AG - New York Branch	-	"	-	US\$ 9,023	N/A	US\$ 8,923	
	Lloyds Banking Group plc	-	"	-	US\$ 8,972	N/A	US\$ 8,891	
	NatWest Markets Plc	-	"	-	US\$ 8,956	N/A	US\$ 8,834	
	Athene Global Funding	-	"	-	US\$ 8,915	N/A	US\$ 8,733	
	NongHyup Bank	-	"	-	US\$ 8,545	N/A	US\$ 8,431	
	BPCE SA	-	"	-	US\$ 8,431	N/A	US\$ 8,243	
	Banco Santander, S.A.	-	"	-	US\$ 8,307	N/A	US\$ 8,223	

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Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Enel Finance International N.V.	-	Financial assets at amortized cost	-	US\$ 8,215	N/A	US\$ 8,062	
	Ventas Realty, Limited Partnership	-	"	-	US\$ 8,181	N/A	US\$ 8,076	
	Protective Life Global Funding	-	"	-	US\$ 8,088	N/A	US\$ 7,913	
	Volkswagen Group of America Finance, LLC	-	"	-	US\$ 8,058	N/A	US\$ 7,937	
	Sydney Airport Finance Company Pty Ltd.	-	"	-	US\$ 7,631	N/A	US\$ 7,476	
	BNP Paribas SA	-	"	-	US\$ 7,552	N/A	US\$ 7,448	
	AIG Global Funding	-	"	-	US\$ 7,200	N/A	US\$ 7,151	
	Nationwide Building Society	-	"	-	US\$ 7,200	N/A	US\$ 6,971	
	KeyBank National Association	-	"	-	US\$ 7,014	N/A	US\$ 6,844	
	GA Global Funding Trust	-	"	-	US\$ 6,285	N/A	US\$ 6,185	
	Canadian Imperial Bank of Commerce	-	"	-	US\$ 6,167	N/A	US\$ 6,065	
	Mitsubishi UFJ Financial Group, Inc.	-	"	-	US\$ 6,062	N/A	US\$ 5,983	
	CRH America, Inc.	-	"	-	US\$ 5,975	N/A	US\$ 5,822	
	Sumitomo Mitsui Financial Group, Inc.	-	"	-	US\$ 5,754	N/A	US\$ 5,702	
	Daimler Trucks Finance North America LLC	-	"	-	US\$ 5,706	N/A	US\$ 5,582	
	Swedbank AB (publ)	-	"	-	US\$ 5,248	N/A	US\$ 5,173	
	F&G Global Funding	-	"	-	US\$ 5,185	N/A	US\$ 5,098	
	Bayer US Finance II LLC	-	"	-	US\$ 4,988	N/A	US\$ 4,929	
	Ecolab Inc.	-	"	-	US\$ 4,878	N/A	US\$ 4,812	
	Kinder Morgan, Inc.	-	"	-	US\$ 4,681	N/A	US\$ 4,643	
	Jackson Financial Inc.	-	"	-	US\$ 4,678	N/A	US\$ 4,632	
	Bristol-Myers Squibb Company	-	"	-	US\$ 4,674	N/A	US\$ 4,621	
	ING Groep N.V.	-	"	-	US\$ 4,504	N/A	US\$ 4,465	
	Toyota Motor Credit Corporation	-	"	-	US\$ 4,497	N/A	US\$ 4,449	
	Five Corners Funding Trust	-	"	-	US\$ 4,415	N/A	US\$ 4,356	
	Svenska Handelsbanken AB (publ)	-	"	-	US\$ 4,182	N/A	US\$ 4,105	
	Danone S.A.	-	"	-	US\$ 4,156	N/A	US\$ 4,113	
	National Australia Bank - New York Branch	-	"	-	US\$ 4,005	N/A	US\$ 3,979	
	Société Générale Société anonyme	-	"	-	US\$ 4,005	N/A	US\$ 3,965	
	Mercedes-Benz Finance North America LLC	-	"	-	US\$ 4,002	N/A	US\$ 3,979	
	Mizuho Financial Group, Inc.	-	"	-	US\$ 4,000	N/A	US\$ 3,991	
	BMW US Capital, LLC	-	"	-	US\$ 3,999	N/A	US\$ 3,983	
	Penske Truck Leasing Co., L.P.	-	"	-	US\$ 3,998	N/A	US\$ 3,978	
	Georgia-Pacific LLC	-	"	-	US\$ 3,996	N/A	US\$ 3,963	
	Simon Property Group, L.P.	-	"	-	US\$ 3,987	N/A	US\$ 3,960	
	SMBC Aviation Capital Finance DAC	-	"	-	US\$ 3,979	N/A	US\$ 3,961	
	Philip Morris International Inc.	-	"	-	US\$ 3,969	N/A	US\$ 3,950	
	Danske Bank A/S	-	"	-	US\$ 3,966	N/A	US\$ 3,921	
	The Bank of Nova Scotia	-	"	-	US\$ 3,914	N/A	US\$ 3,875	
	Komatsu Finance America, Inc.	-	"	-	US\$ 3,912	N/A	US\$ 3,879	
	Nordea Bank Abp	-	"	-	US\$ 3,788	N/A	US\$ 3,751	
	Shire Acquisitions Investments Ireland Designated Activity Company	-	"	-	US\$ 3,740	N/A	US\$ 3,703	
	Georgia Power Company	-	"	-	US\$ 3,553	N/A	US\$ 3,532	
	Enbridge Inc.	-	"	-	US\$ 3,423	N/A	US\$ 3,382	
	Central Japan Railway Company	-	"	-	US\$ 3,389	N/A	US\$ 3,361	
	Jackson National Life Global Funding	-	"	-	US\$ 3,326	N/A	US\$ 3,242	
	Nestlé Holdings, Inc.	-	"	-	US\$ 3,276	N/A	US\$ 3,237	
	ANZ New Zealand (Int'l) Limited	-	"	-	US\$ 3,191	N/A	US\$ 3,122	
	Spectra Energy Partners, LP	-	"	-	US\$ 2,831	N/A	US\$ 2,770	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Reliance Standard Life Global Funding II	-	Financial assets at amortized cost	-	US\$ 2,671	N/A	US\$ 2,657	
	Ryder System, Inc.	-	"	-	US\$ 2,553	N/A	US\$ 2,527	
	Southern California Edison Company	-	"	-	US\$ 2,273	N/A	US\$ 2,262	
	American Honda Finance Corporation	-	"	-	US\$ 1,964	N/A	US\$ 1,943	
	Oracle Corporation	-	"	-	US\$ 888	N/A	US\$ 879	
	Baxter International Inc.	-	"	-	US\$ 783	N/A	US\$ 774	
	Fidelity National Information Services, Inc.	-	"	-	US\$ 596	N/A	US\$ 595	
	Abbott Laboratories	-	"	-	US\$ 362	N/A	US\$ 358	
	Metropolitan Life Global Funding I	-	"	-	US\$ 147	N/A	US\$ 146	
	<u>Government bond</u>							
	United States Department of The Treasury	-	Financial assets at fair value through other comprehensive income	-	US\$ 613,603	N/A	US\$ 613,603	
	Emirate of Abu Dhabi	-	"	-	US\$ 1,453	N/A	US\$ 1,453	
	Qatar	-	"	-	US\$ 1,293	N/A	US\$ 1,293	
	<u>Agency bonds/Agency mortgage-backed securities</u>							
	FEDERAL NATIONAL MORTGAGE ASSOCIATION	-	Financial assets at fair value through other comprehensive income	-	US\$ 464,686	N/A	US\$ 464,686	
	Federal Home Loan Mortgage Corporation	-	"	-	US\$ 284,933	N/A	US\$ 284,933	
	Government National Mortgage Association	-	"	-	US\$ 175,067	N/A	US\$ 175,067	
	<u>Asset-backed securities</u>							
	Hyundai Auto Receivables Trust 2021-C	-	Financial assets at fair value through other comprehensive income	-	US\$ 10,395	N/A	US\$ 10,395	
	BX Trust 2022-LBA6	-	"	-	US\$ 9,655	N/A	US\$ 9,655	
	JPMBB Commercial Mortgage Securities Trust 2014-C24	-	"	-	US\$ 9,612	N/A	US\$ 9,612	
	Toyota Auto Receivables 2022-B Owner Trust	-	"	-	US\$ 9,543	N/A	US\$ 9,543	
	Wells Fargo Commercial Mortgage Trust 2016-Bnk1	-	"	-	US\$ 8,910	N/A	US\$ 8,910	
	Ford Credit Auto Owner Trust 2021-Rev2	-	"	-	US\$ 7,307	N/A	US\$ 7,307	
	Citigroup Commercial Mortgage Trust 2015-GC33	-	"	-	US\$ 7,101	N/A	US\$ 7,101	
	BX Trust 2022-CLS	-	"	-	US\$ 6,865	N/A	US\$ 6,865	
	Ford Credit Auto Owner Trust 2020-REV2	-	"	-	US\$ 6,603	N/A	US\$ 6,603	
	Morgan Stanley Capital I Trust 2021-L6	-	"	-	US\$ 6,163	N/A	US\$ 6,163	
	JPMBB Commercial Mortgage Securities Trust 2016-C1	-	"	-	US\$ 6,085	N/A	US\$ 6,085	
	Morgan Stanley Bank America Merrill Lynch Trust 2016-C30	-	"	-	US\$ 5,990	N/A	US\$ 5,990	
	BBCMS Mortgage Trust 2020-C8	-	"	-	US\$ 5,924	N/A	US\$ 5,924	
	Benchmark 2019-B11 Mortgage Trust	-	"	-	US\$ 5,796	N/A	US\$ 5,796	
	Bank 2020-BNK26	-	"	-	US\$ 5,741	N/A	US\$ 5,741	
	Hudson Yards 2016-10HY Mortgage Trust	-	"	-	US\$ 5,552	N/A	US\$ 5,552	
	Citigroup Commercial Mortgage Trust 2021-PRM2	-	"	-	US\$ 5,388	N/A	US\$ 5,388	
	Wells Fargo Commercial Mortgage Trust 2016-C35	-	"	-	US\$ 5,318	N/A	US\$ 5,318	
	Bank 2021-bnk33	-	"	-	US\$ 5,307	N/A	US\$ 5,307	
	Bank 2017-Bnk6	-	"	-	US\$ 5,305	N/A	US\$ 5,305	
	Benchmark 2019-B12 Mortgage Trust	-	"	-	US\$ 5,231	N/A	US\$ 5,231	
	BBCMS 2018-Tall Mortgage Trust	-	"	-	US\$ 5,080	N/A	US\$ 5,080	
	Morgan Stanley Bank America Merrill Lynch Trust 2013-C10	-	"	-	US\$ 4,697	N/A	US\$ 4,697	
	CSAIL 2018-CX11	-	"	-	US\$ 4,670	N/A	US\$ 4,670	
	Wells Fargo Commercial Mortgage Trust 2021-C59	-	"	-	US\$ 4,662	N/A	US\$ 4,662	
	GM Financial Revolving Receivables Trust 2021-1	-	"	-	US\$ 4,350	N/A	US\$ 4,350	
	Honda Auto Receivables 2021 - 4 Owner Trust	-	"	-	US\$ 4,329	N/A	US\$ 4,329	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	MRCB 2019-Prkc Mortgage Trust	-	Financial assets at fair value through other comprehensive income	-	US\$ 4,306	N/A	US\$ 4,306	
	Bank 2017-BNK9	-	"	-	US\$ 4,245	N/A	US\$ 4,245	
	Citigroup Commercial Mortgage Trust 2014-GC21	-	"	-	US\$ 4,127	N/A	US\$ 4,127	
	Bank 2017 - BNK7	-	"	-	US\$ 3,967	N/A	US\$ 3,967	
	Bank 2019-Bnk17	-	"	-	US\$ 3,904	N/A	US\$ 3,904	
	JPMCC 2017-JP7	-	"	-	US\$ 3,849	N/A	US\$ 3,849	
	BANK 2017-BNK5	-	"	-	US\$ 3,458	N/A	US\$ 3,458	
	Msbam 2016-C29	-	"	-	US\$ 3,433	N/A	US\$ 3,433	
	Bank 2019-Bnk22	-	"	-	US\$ 3,270	N/A	US\$ 3,270	
	Citigroup Commercial Mortgage Trust 2019-Gc43	-	"	-	US\$ 3,162	N/A	US\$ 3,162	
	Commerce 2015-CCRE24 Mortgage Trust	-	"	-	US\$ 3,030	N/A	US\$ 3,030	
	Msbam 2016-C31	-	"	-	US\$ 2,983	N/A	US\$ 2,983	
	WFRBS Commercial Mortgage Trust 2014-C25	-	"	-	US\$ 2,882	N/A	US\$ 2,882	
	Ford Credit Auto Owner Trust 2022-B	-	"	-	US\$ 2,850	N/A	US\$ 2,850	
	Benchmark 2019-B15 Mortgage Trust	-	"	-	US\$ 2,790	N/A	US\$ 2,790	
	Sreit Commercial Mortgage Trust 2021-Mfp	-	"	-	US\$ 2,789	N/A	US\$ 2,789	
	GS Mortgage Securities Corporation Trust 2018-RIVR	-	"	-	US\$ 2,787	N/A	US\$ 2,787	
	JPMDB 2017-C7	-	"	-	US\$ 2,622	N/A	US\$ 2,622	
	GS Mortgage Securities Trust 2015-GC32	-	"	-	US\$ 2,600	N/A	US\$ 2,600	
	Benchmark 2018-B3 Commercial Mortgage Trust	-	"	-	US\$ 2,473	N/A	US\$ 2,473	
	Ford Credit Auto Owner Trust 2020-Rev1	-	"	-	US\$ 2,343	N/A	US\$ 2,343	
	GS Mortgage Securities Trust 2013-GCJ12	-	"	-	US\$ 2,313	N/A	US\$ 2,313	
	Mhc Commercial Mortgage Trust 2021-Mhc	-	"	-	US\$ 2,221	N/A	US\$ 2,221	
	Citigroup Commercial Mortgage Trust 2015-P1	-	"	-	US\$ 2,144	N/A	US\$ 2,144	
	GM Financial Consumer Automobile Receivables Trust 2021-4	-	"	-	US\$ 2,069	N/A	US\$ 2,069	
	Citigroup Commercial Mortgage Trust 2015-GC27	-	"	-	US\$ 2,055	N/A	US\$ 2,055	
	Wells Fargo Commercial Mortgage Trust 2020-C55	-	"	-	US\$ 2,046	N/A	US\$ 2,046	
	UBS Commercial Mortgage Trust 2018-C11	-	"	-	US\$ 1,983	N/A	US\$ 1,983	
	Morgan Stanley Capital I Trust 2018-H3	-	"	-	US\$ 1,970	N/A	US\$ 1,970	
	Commerce 2013-CCRE12 Mortgage Trust	-	"	-	US\$ 1,962	N/A	US\$ 1,962	
	Benchmark 2018-B4 Mortgage Trust	-	"	-	US\$ 1,946	N/A	US\$ 1,946	
	Morgan Stanley Capital I Trust	-	"	-	US\$ 1,830	N/A	US\$ 1,830	
	Dolp Trust 2021-NYC	-	"	-	US\$ 1,759	N/A	US\$ 1,759	
	CGCMT 2017-P8 Mortgage Trust	-	"	-	US\$ 1,690	N/A	US\$ 1,690	
	JPMBB Commercial Mortgage Securities Trust 2015-C28	-	"	-	US\$ 1,585	N/A	US\$ 1,585	
	Wells Fargo Commercial Mortgage Trust 2015-C30	-	"	-	US\$ 1,547	N/A	US\$ 1,547	
	JPMBB Commercial Mortgage Securities Trust 2015-C27	-	"	-	US\$ 1,498	N/A	US\$ 1,498	
	Wells Fargo Commercial Mortgage Trust 2018-C44	-	"	-	US\$ 1,455	N/A	US\$ 1,455	
	JPMBB Commercial Mortgage Securities Trust 2013-C12	-	"	-	US\$ 1,450	N/A	US\$ 1,450	
	COMM 2020-CBM Mortgage Trust	-	"	-	US\$ 1,421	N/A	US\$ 1,421	
	Morgan Stanley Capital I Trust 2021-L5	-	"	-	US\$ 1,331	N/A	US\$ 1,331	
	Dbgs 2018-Biod Mortgage Trust	-	"	-	US\$ 1,257	N/A	US\$ 1,257	
	Wells Fargo Commercial Mortgage Trust 2015-C29	-	"	-	US\$ 1,225	N/A	US\$ 1,225	
	WFRBS Commercial Mortgage Trust 2013-UBS1	-	"	-	US\$ 1,217	N/A	US\$ 1,217	
	Honda Auto Receivables 2021-2 Owner Trust	-	"	-	US\$ 1,209	N/A	US\$ 1,209	
	WFRBS Commercial Mortgage Trust 2013-C13	-	"	-	US\$ 1,164	N/A	US\$ 1,164	
	Toyota Auto Receivables 2021-D Owner Trust	-	"	-	US\$ 1,131	N/A	US\$ 1,131	
	Wells Fargo Commercial Mortgage Trust 2017-C40	-	"	-	US\$ 1,054	N/A	US\$ 1,054	
	Morgan Stanley Capital I Trust 2015 - UBS8	-	"	-	US\$ 946	N/A	US\$ 946	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Morgan Stanley Bank Of America Merrill Lynch Trust 2013-C13	-	Financial assets at fair value through other comprehensive income	-	US\$ 874	N/A	US\$ 874	
	JPMCC Commercial Mortgage Securities Trust 2016 - JP3	-	"	-	US\$ 838	N/A	US\$ 838	
	UBS Barclays Commercial Mortgage Trust 2013-C6	-	"	-	US\$ 836	N/A	US\$ 836	
	BX Trust 2021-BXMF	-	"	-	US\$ 815	N/A	US\$ 815	
	280 Park Avenue Trust 2017 - 280P	-	"	-	US\$ 810	N/A	US\$ 810	
	Elp Commercial Mortgage Trust 2021-Elp	-	"	-	US\$ 768	N/A	US\$ 768	
	COMM Mortgage Trust Series 2015-LC19	-	"	-	US\$ 763	N/A	US\$ 763	
	UBS Commercial Mortgage Trust 2018-C10	-	"	-	US\$ 750	N/A	US\$ 750	
	Equus 2021-Eqaz Mortgage Trust	-	"	-	US\$ 577	N/A	US\$ 577	
	Benchmark 2019-B14 Mortgage Trust	-	"	-	US\$ 576	N/A	US\$ 576	
	Bx 2021-21M Mortgage Trust	-	"	-	US\$ 573	N/A	US\$ 573	
	Gs Mortgage Securities Corporation Trust 2020-Uptn	-	"	-	US\$ 539	N/A	US\$ 539	
	Wells Fargo Commercial Mortgage Trust 2015-C28	-	"	-	US\$ 532	N/A	US\$ 532	
	Bx Commercial Mortgage Trust 2021-CIP	-	"	-	US\$ 531	N/A	US\$ 531	
	Commerce 2014-Ccre17 Mortgage Trust	-	"	-	US\$ 518	N/A	US\$ 518	
	Morgan Stanley Capital I Trust 2019-H6	-	"	-	US\$ 516	N/A	US\$ 516	
	GS Mortgage Securities Trust 2014-GC22	-	"	-	US\$ 505	N/A	US\$ 505	
	Citigroup Commercial Mortgage Trust 2018-C5	-	"	-	US\$ 482	N/A	US\$ 482	
	Wells Fargo Commercial Mortgage Trust 2015-LC20	-	"	-	US\$ 478	N/A	US\$ 478	
	GS Mortgage Securities Trust 2014-GC24	-	"	-	US\$ 470	N/A	US\$ 470	
	Bank 2019-BNK23	-	"	-	US\$ 392	N/A	US\$ 392	
	Wells Fargo Commercial Mortgage Trust 2015-NXS3	-	"	-	US\$ 373	N/A	US\$ 373	
	WFRBSC Commercial Mortgage Trust 2013-C17	-	"	-	US\$ 365	N/A	US\$ 365	
	Morgan Stanley Capital I Trust 2019-H7	-	"	-	US\$ 349	N/A	US\$ 349	
	CF 2019-CF1 Mortgage Trust	-	"	-	US\$ 336	N/A	US\$ 336	
	Benchmark 2019-B9 Mortgage Trust	-	"	-	US\$ 328	N/A	US\$ 328	
	JPMBB Commercial Mortgage Securities Trust 2014-C19	-	"	-	US\$ 315	N/A	US\$ 315	
	Citigroup Commercial Mortgage Trust 2014-GC23	-	"	-	US\$ 308	N/A	US\$ 308	
	COMM 2015-CCRE22 Mortgage Trust	-	"	-	US\$ 301	N/A	US\$ 301	
	JPMCC 2015 - JP1	-	"	-	US\$ 269	N/A	US\$ 269	
	JPMDDB Commercial Mortgage Securities Trust 2019-COR6	-	"	-	US\$ 237	N/A	US\$ 237	
	Citigroup Commercial Mortgage Trust 2015-GC35	-	"	-	US\$ 203	N/A	US\$ 203	
	GS Mortgage Securities Trust 2014-GC26	-	"	-	US\$ 170	N/A	US\$ 170	
	Citigroup Commercial Mortgage Trust 2014-GC19	-	"	-	US\$ 137	N/A	US\$ 137	
	Morgan Stanley Bank Of America Merrill Lynch Trust 2013-C12	-	"	-	US\$ 117	N/A	US\$ 117	
	BBCMS Mortgage Trust 2020-C7	-	"	-	US\$ 69	N/A	US\$ 69	
	Bank 2020-BNK28	-	"	-	US\$ 25	N/A	US\$ 25	
	Wells Fargo Commercial Mortgage Trust 2015-NXS1	-	"	-	US\$ 3	N/A	US\$ 3	
	<u>Non-publicly traded equity investments</u>							
	Primavera Capital Fund II L.P.	-	Financial assets at fair value through other comprehensive income	-	US\$ 81,039	4	US\$ 81,039	
VTAF II	<u>Non-publicly traded equity investments</u>							
	Aether Systems, Inc.	-	Financial assets at fair value through other comprehensive income	1,085	-	20	-	
	5V Technologies, Inc.	-	"	1	-	-	-	
	<u>Publicly traded stocks</u>							
	Sentelic Corporation	-	Financial assets at fair value through other comprehensive income	971	US\$ 1,422	3	US\$ 1,422	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2022				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
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> Astera Labs, Inc.	-	Financial assets at fair value through other comprehensive income	637	US\$ 4,146	-	US\$ 4,146	
	CNEX Labs, Inc.	-	"	33	US\$ 166	-	US\$ 166	
	<u>Publicly traded stocks</u> Marvell Technology Group Ltd.	-	Financial assets at fair value through other comprehensive income	30	US\$ 1,097	-	US\$ 1,097	
Emerging Fund	<u>Convertible bonds</u> EdgeQ Inc.	-	Financial assets at fair value through profit or loss	-	US\$ 4,000	N/A	US\$ 4,000	
	<u>Non-publicly traded equity investments</u> Astera Labs, Inc.	-	Financial assets at fair value through other comprehensive income	1,487	US\$ 9,680	-	US\$ 9,680	
	Empower Semiconductor, Inc.	-	"	868	US\$ 5,000	3	US\$ 5,000	
	Kinara, Inc.	-	"	2,015	US\$ 3,000	2	US\$ 3,000	
	NeuReality Ltd.	-	"	122	US\$ 3,000	3	US\$ 3,000	
	RiVos, Inc.	-	"	750	US\$ 2,000	-	US\$ 2,000	
	<u>Publicly traded stocks</u> Credo Technology Group Holding Ltd.	-	Financial assets at fair value through other comprehensive income	491	US\$ 6,529	-	US\$ 6,529	

(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 YEAR ENDED DECEMBER 31, 2022
(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 (Foreign Currencies in Thousands)	Shares/Units (In Thousands)	Amount (Foreign Currencies in Thousands)	Shares/Units (In Thousands)	Amount (Foreign Currencies in Thousands)	Carrying Value (Foreign Currencies in Thousands)	Gain/Loss on Disposal (Foreign Currencies in Thousands)	Shares/Units (In Thousands)	Amount (Foreign Currencies in Thousands)	
TSMC	<u>Commercial paper</u>														
	Taiwan Power Company	Financial assets at amortized cost	-	-	-	\$ -	5,610	\$ 55,830,298	2,660	\$ 26,600,000	\$ 26,600,000	\$ -	2,950	\$ 29,335,729	
	CPC Corporation, Taiwan	"	-	-	-	-	3,009	29,969,655	2,259	22,590,000	22,590,000	-	750	7,458,936	
	Nan Ya Plastics Corporation	"	-	-	-	-	450	4,480,179	-	-	-	-	450	4,476,301	
	Formosa Petrochemical Corporation	"	-	-	-	-	300	2,987,971	-	-	-	-	300	2,985,385	
	Formosa Chemicals & Fibre Corporation	"	-	-	-	-	250	2,487,819	-	-	-	-	250	2,485,666	
	Formosa Plastics Corporation	"	-	-	-	-	200	1,992,183	-	-	-	-	200	1,990,459	
	<u>Non-publicly traded equity investments</u>														
	TSMC Arizona	Investments accounted for using equity method	-	-	-	770	16,667,696	500	15,372,500	-	-	-	-	1,270	25,639,079
	JASM	"	-	-	-	58	1,383,554	962	23,150,164	-	-	-	-	1,020	23,330,125
TSMC 3DIC	"	-	-	-	11	270,513	38	865,370	-	-	-	-	49	1,172,706	
<u>Capital</u>															
Emerging Fund	Investments accounted for using equity method	-	-	-	-	286,205	-	1,033,339	-	-	62,532	-	-	1,760,885	
TSMC Global	<u>Corporate bond</u>														
	Morgan Stanley	Financial assets at fair value through other comprehensive income	-	-	-	US\$ 65,115	-	US\$ 27,545	-	US\$ 4,750	US\$ 4,678	US\$ 72	-	US\$ 83,242	
	Bank of America Corporation	"	-	-	-	US\$ 75,265	-	US\$ 20,231	-	US\$ 13,680	US\$ 13,631	US\$ 49	-	US\$ 76,626	
	Citigroup Inc.	"	-	-	-	US\$ 49,298	-	US\$ 21,416	-	US\$ 5,787	US\$ 5,779	US\$ 8	-	US\$ 61,493	
	Wells Fargo & Company	"	-	-	-	US\$ 38,439	-	US\$ 24,456	-	US\$ -	US\$ -	US\$ -	-	US\$ 59,735	
	The Goldman Sachs Group, Inc.	"	-	-	-	US\$ 53,756	-	US\$ 15,998	-	US\$ 14,852	US\$ 14,906	US\$ (54)	-	US\$ 51,439	
	JPMorgan Chase & Co.	"	-	-	-	US\$ 45,332	-	US\$ 12,125	-	US\$ 3,842	US\$ 3,869	US\$ (27)	-	US\$ 50,629	
	Banco Santander, S.A.	"	-	-	-	US\$ 18,461	-	US\$ 10,094	-	US\$ 410	US\$ 420	US\$ (10)	-	US\$ 26,257	
	Metropolitan Life Global Funding I	"	-	-	-	US\$ 17,341	-	US\$ 10,758	-	US\$ 3,000	US\$ 3,000	US\$ -	-	US\$ 24,408	
	The Toronto-Dominion Bank	"	-	-	-	US\$ 14,786	-	US\$ 15,598	-	US\$ 9,344	US\$ 9,685	US\$ (341)	-	US\$ 19,510	
	Bank of Montreal	"	-	-	-	US\$ 6,295	-	US\$ 14,842	-	US\$ 5,076	US\$ 4,999	US\$ 77	-	US\$ 15,224	
	The Bank of New York Mellon Corporation	"	-	-	-	US\$ 6,072	-	US\$ 11,290	-	US\$ 6,177	US\$ 6,165	US\$ 12	-	US\$ 11,282	
	Lloyds Banking Group plc	"	-	-	-	US\$ 21,675	-	US\$ 2,210	-	US\$ 12,370	US\$ 12,339	US\$ 31	-	US\$ 10,533	
S&P Global Inc.	"	-	-	-	US\$ -	-	US\$ 14,096	-	US\$ 2,893	US\$ 2,934	US\$ (41)	-	US\$ 10,246		
The Goldman Sachs Group, Inc.	Financial assets at amortized cost	-	-	-	US\$ 51,347	-	US\$ 561,607	-	US\$ 171,000	US\$ 171,000	US\$ -	-	US\$ 440,655		

(Continued)

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 (Foreign Currencies in Thousands)	Shares/Units (In Thousands)	Amount (Foreign Currencies in Thousands)	Shares/Units (In Thousands)	Amount (Foreign Currencies in Thousands)	Carrying Value (Foreign Currencies in Thousands)	Gain/Loss on Disposal (Foreign Currencies in Thousands)	Shares/Units (In Thousands)	Amount (Foreign Currencies in Thousands)
TSMC Global	Citigroup Global Markets Inc.	Financial assets at amortized cost	-	-	-	US\$ 99,968	-	US\$ 350,000	-	US\$ 100,000	US\$ 100,000	US\$ -	-	US\$ 349,886
	Bank of America Corporation	"	-	-	-	US\$ -	-	US\$ 448,254	-	US\$ 124,000	US\$ 123,818	US\$ 182	-	US\$ 324,757
	JPMorgan Chase & Co.	"	-	-	-	US\$ 10,054	-	US\$ 268,126	-	US\$ -	US\$ -	US\$ -	-	US\$ 280,213
	Wells Fargo & Company	"	-	-	-	US\$ 30,399	-	US\$ 243,897	-	US\$ -	US\$ -	US\$ -	-	US\$ 274,713
	Citigroup Inc.	"	-	-	-	US\$ -	-	US\$ 188,138	-	US\$ 14,000	US\$ 14,000	US\$ -	-	US\$ 174,540
	Citigroup Global Markets Holdings Inc.	"	-	-	-	US\$ -	-	US\$ 150,000	-	US\$ -	US\$ -	US\$ -	-	US\$ 149,951
	Goldman Sachs Finance Corp International Ltd.	"	-	-	-	US\$ -	-	US\$ 150,000	-	US\$ -	US\$ -	US\$ -	-	US\$ 149,870
	Morgan Stanley	"	-	-	-	US\$ -	-	US\$ 60,255	-	US\$ -	US\$ -	US\$ -	-	US\$ 60,207
	Jpmorgan LLC	"	-	-	-	US\$ -	-	US\$ 50,000	-	US\$ -	US\$ -	US\$ -	-	US\$ 49,984
	Banco Bilbao Vizcaya Argentaria, S.A.	"	-	-	-	US\$ -	-	US\$ 10,418	-	US\$ -	US\$ -	US\$ -	-	US\$ 10,534
	<u>Government bond</u>													
	United States Department of The Treasury	Financial assets at fair value through other comprehensive income	-	-	-	US\$ 768,483	-	US\$ 93,078	-	US\$ 193,697	US\$ 195,409	US\$ (1,712)	-	US\$ 613,603
	<u>Agency bonds/Agency mortgage-backed securities</u>													
	FEDERAL NATIONAL MORTGAGE ASSOCIATION	Financial assets at fair value through other comprehensive income	-	-	-	US\$ 460,205	-	US\$ 251,791	-	US\$ 170,673	US\$ 174,005	US\$ (3,332)	-	US\$ 464,686
	Federal Home Loan Mortgage Corporation	"	-	-	-	US\$ 253,075	-	US\$ 146,242	-	US\$ 74,099	US\$ 75,623	US\$ (1,524)	-	US\$ 284,933
	Government National Mortgage Association	"	-	-	-	US\$ 285,581	-	US\$ 75,508	-	US\$ 158,836	US\$ 162,184	US\$ (3,348)	-	US\$ 175,067
Emerging Fund	<u>Non-publicly traded equity investments</u>													
	Solanium Labs, Ltd.	Financial assets at fair value through other comprehensive income	-	-	-	US\$ -	1,429	US\$ 5,000	1,429	US\$ 11,370	US\$ 5,000	US\$ 6,370	-	US\$ -

Note: The ending balance includes the realized gain/loss on equity investment, the amortization of premium/discount on bonds investments and other related adjustment.

(Concluded)

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 YEAR ENDED DECEMBER 31, 2022

(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	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate	February 15, 2022 (Note)	\$ 213,300,000 (Note)	Based on the terms in the purchase order	122 counterparties (Note), including: ABB Ltd. Accudevice Co., Ltd. Addtron Technology (Japan), Inc. Aegis Technology Co. Air Liquid Japan G.K. Air Liquide Far Eastern Ltd. Air Water Plant Engineering Co., 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. Chien Kuo Construction Co., Ltd. China Steel Structure Co., Ltd. Chun Yuan Steel Industry 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	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Chung-Lin General Contractors, Ltd. Chunghwa Telecom Japan Co., Ltd. Cica-Huntek Chemical Technology Taiwan Co., Ltd. Confederate Technology Co., Ltd. Da-Cin Construction Co., Ltd. Desiccant Technology Corporation Eaton Electric Japan Evergreen Steel Corporation Exyte Taiwan Co., Ltd. Fortune Electric Co., Ltd. Fu Tsu Construction Co., Ltd. Fuji Electric Co., Ltd. Fuji Furukawa E&C Co., Ltd. Green Partners Industry Co., Ltd. Hantech Engineering Co., Ltd. Hitachi Energy 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 Japan Material Co., Ltd. JG Environmental Technology Co., Ltd. Jienshian Information Engineering Co., Ltd. JJmr-Clean-Air Solution Tech.Services Co., Ltd.								

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Johnson Controls York Taiwan Co, Ltd. Jusun Instruments Co., Ltd. Kajima Corporation Kanto Chemical Engineering Co., Ltd. Kao Hsin Engineering Co., Ltd. Kedge Construction Co., Ltd. Kinetics Technology Corporation Koei International Corp. Kuken Kogyo Co., Ltd. Kurita Water Industries Ltd., Taiwan Kyudenko Corporation L&K Engineering Co., Ltd. Lead-Fu Industrials Corporation Lee Ming Construction Co., Ltd. Lumax International Corp., Ltd. Mandartech Interiors Inc. Marketch International Corp. Mega Union Technology Incorporated Mitsubishi Heavy Industries Air-Conditioning & Refrigeration Corporation Mitsubishi Heavy Industries, Ltd. NAGASE & CO. LTD. NEC Facilities, Ltd. Organo Corporation Organo Technology Co., Ltd. Ovivo Taiwan Co., Ltd.								

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Pan Asia (Engineers & Constructors) Corporation Quicken System Integration Co., Ltd. Ruentex Engineering & Construction Co., Ltd. SACHEM Inc. San Fu Chemical Co., Ltd. Schneider Electric Taiwan Co., Ltd. Seibu Giken Co., Ltd. Shihlin Electric & Engineering Corporation Shimizu Corporation Siemens Limited SN Tech Corporation Solomon Technology Corporation Sumitomo Corporation Swift Engineering Co., Ltd. Taikisha Ltd. Taisei Corporation Taiwan Gleno Enterprise Co., Ltd. Taiwan Obayashi Corporation Taiwan Puritic Corp. Taiyo Nippon Sanso Corporation TASA Construction Corporation Techgo Industrial Co., Ltd. Toshiba Mitsubishi-Electric Industrial Systems Corporation Toyoko Kagaku Co., Ltd. Trane Taiwan Distribution Limited								

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Trusval Technology Co., Ltd. Tung Kang Steel Structure Corp. Uangyih-Tech Industrial Co., Ltd. Unelectra International Corp. United Integrated Services Co., Ltd. Versum Materials Taiwan Co., Ltd. Vertiv Weltall Technology Corporation Wholetech System Hitech Limited Yangtech Engineering Co., Ltd. Yankey Engineering Co., Ltd. Ying Pao Technology Inc. Zhao-Cheng Corp.								
	Real estate	May 10, 2022 (Note)	US\$ 2,147,000 (Note)	Based on the terms in the purchase order	19 counterparties (Note), including: Southern Taiwan Science Park Bureau, Ministry of Science and Technology	-	N/A	N/A	N/A	N/A	Price comparison and price negotiation	Manufacturing purpose	None
	Real estate	November 8, 2022 (Note)	US\$ 1,119,000 (Note)	Based on the terms in the purchase order	115 counterparties (Note), 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.	-	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	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Atlas Technology Corp. Capital Machinery Limited Central Taiwan Science Park Bureau, Ministry of Science and Technology Century Iron and Steel Industrial Co., Ltd. Chen Yuan International Co., Ltd. Chenfull International Co., Ltd. Cheng Deh Fire Protection Industrial Corp. Chien Kuo Construction Co., Ltd. China Steel Structure Co., Ltd. Chun Yuan Steel Industry Co., Ltd. Chung-Lin General Contractors, Ltd. Cica-Huntek Chemical Technology Taiwan Co., Ltd. Confederate Technology Co., Ltd. Da-Cin Construction Co., Ltd. Desiccant Technology Corporation Evergreen Steel Corporation Exyte Taiwan Co., Ltd. Fortune Electric Co., Ltd. Fu Tsu Construction Co., Ltd. Hantech Engineering Co., Ltd. Hsieh Kun Co., Ltd. Hsinchu Science Park Bureau, Ministry of Science and Technology Hueng Luei Process Industry Co., Ltd.								

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Immense Team Construction & Building Co., Ltd. Ingersoll-Rand Southeast Asia (Pte) Ltd. Taiwan Branch (Singapore) J.C. Yang Architect and Associates Jaie Haour Industry Corporation JG Environmental Technology Co., Ltd. JJmr-Clean-Air Solution Tech.Services Co., Ltd. Ju Yao Construction Co., Ltd. Jusun Instruments Co., Ltd. Kedge Construction Co., Ltd. Kinetics Technology Corporation L&K Engineering Co., Ltd. Lead-Fu Industrials Corporation Lee Ming Construction Co., Ltd. Li Jin Engineering Co., Ltd. Mandartech Interiors Inc. Marketech International Corp. Mega Union Technology Incorporated Organo Technology Co., Ltd. Ovivo Taiwan Co., Ltd. Pan Asia (Engineers & Constructors) Corporation Ruentex Engineering & Construction Co., Ltd. San Fu Chemical Co., Ltd. Schneider Electric Taiwan Co., Ltd. Shihlin Electric & Engineering Corporation								

(Continued)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counterparty	Nature of Relationships	Prior Transaction of Related Counterparty				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Real estate				Siemens Limited Solomon Technology Corporation Southern Taiwan Science Park Bureau, Ministry of Science and Technology Swift Engineering Co., Ltd. Taiwan Gleno Enterprise Co., Ltd. Taiwan Obayashi Corporation Taiwan Puritic Corp. TASA Construction Corporation Techgo Industrial Co., Ltd. Trusval Technology Co., Ltd. Tung Kang Steel Structure Corp. Uangyih-Tech Industrial Co., Ltd. Unelectra International Corp. United Integrated Services Co., Ltd. Versum Materials Taiwan Co., Ltd. Weltall Technology Corporation Wholetch System Hitech Limited Yangtech Engineering Co., Ltd. Yankey Engineering Co., Ltd. Ying Pao Technology Inc. Zhao-Cheng Corp.								

Note: The disclosures are expected information based on the capital appropriation approved by the Board of Directors (Right-of-use assets are included). The actual information shall be subject to the final purchase order of TSMC.

(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 YEAR ENDED DECEMBER 31, 2022

(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	Subsidiary	Sales	\$ 1,538,849,403	68	Net 30 days from invoice date (Note)	-	(Note)	\$ 171,738,863	80	
	TSMC Nanjing	Subsidiary	Sales	155,024	-	Net 30 days from the end of the month of when invoice is issued	-	-	-	-	
	GUC	Associate	Sales	11,346,289	1	Net 30 days from the end of the month of when invoice is issued	-	-	1,300,302	1	
	TSMC Nanjing	Subsidiary	Purchases	43,186,122	26	Net 30 days from the end of the month of when invoice is issued	-	-	(4,105,919)	7	
	TSMC China	Subsidiary	Purchases	28,400,454	17	Net 30 days from the end of the month of when invoice is issued	-	-	(2,296,083)	4	
	WaferTech	Indirect subsidiary	Purchases	10,336,735	6	Net 30 days from the end of the month of when invoice is issued	-	-	(855,952)	1	
	SSMC	Associate	Purchases	4,572,894	3	Net 30 days from the end of the month of when invoice is issued	-	-	(385,979)	1	
	VIS	Associate	Purchases	1,849,937	1	Net 30 days from the end of the month of when invoice is issued	-	-	(190,587)	-	
TSMC North America	GUC	Associate of TSMC	Sales	3,204,489 (US\$ 106,695)	-	Net 30 days from invoice date	-	-	171,049 (US\$ 5,569)	-	
VisEra Tech	Xintec	Associate of TSMC	Sales	787,702	9	Net 60 days from the end of the month of when invoice is issued	-	-	112,607	15	

Note: The tenor is 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

December 31, 2022

(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 GUC	Subsidiary Associate	\$ 177,923,661 1,300,302	37 27	\$ - -	- -	\$ - -	\$ - -
TSMC North America	GUC	Associate of TSMC	171,078 (US\$ 5,570)	22	-	-	-	-
TSMC JDC	TSMC	Parent company	108,835 (JPY 466,905)	Note 2	-	-	-	-
TSMC China	TSMC	Parent company	2,296,083 (RMB 519,682)	26	-	-	-	-
	TSMC Nanjing	The same parent company	45,353,940 (RMB10,265,253)	Note 2	-	-	-	-
TSMC Nanjing	TSMC	Parent company	4,105,919 (RMB 929,191)	29	-	-	-	-
VisEra Tech	Xintec	Associate of TSMC	112,607	53	-	-	-	-
TSMC Technology	TSMC	The ultimate parent of the Company	744,620 (US\$ 24,244)	Note 2	-	-	-	-
WaferTech	TSMC	The ultimate parent of the Company	855,952 (US\$ 27,869)	29	-	-	-	-
	TSMC Development	Parent company	192,719 (US\$ 6,275)	Note 2	-	-	-	-

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 YEAR ENDED DECEMBER 31, 2022

(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	\$ 1,538,849,403	-	68%
				Receivables from related parties	171,738,863	-	3%
				Other receivables from related parties	6,184,798	-	-
				Accrued expenses and other current liabilities	98,595,725	-	2%
				Other noncurrent liabilities	142,132,113	-	3%
				JASM	1	Other noncurrent assets	6,925,782
		TSMC JDC	1	Research and development expenses	505,454	-	-
		TSMC 3DIC	1	Research and development expenses	787,114	-	-
		TSMC Europe	1	Marketing expenses-commission	541,200	-	-
		TSMC China	1	Purchases	28,400,454	-	1%
				Marketing expenses-commission	329,166	-	-
				Payables to related parties	2,296,083	-	-
		TSMC Nanjing	1	Purchases	43,186,122	-	2%
				Proceeds from disposal of property, plant and equipment	673,945	-	-
Gains from disposal of property, plant and equipment	302,234			-	-		
Payables to related parties	4,105,919			-	-		
TSMC Technology	1	Research and development expenses	3,653,480	-	-		
		Payables to related parties	744,620	-	-		
WaferTech	1	Purchases	10,336,735	-	-		
		Payables to related parties	855,952	-	-		
1	TSMC China	TSMC Nanjing	3	Interest income	436,902	-	-
				Other receivables from related parties	45,353,940	-	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 YEAR ENDED DECEMBER 31, 2022
 (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 December 31, 2022			Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				December 31, 2022 (Foreign Currencies in Thousands)	December 31, 2021 (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	\$ 411,992,426	\$ 7,308,722	\$ 7,308,722	Subsidiary
		Tortola, British Virgin Islands	Investing in companies involved in the semiconductor design and manufacturing, and other investment activities	31,456,130	31,456,130	988,268	100	63,697,217	3,135,764	3,135,764	Subsidiary
	TSMC Arizona	Phoenix, Arizona, U.S.A.	Manufacturing, sales and testing of integrated circuits and other semiconductor devices	37,015,800	21,643,300	1,270	100	25,639,079	(9,430,070)	(9,430,070)	Subsidiary
	JASM	Kumamoto, Japan	Manufacturing, sales, testing and computer-aided design of integrated circuits and other semiconductor devices	24,567,085	1,416,921	1,020	71	23,330,125	(593,429)	(452,020)	Subsidiary
	VIS	Hsin-Chu, Taiwan	Manufacturing, sales, 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	13,492,653	15,280,388	4,322,799	Associate
	VisEra Tech	Hsin-Chu, Taiwan	Research, design, development, manufacturing, sales, packaging and test of color filter	4,224,082	4,224,082	213,619	68	11,467,860	1,765,796	1,253,986	Subsidiary
	SSMC	Singapore	Manufacturing and sales of integrated circuits and other semiconductor devices	5,120,028	5,120,028	314	39	8,934,731	3,540,176	1,373,234	Associate
	TSMC North America	San Jose, California, U.S.A	Sales and marketing of integrated circuits and other semiconductor devices	333,718	333,718	11,000	100	5,449,755	62,213	62,213	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	3,528,417	1,983,736	813,516	Associate
	Emerging Fund GUC	Cayman Islands Hsin-Chu, Taiwan	Investing in technology start-up companies	1,269,425	298,618	-	99.9	1,760,885	(6,917)	(6,910)	Subsidiary
			Researching, developing, manufacturing, testing and marketing of integrated circuits	386,568	386,568	46,688	35	1,666,651	3,710,442	1,292,705	Associate
	TSMC 3DIC	Yokohama, Japan	Engineering support activities	1,144,356	278,986	49	100	1,172,706	27,950	27,950	Subsidiary
	TSMC Europe	Amsterdam, the Netherlands	Customer service and supporting activities	15,749	15,749	-	100	527,693	(4,926)	(4,926)	Subsidiary
	TSMC JDC	Yokohama, Japan	Engineering support activities	410,680	410,680	15	100	376,176	20,303	20,303	Subsidiary
	VTAF III	Cayman Islands	Investing in technology start-up companies	1,239,621	1,321,594	-	98	246,702	(6,700)	(6,566)	Subsidiary
	TSMC Japan	Yokohama, Japan	Customer service and supporting activities	83,760	83,760	6	100	134,560	6,559	6,559	Subsidiary
	VTAF II	Cayman Islands	Investing in technology start-up companies	260,300	260,300	-	98	71,429	319	313	Subsidiary
TSMC Korea	Seoul, Korea	Customer service and supporting activities	13,656	13,656	80	100	44,082	1,408	1,408	Subsidiary	
TSMC Partners	TSMC Development	Delaware, U.S.A	Investing in companies involved in semiconductor manufacturing	18,026,652	18,026,652	-	100	36,609,536	2,620,596	Note 2	Subsidiary
	TSMC Technology	Delaware, U.S.A	Engineering support activities	(US\$ 586,939)	(US\$ 586,939)	-	100	(US\$1,191,988)	(US\$ 87,795)	Note 2	Subsidiary
			Engineering support activities	438,644	438,644	-	100	993,700	66,998	Note 2	Subsidiary
TSMC Canada	Ontario, Canada	Engineering support activities	(US\$ 14,282)	(US\$ 14,282)	-	100	(US\$ 32,354)	(US\$ 2,150)	Note 2	Subsidiary	
VTAF III	Growth Fund	Cayman Islands	Investing in technology start-up companies	70,640	70,640	2,300	100	321,059	31,997	Note 2	Subsidiary
			Investing in technology start-up companies	(US\$ 2,300)	(US\$ 2,300)	-	100	(US\$ 10,454)	(US\$ 1,071)	Note 2	Subsidiary
			Investing in technology start-up companies	67,429	79,970	-	100	166,549	(609)	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	Investing in technology start-up companies	(US\$ 2,195)	(US\$ 2,604)	-	100	(US\$ 5,423)	(US\$ (21))	Note 2	Subsidiary
			Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	48,937	48,937	4,693	28	19,053	(13,738)	Note 2	Associate
				(US\$ 1,593)	(US\$ 1,593)	-	100	(US\$ 620)	(US\$ (464))	Note 2	Associate

(Continued)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2022			Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				December 31, 2022 (Foreign Currencies in Thousands)	December 31, 2021 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership	Carrying Value (Foreign Currencies in Thousands)			
TSMC Development	WaferTech	Washington, U.S.A	Manufacturing, sales and testing of integrated circuits and other semiconductor devices	\$ -	\$ -	293,637	100	\$ 6,251,109 (US\$ 203,533)	\$ 2,299,054 (US\$ 77,303)	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 YEAR ENDED DECEMBER 31, 2022

(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, 2022 (US\$ in Thousands)	Investment Flows		Accumulated Outflow of Investment from Taiwan as of December 31, 2022 (US\$ in Thousands)	Net Income (Losses) of the Investee Company	Percentage of Ownership	Share of Profits/Losses	Carrying Amount as of Balance as of December 31, 2022	Accumulated Inward Remittance of Earnings as of December 31, 2022
					Outflow (US\$ in Thousands)	Inflow						
TSMC China	Manufacturing, sales, 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)	\$ 12,411,290	100%	\$ 12,223,165 (Note 2)	\$ 87,028,722	\$ -
TSMC Nanjing	Manufacturing, sales, 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)	20,486,591	100%	20,473,263 (Note 2)	67,385,300	-

Accumulated Investment in Mainland China as of December 31, 2022 (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)	\$ 1,776,293,320 (Note 3)

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

Note 2: Amount was recognized based on the audited 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
DECEMBER 31, 2022**

Shareholders (Note)	Shares	
	Total Shares Owned	Ownership Percentage
ADR-Taiwan Semiconductor Manufacturing Company, Ltd.	5,319,233,558	20.51%
National Development Fund, Executive Yuan	1,653,709,980	6.38%

Note: Major shareholders shows the list of all shareholders with ownership of 5 percent or greater.