TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS AND

REPORT OF INDEPENDENT ACCOUNTANTS

DECEMBER 31, 2019 AND 2018

For the convenience of readers and for information purposes only, the auditors' report and the accompanying financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. In the event of any discrepancy between the English version and the original Chinese version or any differences in the interpretation of the two versions, the Chinese-language auditors' report and financial statements shall prevail.

REPORT OF INDEPENDENT ACCOUNTANTS TRANSLATED FROM CHINESE

To the Board of Directors and Shareholders of Taiwan Stock Exchange Corporation

Opinion

We have audited the accompanying consolidated balance sheets of Taiwan Stock Exchange Corporation and its subsidiaries (hereinafter referred to as the "Company and its subsidiaries") as of December 31, 2019 and 2018, and the related consolidated statements of comprehensive income, of changes in equity and of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, based on our audits and the reports of other auditors (refer to *Other matter* section of our report), the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of December 31, 2019 and 2018, and their consolidated financial performance and their consolidated cash flows for the years then ended in accordance with the "Criteria Governing Preparation of Financial Reports by Company-Type Stock Exchanges" and the International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the Financial Supervisory Commission.

Basis for opinion

We conducted our audits in accordance with the "Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants" and generally accepted auditing standards in the Republic of China (ROC GAAS). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Company and its subsidiaries in accordance with the Code of Professional Ethics for Certified Public Accountants in the Republic of China (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. Based on our audits and the reports of other auditors, 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 of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and, in forming our opinion thereon, we do not provide a separate opinion on these matters.

Financial assets-measurement of fair value of unlisted stocks without an active market

<u>Description</u>

Refer to Notes 4(8) and 6(3) for the accounting policy on and the details of unlisted stocks without an active market recognized as financial assets at fair value through other comprehensive income, and Notes 5 and 12(3) for the accounting estimates and assumption uncertainty in relation to unlisted stocks without an active market.

The Company and one of its subsidiaries invested in stocks of Taiwan Futures Exchange Corporation and Taipei Financial Center Corporation which are financial instruments without an active market. Valuation techniques have been applied to determine the fair value of abovementioned stocks. These valuation techniques use significant unobservable inputs, including a compound dividend growth rate and discount rate, which involve high uncertainty and subjective judgements by management, and could have a material impact on the fair value measurement. Therefore, we consider the fair value measurement of the stocks of Taiwan Futures Exchange Corporation and Taipei Financial Center a key audit matter.

<u>How our audit addressed the matter</u>

Our audit procedures on the above key audit matter included assessing the appropriateness of the significant assumptions used in applying the valuation techniques:

1. Comparing the compound dividend growth rate with historical data and economic forecasts.
2. For the discount rate, examining the cost of capital assumptions of the related cash-generating units, and comparing the return on assets ratio with similar companies in the market.
3. Examining the inputs and calculation formula of the valuation models, and reviewing information and documents to evaluate the relevance and reliability of the data source.

Accuracy of operating revenue

Description

Refer to Note 4(25) for the accounting policy on revenue recognition and Note 6(23) for the details of "Trading fees". The Company and its subsidiaries have various types of operating revenue, consisting of various fees, such as trading, securities settlement and account maintenance services, listing and securities recording services. Each type of revenue is recognized based on the pricing method in accordance with the related regulations or terms of the contracts. As the amount of operating revenue is significant, we consider the accuracy of operating revenue a key audit matter.

How our audit addressed the matter

Our audit procedures on the above key audit matter included:

1. Interviewing management and understanding the operations and industry of the Company and its subsidiaries, evaluating the internal control workflow of operating revenues, understanding the information environment used by management to calculate the related revenue, and testing the effectiveness of significant internal controls.
2. Selecting samples to verify the pricing method used by management to calculate revenue and ascertaining whether it is in compliance with the related regulations or underlying contracts.
3. Selecting samples to examine the accuracy of the amount of each type of operating revenue.

Existence and classification of cash in banks

Description

Refer to Note 4(6) for the accounting policy on cash equivalents and Notes 6(1)(8)(7) for the details of "cash and cash equivalents", "other current financial assets", "settlement and clearing fund" and "compensation reserve". As of December 31, 2019, the Company and one of its subsidiaries' cash in banks was recognized as cash and cash equivalents amounting to NT$9,911,747 thousand, other current financial assets amounting to NT$23,924,725 thousand, settlement and clearing fund amounting to NT$3,427,484 thousand and compensation reserve amounting to NT$11,935,012 thousand.

The Company and one of its subsidiaries' cash in banks is recognized as cash and cash equivalents, other current financial assets (time deposits with an original maturity date of more than three months), the settlement and clearing fund in which each securities company appropriates and deposits a certain amount to the Company in accordance with the related regulations and the compensation reserve (appropriated and deposited in accordance with the "Securities and Exchange Act" and the related regulations).

As the balances of cash and cash equivalents, other current financial assets, settlement and clearing fund and compensation reserve are significant, we consider the existence and classification of cash and cash equivalents a key audit matter.

How our audit addressed the matter

Our audit procedures on the above key audit matter included:

1. Interviewing management, understanding the internal control workflow and testing the effectiveness of significant internal controls.
2. Sending out confirmations to financial institutions to confirm the existence and accuracy of financial assets and to verify the rights and obligations of the Company and one of its subsidiaries to the financial assets.
3. Checking whether cash in banks held for specific purposes or with certain limitations have been reclassified to appropriate account items.
4. Performing counts of time deposits and verifying its details against accounting records.
5. Selecting samples to perform tests of material cash collection and disbursement transactions to confirm whether it was for operations purpose and to determine whether there were any significant unusual transactions.

Other matter-Scope of the Audit

We did not audit the financial statements of certain subsidiaries and investees accounted for using the equity method that were included in the consolidated financial statements. Total assets of the subsidiaries (including investments accounted for using the equity method) amounted to NT$40,801,759 thousand and NT$29,252,267 thousand, constituting 42% and 26% of consolidated total assets as of December 31, 2019 and 2018, respectively, and operating revenue of the subsidiaries amounted to NT$5,127,710 thousand and NT$5,014,679 thousand, constituting 47% and 45% of consolidated total operating revenue for the years then ended, respectively. Those financial statements were audited by other auditors whose reports thereon have been furnished to us, and our opinion expressed herein is based solely on the audit reports of the other auditors.

Other matter – Parent company only financial reports

We have audited and expressed an unqualified opinion with other matter paragraph on the parent company only financial statements of Taiwan Stock Exchange Corporation as of and for the years ended December 31, 2019 and 2018.

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 "Criteria Governing Preparation of Financial Reports by Company-Type Stock Exchanges" and the International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the Financial Supervisory Commission, 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 and its subsidiaries' 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 and its subsidiaries or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including supervisors, are responsible for overseeing the Company and its subsidiaries' financial reporting process.

Auditor's 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 auditor's 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 ROC GAAS will always detect a material misstatement if 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 ROC GAAS, 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 controls.
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 and its subsidiaries' internal controls.
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 and its subsidiaries' ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's 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 auditor's report. However, future events or conditions may cause the Company and its subsidiaries 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 financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient appropriate audit evidence regarding the consolidated financial information of the entities or business activities within the Company and its subsidiaries 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 controls that we identify during our audit.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor’s 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.

PricewaterhouseCoopers, Taiwan
March 24, 2020

The accompanying consolidated financial statements are not intended to present the financial position and results of operations and cash flows in accordance with accounting principles generally accepted in countries and jurisdictions other than the Republic of China. The standards, procedures and practices in the Republic of China governing the audit of such financial statements may differ from those generally accepted in countries and jurisdictions other than the Republic of China. Accordingly, the accompanying consolidated financial statements and report of independent accountants are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice.

As the financial statements are the responsibility of the management, PricewaterhouseCoopers cannot accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may derive from the translation.

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

Assets	Notes	December 31, 2019 AMOUNT	%	December 31, 2018 AMOUNT	%
Current Assets					
Cash and cash equivalents	6(1)	$ 9,911,747	10	$ 34,960,862	31
Current financial assets at fair value through profit or loss	6(2)	5,589,073	6	5,133,853	4
Current financial assets at amortized cost	6(4)	2,422,123	2	3,453,188	3
Accounts receivable, net	6(5) and 7	875,610	1	732,123	1
Other receivables		127,938	-	134,901	-
Other current financial assets	6(1)	23,924,725	24	22,024,072	20
Settlement and clearing debit items	6(8)	7,710,487	8	10,245,195	9
Other current assets	6(6)	11,367,004	12	1,536,392	1
Total Current Assets		61,928,707	63	78,220,586	69
Non-current Assets					
Non-current financial assets at fair value through other comprehensive income	6(3)	5,756,881	6	5,668,034	5
Non-current financial assets at amortized cost	6(4)	10,792,049	11	11,115,236	10
Compensation reserve	6(7)	11,935,012	12	11,658,178	10
Investments accounted for using the equity method	6(9)	54,322	-	54,190	-
Property and equipment	6(10)	3,510,077	4	3,757,869	3
Right-of-use assets	6(11)	1,672,952	2	-	-
Investment properties, net	6(12)	438,866	-	445,173	1
Intangible assets	6(13)	888,609	1	951,451	1
Other non-current assets	6(14)	752,465	1	714,150	1
Total Non-current Assets		35,801,233	37	34,364,281	31
TOTAL ASSETS		$ 97,729,940	100	$ 112,584,867	100

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TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

Liabilities and Equity	Notes	December 31, 2019 AMOUNT	%	December 31, 2018 AMOUNT	%
Current Liabilities					
Securities lending and borrowing collateral payable	6(15)	$ 525,525	1	$ 28,206,367	25
Accrued expenses		1,758,136	2	1,542,820	1
Current income tax liabilities		496,071	-	809,276	1
Current lease liabilities	6(11)	266,931	-	-	-
Settlement and clearing credit items	6(8)	7,710,487	8	10,245,195	9
Other current liabilities	6(16)	15,011,066	15	3,658,092	3
Total Current Liabilities		25,768,216	26	44,461,750	39
Non-current Liabilities					
Deferred income tax liabilities	6(28)	80,272	-	79,702	-
Non-current lease liabilities	6(11)	1,482,476	2	-	-
Net defined benefit liability	6(17)	665,669	1	638,914	1
Guarantee deposits received		156,306	-	131,783	-
Other non-current liabilities		39,991	-	37,462	-
Total Non-current Liabilities		2,424,714	3	887,861	1
Total Liabilities		28,192,930	29	45,349,611	40
Equity Attributable to Owners of the Parent					
Share Capital					
Share capital-common stock	6(18)	7,285,627	7	6,938,692	6
Capital Surplus					
Capital surplus	6(19)	2,179	-	1,977	-
Retained Earnings					
Legal reserve	6(20)	5,834,044	6	5,480,537	5
Special reserve	6(20)	35,913,080	37	34,283,412	30
Unappropriated retained earnings	6(21)	3,358,349	3	4,065,842	4
Other Equity Interest					
Other equity interest	6(22)	3,487,531	4	3,494,405	3
Equity Attributable to Owners of the Parent		55,880,810	57	54,264,865	48
Non-controlling Interests		13,656,200	14	12,970,391	12
Total Equity		69,537,010	71	67,235,256	60
TOTAL LIABILITIES AND EQUITY		$ 97,729,940	100	$ 112,584,867	100

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

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except for earnings)

		Year ended December 31			
		2019		2018	
Items	Notes	AMOUNT	%	AMOUNT	%
Operating Revenue	6(23) and 7				
Trading fees		$ 2,995,978	27	$ 3,322,097	30
Securities settlement and account maintenance service fees		1,416,428	13	1,352,486	12
Listing fees		1,391,698	13	1,378,042	12
Securities recording service fees		1,019,143	9	1,105,422	10
Mutual fund service fees		487,041	4	275,808	2
Transfer process service fees		414,365	4	519,550	5
Data processing fees		409,055	4	361,195	3
Account maintenance service fees		385,268	3	393,823	4
Futures clearing service fees		310,626	3	376,267	3
Royalty fees		310,044	3	366,537	3
Information processing fees		204,834	2	205,122	2
Securities lending and borrowing service fees		176,721	2	216,722	2
Others		1,427,525	13	1,302,762	12
Total Operating Revenue		10,948,726	100	11,175,833	100
Operating Expenses	6(24)				
Personnel		(2,998,063)	(27)	(2,751,286)	(25)
General and administrative		(3,487,766)	(32)	(3,192,953)	(28)
Total Operating Expenses		(6,485,829)	(59)	(5,944,239)	(53)
Operating Profit		4,462,897	41	5,231,594	47
Non-operating Income and Expenses					
Interest income		539,495	5	523,899	5
Other income	6(25)	376,309	3	356,175	3
Other gains and losses	6(26)	279,281	2	(185,669)	(2)
Share of profit of associates accounted for using the equity method	6(9)	15,044	-	14,847	-
Finance costs	6(27)	(34,744)	-	(1,751)	-
Total Non-operating Income and Expenses		1,175,385	10	707,501	6
Profit before income tax		5,638,282	51	5,939,095	53
Income tax expense	6(28)	(999,752)	(9)	(1,125,550)	(10)
Profit for the year		4,638,530	42	4,813,545	43

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TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except for earnings)

		Year ended December 31			
		2019		2018	
Items	Notes	AMOUNT	%	AMOUNT	%
Other comprehensive income, net					
Components of other comprehensive income (loss) that will not be reclassified to profit or loss					
Unrealized gains from investments in equity instruments measured at fair value through other comprehensive income	6(3)	$ 88,847	1	$ 557,526	5
Share of other comprehensive loss of associates accounted for using the equity method	6(9)	(685)	-	(738)	-
Losses on remeasurements of defined benefit plans	6(17)	(29,168)	-	(30,252)	-
Income tax related to components of other comprehensive income that will not be reclassified to profit or loss		93	-	149	-
Other comprehensive income, net		$ 59,087	1	$ 526,685	5
Total comprehensive income for the year		$ 4,697,617	43	$ 5,340,230	48
Profit attributable to:					
Owners of the parent		$ 3,375,060	31	$ 3,535,071	32
Non-controlling interest		1,263,470	11	1,278,474	11
		$ 4,638,530	42	$ 4,813,545	43
Comprehensive income attributable to:					
Owners of the parent		$ 3,350,416	31	$ 4,004,250	36
Non-controlling interest		1,347,201	12	1,335,980	12
		$ 4,697,617	43	$ 5,340,230	48
Earnings per share (in New Taiwan dollars)					
Basic earnings per share	6(29)	$ 4.63		$ 4.85	

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

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

		Equity attributable to owners of the parent								
				Retained Earnings						
	Notes	Share capital-common stock	Capital surplus	Legal reserve	Special reserve	Unappropriated retained earnings	Other equity interest	Total	Non-controlling interest	Total equity
Year ended December 31, 2018										
Balance at January 1, 2018		$ 6,938,692	$ 2,196	$ 5,195,112	$ 33,261,592	$ 3,050,933	$ 3,557,991	$ 52,006,516	$ 12,255,436	$ 64,261,952
Effects of retrospective application		-	-	-	-	552,222	(559,778)	(7,556)	(4,918)	(12,474)
Balance at January 1, 2018 after adjustments		6,938,692	2,196	5,195,112	33,261,592	3,603,155	2,998,213	51,998,960	12,250,518	64,249,478
Profit for the year		-	-	-	-	3,535,071	-	3,535,071	1,278,474	4,813,545
Other comprehensive income (loss) for the year	6(21)(22)	-	-	-	-	(27,013)	496,192	469,179	57,506	526,685
Total comprehensive income for the year		-	-	-	-	3,508,058	496,192	4,004,250	1,335,980	5,340,230
Appropriations of 2017 retained earnings:										
Legal reserve	6(21)	-	-	285,425	-	(285,425)	-	-	-	-
Special reserve	6(21)	-	-	-	1,021,820	(1,021,820)	-	-	-	-
Cash dividends	6(21)	-	-	-	-	(1,734,673)	-	(1,734,673)	-	(1,734,673)
Difference between consideration and carrying amount of subsidiaries acquired or disposed		-	(437)	-	-	(3,453)	-	(3,890)	(26,542)	(30,432)
Capital surplus, other adjustments		-	218	-	-	-	-	218	-	218
Changes in non-controlling interests		-	-	-	-	-	-	-	(589,565)	(589,565)
Balance at December 31, 2018		$ 6,938,692	$ 1,977	$ 5,480,537	$ 34,283,412	$ 4,065,842	$ 3,494,405	$ 54,264,865	$ 12,970,391	$ 67,235,256
Year ended December 31, 2019										
Balance at January 1, 2019		$ 6,938,692	$ 1,977	$ 5,480,537	$ 34,283,412	$ 4,065,842	$ 3,494,405	$ 54,264,865	$ 12,970,391	$ 67,235,256
Profit for the year		-	-	-	-	3,375,060	-	3,375,060	1,263,470	4,638,530
Other comprehensive income (loss) for the year	6(21)(22)	-	-	-	-	(17,770)	(6,874)	(24,644)	83,731	59,087
Total comprehensive income for the year		-	-	-	-	3,357,290	(6,874)	3,350,416	1,347,201	4,697,617
Appropriations of 2018 retained earnings:										
Legal reserve	6(21)	-	-	353,507	-	(353,507)	-	-	-	-
Special reserve	6(21)	-	-	-	1,629,668	(1,629,668)	-	-	-	-
Cash dividends	6(21)	-	-	-	-	(1,734,673)	-	(1,734,673)	-	(1,734,673)
Stock dividends	6(21)	346,935	-	-	-	(346,935)	-	-	-	-
Capital surplus, other adjustments		-	202	-	-	-	-	202	-	202
Changes in non-controlling interests		-	-	-	-	-	-	-	(661,392)	(661,392)
Balance at December 31, 2019		$ 7,285,627	$ 2,179	$ 5,834,044	$ 35,913,080	$ 3,358,349	$ 3,487,531	$ 55,880,810	$ 13,656,200	$ 69,537,010

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

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Notes	Year ended December 31, 2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES			
Profit before tax		$ 5,638,282	$ 5,939,095
Adjustments			
Adjustments to reconcile profit (loss)			
(Gains) losses on financial assets at fair value through profit or loss	6(26)	(392,873)	99,515
Interest income		(539,495)	(523,899)
Dividend income	6(25)	(260,397)	(249,891)
Finance costs	6(27)	34,744	1,751
Depreciation	6(24)	860,392	521,468
Amortization	6(24)	291,572	224,765
Differences between investment income from investments accounted for using the equity method and current cash dividends received		(816)	3,465
Gains on reversal of expected credit impairment loss		(1,190)	(2,521)
Losses (gains) on disposal of property and equipment		145	(18)
Changes in operating assets and liabilities			
Changes in operating assets			
Accounts receivable, net		(143,656)	39,576
Other receivables		(28,682)	(24,631)
Other current assets		(9,830,612)	(240,355)
Compensation reserve		(276,834)	(322,004)
Changes in operating liabilities			
Securities lending and borrowing collateral payable		(27,680,842)	14,690,712
Accrued expenses		216,081	(90,720)
Other current liabilities		11,352,974	837,566
Net defined benefit liability		(2,413)	5,570
Other non-current liabilities		2,529	37,462
Cash (outflow) inflow generated from operations		(20,761,091)	20,946,906
Interest received		575,140	550,467
Interest paid		(35,308)	(2,554)
Income tax paid		(1,338,993)	(725,449)
Net cash flows (used in) from operating activities		(21,560,252)	20,769,370
CASH FLOWS FROM INVESTING ACTIVITIES			
Net increase in financial assets at fair value through profit or loss		(62,347)	(839,058)
Net decrease in financial assets at amortized cost		1,355,611	1,642,710
Increase in other current financial assets		(1,900,653)	(3,722,917)
Acquisition of property, equipment and intangible assets	6(30)	(491,427)	(855,008)
Proceeds from disposal of property and equipment		20	99
(Increase) decrease in refundable deposits		(116)	1,980
Increase in operations guarantee deposits		(17,400)	-
Increase in other non-current assets		-	(29,325)
Dividends received		260,397	249,891
Net cash flows used in investing activities		(855,915)	(3,551,628)
CASH FLOWS FROM FINANCING ACTIVITIES			
Increase (decrease) in guarantee deposits received		24,523	(8,086)
Repayment of the principal portion of lease liabilities		(261,406)	-
Cash dividends paid		(1,734,673)	(1,734,673)
Changes in non-controlling interests		(661,392)	(619,997)
Net cash flows used in financing activities		(2,632,948)	(2,362,756)
Net (decrease) increase in cash and cash equivalents		(25,049,115)	14,854,986
Cash and cash equivalents at the beginning of the year		34,960,862	20,105,876
Cash and cash equivalents at the end of the year		$ 9,911,747	$ 34,960,862

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

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except as otherwise indicated)

1. HISTORY AND ORGANIZATION

Taiwan Stock Exchange Corporation (the Company) was established in December 1961. The main activities of the Company and its subsidiaries are providing location and facilities for trading and settlement of securities, and other services as approved by the Competent Authority.

On October 11, 2011, the Competent Authority authorized the Company to continue existing in its current corporate form for the next ten years until a change into a membership-type organization is approved.

2. THE DATE OF AUTHORIZATION FOR ISSUANCE OF THE FINANCIAL STATEMENTS AND PROCEDURES FOR AUTHORIZATION

These consolidated financial statements were authorized for issuance by the Board of Directors on March 24, 2020.

3. APPLICATION OF NEW STANDARDS, AMENDMENTS AND INTERPRETATIONS

(1) Effect of the adoption of new issuances of or amendments to International Financial Reporting Standards (hereinafter referred to as "IFRS") as endorsed by the Financial Supervisory Commission (hereinafter referred to as "FSC")

New standards, interpretations and amendments endorsed by the FSC effective from 2019 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board (hereinafter referred to as "IASB")
Amendments to IFRS 9, "Prepayment features with negative compensation"	January 1, 2019
IFRS 16, "Leases"	January 1, 2019
Amendments to IAS 19, "Plan amendment, curtailment or settlement"	January 1, 2019
Amendments to IAS 28, "Long-term interests in associates and joint ventures"	January 1, 2019
IFRIC 23, "Uncertainty over income tax treatments"	January 1, 2019
Annual improvements to IFRSs 2015 - 2017 cycle	January 1, 2019

Except for the following, the above standards and interpretations have no significant impact on the Company and its subsidiaries' financial position and financial performance based on the Company and its subsidiaries' assessment.

IFRS 16, “Leases”

A. IFRS 16, “Leases”, replaces IAS 17, “Leases” and related interpretations and SICs. The standard requires lessees to recognize a “right-of-use asset” and a lease liability (except for those leases with terms of 12 months or less and leases of low-value assets). The accounting stays the same for lessors, which is to classify their leases as either finance leases or operating leases and account for those two types of leases differently. IFRS 16 only requires enhanced disclosures to be provided by lessors.

B. The Company and its subsidiaries have elected to apply IFRS 16 by not restating the comparative information (hereinafter referred to as the “modified retrospective approach”) when applying the International Financial Reporting Standards, International Accounting Standards (hereinafter referred to as “IAS”), IFRIC Interpretations, and SIC Interpretations as endorsed by the FSC (collectively hereinafter referred to as the “IFRSs”) effective in 2019. Accordingly, the Company and its subsidiaries increased “right-of-use asset” by $1,829,559 and increased “lease liability” by $1,829,559 with respect to the lease contracts of lessees on January 1, 2019.

C. The Company and its subsidiaries used the following practical expedients permitted by the standard at the date of initial application of IFRS 16:

   (a) Reassessment as to whether a contract is, or contains, a lease is not required, instead, the application of IFRS 16 depends on whether or not the contracts were previously identified as leases applying IAS 17 and IFRIC 4.

   (b) The use of a single discount rate to a portfolio of leases with reasonably similar characteristics.

D. The Company and its subsidiaries calculated the present value of lease liabilities by using the incremental borrowing interest rate ranging from 1% to 3.5%.

E. The Company and its subsidiaries recognized lease liabilities which had previously been classified as “operating leases” under the principles of IAS 17, “Leases”. The reconciliation between operating lease commitments under IAS 17 measured at the present value of the remaining lease payments, discounted using the lessee’s incremental borrowing rate and lease liabilities recognized as of January 1, 2019, is as follows:

Operating lease commitments disclosed by applying IAS 17 as of December 31, 2018	$ 575,370
Add : Adjustments as a result of a different treatment of extension and termination options	1,389,885
Total lease contracts amount recognized as lease liabilities by applying IFRS 16 on January 1, 2019	1,965,255
Incremental borrowing interest rate at the date of initial application	1%~3.5%
Lease liabilities recognized as of January 1, 2019 by applying IFRS 16	$ 1,829,559

(2) Effect of new issuances of or amendments to IFRSs as endorsed by the FSC but not yet adopted by the Company and its subsidiaries

New standards, interpretations and amendments endorsed by the FSC effective from 2020 are as follows:

New Standards, Interpretations and Amendments	Effective date by the IASB
Amendments to IAS 1 and IAS 8, "Disclosure Initiative-Definition of Material"	January 1, 2020
Amendments to IFRS 3, "Definition of a business"	January 1, 2020
Amendments to IFRS 9, IAS 39 and IFRS 7, "Interest rate benchmark reform"	January 1, 2020

The above standards and interpretations have no significant impact on the Company and its subsidiaries' financial position and financial performance based on the Company and its subsidiaries' assessment.

(3) IFRSs issued by the IASB but not yet endorsed by the FSC

New standards, interpretations and amendments issued by the IASB but not yet included in the IFRSs as endorsed by the FSC are as follows:

New Standards, Interpretations and Amendments	Effective date by the 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 the IASB
IFRS 17, "Insurance contracts"	January 1, 2021
Amendments to IAS 1, "Classification of liabilities as current or non-current"	January 1, 2022

The above standards and interpretations have no significant impact on the Company and its subsidiaries' financial position and financial performance based on the Company and its subsidiaries' assessment.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

(1) Compliance statement

These consolidated financial statements of the Company and its subsidiaries have been prepared in accordance with the "Criteria Governing Preparation of Financial Reports by Company-Type Stock Exchange" and "IFRSs". However, the Company and its subsidiaries comply with the regulations issued by the FSC if different from the aforementioned standards.

(2) Basis of preparation

A. Except for the following items, the consolidated financial statements have been prepared under the historical cost convention:

(a) Financial assets at fair value through profit or loss;

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

(c) Defined benefit liability recognized based on the net amount of pension fund assets less present value of defined benefit obligation.

B. The preparation of financial statements in conformity with IFRSs requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Company and its subsidiaries' accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 5.

(3) Basis of consolidation

A. Basis for preparation of consolidated financial statements:

(a) All subsidiaries are included in the consolidated financial statements. Subsidiaries are all entities controlled by the Company. The Company and its subsidiaries control an entity when the Company and its subsidiaries are exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Consolidation of subsidiaries begins from the date the Company obtains control of the subsidiaries and ceases when the Company loses control of the subsidiaries.

(b) Inter-company transactions, balances and unrealized gains or losses on transactions between the Company and its subsidiaries are eliminated. Accounting policies of subsidiaries have been adjusted where necessary to ensure consistency with the policies adopted by the Company.

(c) Profit or loss and each component of other comprehensive income are attributed to the owners of the parent and to the non-controlling interests. Total comprehensive income is attributed to the owners of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

B. For the years ended December 31, 2019 and 2018, the details of consolidated subsidiaries are as follows:

(a) Taiwan Depository & Clearing Corporation (the "TDCC")

i. The TDCC was established in October 1989. It provides the following services: (a) custody of securities certificates; (b) maintenance of records of securities settled or pledged; (c) electronic processing of records for securities; (d) service in connection with book-entry distribution of securities; (e) book-entry registration of non-certificated securities; (f) depository and clearing of short-term bills; and (g) other services approved by the Competent Authority.

ii. The Company's ownership percentage as of December 31, 2019 and 2018 was 50.59%.

(b) Taiwan-Ca Inc. (the "TWCA")

i. The TWCA was incorporated on December 17, 1999 and is mainly engaged in internet certification, retail and wholesale of information software and related services.

ii. The TWCA was 30.23% owned by the Company as of December 31, 2019 and 2018. Although the Company does not directly or indirectly hold more than 50% of the TWCA's voting shares, the Company and the TDCC together hold more than half of all the Board of Directors' seats. Therefore, the Company exercises de facto control over the TWCA.

(c) Taiwan Index Plus Corporation (the "TIP")

i. The TIP was established on January 20, 2016, with main operations in compilation, maintenance, calculation, dissemination and authorization of domestic and foreign index.

ii. As of December 31, 2019 and 2018, the TIP was 100% owned by the Company.

(d) Fundrich Securities Co., Ltd.

i. Fundrich Securities Co., Ltd. was established on December 18, 2015, and obtained license of securities brokerage business authorized by the Securities and Futures Bureau, Financial Supervisory Commission on January 27, 2016. Fundrich Securities Co., Ltd. is primarily engaged in sales of funds.

ii. Through its subsidiary, the TDCC, the Company's shareholding ratio in Fundrich Securities Co., Ltd. as of December 31, 2019 and 2018 was 56.64%.

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

D. Adjustments for subsidiaries with different balance sheet dates: None.

E. Nature and extent of the restrictions on fund remittance from subsidiaries to the parent company: None.

F. Subsidiaries that have non-controlling interests that are significant to the Company and its subsidiaries:

As of December 31, 2019 and 2018, the non-controlling interest amounted to $13,656,200 and $12,970,391, respectively. The information on non-controlling interest and respective subsidiaries is as follows:

		Non-controlling interest			
	Principal	December 31, 2019		December 31, 2018	
Name of subsidiaries	place of business	Amount	Ownership (%)	Amount	Ownership (%)
The TDCC and its subsidiaries	Taiwan	$ 13,208,756	49.41%	$ 12,799,522	49.41%

Balance sheets

	The TDCC and its subsidiaries	
	December 31, 2019	December 31, 2018
Current assets	$ 25,189,773	$ 14,577,070
Non-current assets	14,889,046	14,010,408
Current liabilities	(12,246,199)	(2,393,523)
Non-current liabilities	(828,181)	(572,388)
Total net assets	$ 27,004,439	$ 25,621,567

Statements of comprehensive income

	The TDCC and its subsidiaries	
	Years ended December 31,	
	2019	2018
Revenue	$ 5,345,120	$ 5,337,137
Profit before income tax	3,110,087	3,188,853
Income tax expense	(601,082)	(621,443)
Profit for the year	2,509,005	2,567,410
Other comprehensive income, net of tax	170,101	117,351
Total comprehensive income for the year	$ 2,679,106	$ 2,684,761
Comprehensive loss attributable to non-controlling interest	($ 5,071)	($ 26,910)
Dividends paid to non-controlling interest	$ 640,457	$ 580,203

Statements of cash flows

	The TDCC and its subsidiaries	
	Years ended December 31,	
	2019	2018
Net cash provided by operating activities	$ 1,770,028	$ 2,553,195
Net cash used in investing activities	(197,087)	(1,209,088)
Net cash used in financing activities	(1,386,941)	(1,206,453)
Increase in cash and cash equivalents	186,000	137,654
Cash and cash equivalents, at the beginning of the year	3,160,730	3,023,076
Cash and cash equivalents, at the end of the year	$ 3,346,730	$ 3,160,730

(4) Foreign currency translation

Items included in the financial statements of each of the Company and its subsidiaries' entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in New Taiwan dollars, which is the functional and presentation currency of the Company and its subsidiaries.

Monetary assets and liabilities denominated in foreign currencies at the period end are re-translated at the exchange rates prevailing at the balance sheet date. Exchange differences arising upon re-translation at the balance sheet date are recognized in profit or loss. All other foreign exchange gains and losses based on the nature of those transactions are presented in the statement of comprehensive income within "other gains and losses".

(5) Classification of current and non-current items

A. Assets that meet one of the following criteria are classified as current assets; otherwise they are classified as non-current assets:

(a) Assets arising from operating activities that are expected to be realized, or are intended to be sold or consumed within the normal operating cycle;

(b) Assets held mainly for trading purposes;

(c) Assets that are expected to be realized within twelve months from the balance sheet date; and

(d) Cash and cash equivalents, excluding restricted cash and cash equivalents and those that are to be exchanged or used to settle liabilities more than twelve months after the balance sheet date.

B. Liabilities that meet one of the following criteria are classified as current liabilities; otherwise they are classified as non-current liabilities:

(a) Liabilities that are expected to be settled within the normal operating cycle;

(b) Liabilities arising mainly from trading activities;

(c) Liabilities that are to be settled within twelve months from the balance sheet date; and

(d) Liabilities for which the repayment date cannot be extended unconditionally to more than twelve months after the balance sheet date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

(6) Cash equivalents

Cash equivalents refer to short-term, highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value. Time deposits that meet the definition above and are held for the purpose of meeting short-term cash commitments in operations are classified as cash equivalents.

(7) Financial assets at fair value through profit or loss

A. Financial assets at fair value through profit or loss are financial assets that are not measured at amortized cost or fair value through other comprehensive income.

B. On a regular way purchase or sale basis, financial assets at fair value through profit or loss are recognized and derecognized using settlement date accounting.

C. At initial recognition, the Company and its subsidiaries measure the financial assets at fair value and recognize the transaction costs in profit or loss. The Company and its subsidiaries subsequently measure the financial assets at fair value, and recognize the gain or loss in profit or loss.

D. The Company and its subsidiaries recognize the dividend income when the right to receive payment is established, future economic benefits associated with the dividend will flow to the

Company and its subsidiaries and the amount of the dividend can be reliably measured.

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

A. Financial assets at fair value through other comprehensive income comprise equity securities which are not held for trading, and for which the Company and its subsidiaries have made an irrevocable election at initial recognition to recognize changes in fair value in other comprehensive income and debt instruments which meet all of the following criteria:

(a) The objective of the Company and its subsidiaries' business models are achieved both by collecting contractual cash flows and selling financial assets; and

(b) The assets' contractual cash flows represent solely payments of principal and interest.

B. On a regular way purchase or sale basis, financial assets at fair value through other comprehensive income are recognized and derecognized using settlement date accounting.

C. At initial recognition, the Company and its subsidiaries measure the financial assets at fair value plus transaction costs. The Company and its subsidiaries subsequently measure the financial assets at fair value:

(a) The changes in fair value of equity investments that were recognized in other comprehensive income are reclassified to retained earnings and are not reclassified to profit or loss following the derecognition of the investment. Dividends are recognized as revenue when the right to receive payment is established, future economic benefits associated with the dividend will flow to the Company and its subsidiaries and the amount of the dividend can be reliably measured.

(b) Except for the recognition of impairment loss, interest income and gains or losses on foreign exchange which are recognized in profit or loss, the changes in fair value of debt instruments are taken through other comprehensive income. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss.

(9) Financial assets at amortized cost

A. Financial assets at amortized cost are those that meet all of the following criteria:

(a) The objective of the Company and its subsidiaries' business models are achieved by collecting contractual cash flows; and

(b) The assets' contractual cash flows represent solely payments of principal and interest.

B. On a regular way purchase or sale basis, financial assets at amortized cost are recognized and derecognized using settlement date accounting.

C. At initial recognition, the Company and its subsidiaries measure the financial assets at fair value plus transaction costs. Interest income from these financial assets is included in finance income using the effective interest method. A gain or loss is recognized in profit or loss when the asset is derecognized or impaired.

(10) Accounts receivable

Accounts receivable entitle the Company and its subsidiaries to a legal right to receive consideration in exchange for services rendered. The short-term accounts receivable without bearing interest are subsequently measured at the initial invoice amounts as the effect of discounting is immaterial.

(11) Impairment of financial assets

For debt instruments measured at fair value through other comprehensive income and financial assets at amortized cost including accounts receivable or contract assets that have a significant financing component, at each reporting date, the Company and its subsidiaries recognize the impairment provision for 12 months expected credit losses if there has not been a significant increase in credit risk since initial recognition or recognize the impairment provision for the lifetime expected credit losses (ECLs) if such credit risk has increased since initial recognition after taking into consideration all reasonable and verifiable information that includes forecasts. On the other hand, for accounts receivable or contract assets that do not contain a significant financing component, the Company and its subsidiaries recognize the impairment provision for lifetime ECLs.

(12) Derecognition of financial assets

The Company and its subsidiaries derecognize a financial asset when the contractual rights to receive the cash flows from the financial asset expire.

(13) Leasing arrangements (lessor)-operating leases

Lease income from an operating lease (net of any incentives given to the lessee) is recognized in profit or loss on a straight-line basis over the lease term.

(14) Investments accounted for using the equity method/associates

A. Associates are all entities over which the Company and its subsidiaries have significant influence but not control. In general, it is presumed that the investor has significant influence, if an investor holds, directly or indirectly 20 percent or more of the voting power of the investee. Investments in associates are accounted for using the equity method and are initially recognized at cost.

B. The Company and its subsidiaries’ share of their associates’ post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income.

(15) Property and equipment

A. Property and equipment are initially recorded at cost. Borrowing costs incurred during the construction period are capitalized.

B. Land is not depreciated and computer equipment is depreciated using the fixed percentage on declining balance method. Other property and equipment apply the cost model and are depreciated using the straight-line method to allocate their cost over their estimated useful lives. Each part of an item of property and equipment with a cost that is significant in relation to the total cost of the item must be depreciated separately.

C. The assets’ residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each balance sheet date. If expectations for the assets’ residual values and useful lives differ from previous estimates or the patterns of consumption of the assets’ future economic benefits embodied in the assets have changed significantly, any change is accounted for as a change in estimate under IAS 8, “Accounting Policies, Changes in Accounting Estimates and Errors”, from the date of the change.

(16) Leasing arrangements (lessee)-right-of-use assets/lease liabilities

Effective 2019

A. Except for payments for short-term leases or leases of low-value assets which are recognized as expenses on a straight-line basis over the lease term, the Company and its subsidiaries recognize right-of-use assets and corresponding lease liabilities for all leases at the date at which the leased asset is available for use by the Company and its subsidiaries.

B. Lease liabilities are measured at the net present value of the remaining fixed lease payments at the commencement date, discounted using the incremental borrowing interest rate.

C. Subsequently, lease liabilities are measured at amortized cost using the interest method, with interest expense recognized over the lease terms. Lease liabilities are remeasured with a corresponding adjustment to the right-of-use assets when there are changes in the lease terms or in future lease payments and such changes do not arise from contract modifications.

D. At the commencement date, right-of-use assets are recognized at cost which comprises the amount of the initial measurement of lease liabilities.

E. Right-of-use assets are measured subsequently using the cost model and are depreciated from the commencement date to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms. When lease liabilities are remeasured, the amount of remeasurement is recognized as an adjustment to the right-of-use assets.

(17) Leasing arrangements (lessee)-operating leases

Prior to 2019

Payments made under operating leases (net of any incentives received from the lessor) are recognized in profit or loss on a straight-line basis over the lease term.

(18) Investment properties

An investment property is stated initially at its cost and measured subsequently using the cost model. Except for land, investment property is depreciated on a straight-line basis.

(19) Intangible assets

A. Computer software

Computer software is stated at cost and amortized on a straight-line basis.

B. Goodwill

Goodwill acquired from an acquisition of a business combination is accounted for by applying the acquisition method. The amount recognized at acquisition date is considered as the cost of goodwill arising in a business combination, and is then measured based on the amount of cost less accumulated impairment loss.

(20) Impairment of non-financial assets

A. The Company and its subsidiaries assess at each balance sheet date the recoverable amounts of those assets where there is an indication that they are impaired. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. Except for goodwill, when the circumstances or reasons for recognizing impairment loss for an asset in prior years no longer exist or diminish, the impairment loss is reversed. The increased carrying amount due to reversal should not be more than what the depreciated or amortized historical cost would have been if the impairment had not been recognized.

B. The recoverable amount of goodwill shall be evaluated periodically. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. Impairment loss of goodwill previously recognized in profit or loss shall not be reversed in the following years.

C. For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash-generating units, or groups of cash-generating units, that is/are expected to benefit from the synergies of the business combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the operating segment level.

(21) Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability specified in the contract is either discharged, cancelled or expires.

(22) Pensions

A. Defined contribution plans

For defined contribution plans, the contributions are recognized as pension expense when they are due on an accrual basis. Prepaid contributions are recognized as an asset to the extent of a cash refund or a reduction in the future payments.

B. Defined benefit plans

(a) Net obligation under defined benefit plans is defined as the present value of an amount of pension benefits that employees will receive on retirement for their services with the Company and its subsidiaries in current period or prior periods. The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets. The net defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method.

(b) Remeasurements arising on defined benefit plans are recognized in other comprehensive income in the period in which they arise and are recorded in retained earnings.

(c) Past service costs are recognized immediately in profit or loss.

(23) Income tax

A. The tax expense for the period comprises current and deferred tax. Tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or items recognized directly in equity, in which cases the tax is recognized in other comprehensive income or equity.

B. An additional tax is levied on the unappropriated retained earnings and is recorded as income tax expense in the year the shareholders resolve to retain the earnings.

C. Deferred tax is recognized, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated balance sheet.

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

(24) <u>Dividends</u>

Dividends are recorded in the Company's financial statements in the period in which they are resolved by the Company's shareholders. Cash dividends are recorded as liabilities; stock dividends are recorded as stock dividends to be distributed and are reclassified to ordinary shares on the effective date of new shares issuance.

(25) <u>Revenue recognition</u>

The Company and its subsidiaries allocate the transaction price to each performance obligation when the performance obligations of customer contracts are identifiable. Revenue is recognized when the performance obligation is satisfied, and is classified as service revenue, dividend income, interest income and rental income.

A. Service revenue

Service revenue is recognized at the end of the month when the service was provided.

B. Dividend income and interest income

The Company and its subsidiaries recognize the dividend income arising from investments when the shareholders' right to receive payment is established, future economic benefits associated with the dividend will flow to the Company and its subsidiaries and the amount of the dividend can be measured reliably.

Interest income arising from financial assets is recognized when it is probable that future economic benefits will flow to the entity and these benefits can be measured reliably. Interest income is calculated over time based on the outstanding principal discounted by using the applicable effective interest rate, and is accounted for under the accrual basis. The effective interest rate is the rate used to discount the estimated cash that will be received during the financial assets' expected lives to be exactly equal to the net carrying amount of such assets at initial recognition.

C. Rental income

Rental income arising from operating leases is recognized in profit or loss on a straight-line basis over the lease terms.

(26) Operating segments

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker.

5. CRITICAL ACCOUNTING JUDGEMENTS, ESTIMATES AND KEY SOURCES OF ASSUMPTION UNCERTAINTY

The preparation of these consolidated financial statements requires management to make critical judgements in applying the Company and its subsidiaries' accounting policies and make critical assumptions and estimates concerning future events. Assumptions and estimates may differ from the actual results and are continually evaluated and adjusted based on historical experience and other factors. The above information is addressed below:

Financial assets-fair value measurement of unlisted stocks without an active market

The fair value of unlisted stocks held by the Company and its subsidiaries that are not traded in an active market is determined considering related financial information and inputs used in applying the valuation techniques. Any change in these judgements and estimates will impact the fair value measurement of these unlisted stocks.

As of December 31, 2019, information on the Company and its subsidiaries' unlisted stocks without an active market is provided in Note 6(3).

6. DETAILS OF SIGNIFICANT ACCOUNTS

(1) Cash and cash equivalents

	December 31, 2019	December 31, 2018
Checking accounts and demand deposits	$ 2,753,405	$ 28,731,063
Cash equivalents		
Time deposits with initial maturity term within three months	2,325,673	2,472,334
Commercial papers	4,832,669	3,757,465
	$ 9,911,747	$ 34,960,862

A. As of December 31, 2019 and 2018, the time deposits with initial maturity term of more than three months were $23,924,725 and $22,024,072, respectively, and were shown as "other current financial assets".

B. The details of cash and cash equivalents pledged to others are provided in Note 8.

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

Items	December 31, 2019	December 31, 2018
Current items:		
Financial assets mandatorily measured at fair value through profit or loss		
Beneficiary certificates	$ 5,589,073	$ 5,133,853

Amounts recognized in profit or loss in relation to financial assets at fair value through profit or loss are listed below:

	Years ended December 31,	
	2019	2018
Financial assets at fair value through profit or loss		
Fair value change recognized in profit or loss	$ 392,873	($ 99,515)
Dividend income recognized in profit or loss	14,476	8,846
	$ 407,349	($ 90,669)

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

Items	December 31, 2019	December 31, 2018
Non-current items:		
Equity instruments		
Unlisted stocks	$ 1,385,493	$ 1,385,493
Valuation adjustment	4,371,388	4,282,541
	$ 5,756,881	$ 5,668,034

Amounts recognized in profit or loss and other comprehensive income in relation to the financial assets at fair value through other comprehensive income are listed below:

	Years ended December 31,	
	2019	2018
Equity instruments at fair value through other comprehensive income		
Fair value change recognized in other comprehensive income	$ 88,847	$ 557,526
Dividend income recognized in profit or loss	$ 245,921	$ 241,045

(4) Financial assets at amortized cost

Items	December 31, 2019	December 31,2018
Current items:		
Financial bonds	$ 2,322,063	$ 3,151,772
Corporate bonds	-	201,007
Government bonds	100,060	100,409
	$ 2,422,123	$ 3,453,188
Non-current items:		
Financial bonds	$ 9,990,508	$ 10,211,765
Corporate bonds	502,592	503,814
Government bonds	298,949	399,657
	$ 10,792,049	$ 11,115,236

A. Amounts recognized in profit or loss in relation to financial assets at amortized cost are listed below:

	Years ended December 31,	
	2019	2018
Interest income	$ 204,981	$ 233,612
Gains on reversal of impairment	1,359	1,521
	$ 206,340	$ 235,133

B. Information relating to credit risk of financial assets at amortized cost is provided in Note 12(2).

(5) Accounts receivable

	December 31, 2019	December 31, 2018
Accounts receivable	$ 875,779	$ 732,123
Less: Allowance for doubtful accounts	(169)	-
	$ 875,610	$ 732,123

A. The Company and its subsidiaries do not hold any collateral on accounts receivable.

B. Aging analysis of accounts receivable and information relating to credit risk are provided in Note 12(2).

(6) Other current assets

	December 31, 2019	December 31, 2018
Payments under cross-border custody	$ 10,719,764	$ 895,377
Receipt and payment for mutual funds on behalf of others	522,012	253,850
Receipt and payment for bills and bonds on behalf of others	16,703	289,090
Others	108,525	98,075
	$ 11,367,004	$ 1,536,392

Since November 2015, the Company's subsidiaries began to provide receipt and payment services for foreign securities under cross-border custody on behalf of others. The amount pertains to payments received and paid on behalf of others for taking custody of cross-border securities.

The Company's subsidiaries began to provide receipt and payment services for domestic and offshore mutual funds on behalf of others since August 2006 and July 2016, respectively. The amount pertains to payments received and paid on behalf of others for purchasing or redeeming domestic and offshore mutual funds.

The Company's subsidiaries provide receipt and payment services for bills and bonds on behalf of others. The amount pertains to payments received and paid on behalf of others for redemption of bills and repayment of bonds.

(7) Compensation reserve

A. The Company, as required by the "Securities and Exchange Act" and the related regulations, deposited $50 million in the beginning and set aside at a certain percentage of trading fees within 15 days at the end of each quarter to the compensation reserve (Debit: compensation reserve; Credit: cash), until the accumulated amount of the compensation reserve is equal to or greater than the total amount of the Company's capital. In addition, pursuant to the regulations of the Competent Authority No. 00480 bulletin (1986), the Company recognized an equivalent amount as provision for the compensation reserve beginning 1986 (Debit: compensation reserve expense; Credit: provision for the compensation reserve). Moreover, following Article 6 of the "Taiwan Stock Exchange Corporation Securities Borrowing and Lending Rules", and the regulations of the Competent Authority No. 0920129756 bulletin (2003), the Company sets aside 3% of securities lending and borrowing service fees towards the compensation reserve.

B. As the accumulated amount of the compensation reserve already exceeded the total amount of the Company's capital, the Company has ceased setting aside at a certain percentage of trading fees to the compensation reserve and the provision for the compensation reserve since November 2006. However, in accordance with the Competent Authority No. 0980026755 bulletin (June 2009), the Company began setting aside 5% of trading fees to the compensation reserve within 15 days after the end of every quarter since January 1, 2010.

C. Taiwan Depository & Clearing Corporation (the TDCC) sets aside 5% of revenue from securities settlement service, securities recording service, transfer process service and account maintenance service to the compensation reserve (Debit: compensation reserve, Credit: cash) 15 days after the end of each quarter until the accumulated fund balance is equal to the TDCC's paid-in capital.

D. The Company and its subsidiaries began preparing the financial statements in accordance with IFRSs for the first time from January 1, 2013. Pursuant to the requirements of the regulatory authority, the balance of the provision for the compensation reserve was reclassified to "special reserve" upon transition. The special reserve cannot be used for other purposes except to cover accumulated deficit or for other uses approved by the FSC. In addition, the Company ceased to set aside the provision for the compensation reserve from October 30, 2012. However, the Company still has to set aside 5% of trading fees to the compensation reserve within 15 days after the end of every quarter since January 1, 2010, in accordance with the Competent Authority No. 0980026755 bulletin (June 2009).

E. Under the regulations of the Competent Authority, if losses occur when the Company pays the settlement on behalf of others under the requirements of Article 153 of the "Securities and Exchange Act", the losses will be directly offset against the abovementioned special reserve and no expense will be recognized, provided the matter is first reported to the Competent Authority and its approval is subsequently obtained.

F. Under the regulations of the Competent Authority, the TDCC may also use the abovementioned special reserve in the future to write down a specified amount and no expense will be recognized upon approval by the Competent Authority.

G. Beginning September 1996, the Company was required to establish a special clearing fund to be used in settling defaults by securities companies in accordance with the "Taiwan Stock Exchange Corporation Rules for the Administration of the Joint Responsibility System Clearing and Settlement Fund". Therefore, the Company established the special clearing fund with an initial funding of $1 billion. The Company has set aside to the special clearing fund on a continuing basis any portion in excess of the balance of $1 billion of the Company's compensation reserve. The special clearing fund in excess of the initial funding has an upper limit of $2 billion. As of December 31, 2019 and 2018, the balance of the special clearing fund was $3 billion.

H. The movements of the compensation reserve are as follows:

	Years ended December 31,	
	2019	2018
Balance, beginning of year (Note)	$ 8,658,178	$ 8,336,174
Contributions		
5% of trading fees	143,800	168,787
5% of securities settlement, securities recording, transfer process and account maintenance service fees	127,610	146,982
3% of securities lending and borrowing service fees	5,424	6,235
	8,935,012	8,658,178
Special clearing fund	3,000,000	3,000,000
Balance, end of year	$ 11,935,012	$ 11,658,178

Note: The beginning balance of the special clearing fund was $3 billion, and the balance of the compensation reserve was $11,658,178 and $11,336,174 as of January 1, 2019 and 2018, respectively.

I. As of December 31, 2019 and 2018, the compensation reserve was invested entirely in time deposits.

(8) Settlement and clearing debit (credit) items

As required by the "Criteria Governing Preparation of Financial Reports by Company–Type Stock Exchanges", settlement and clearing debit (credit) items include settlement and clearing fund and settlement consideration, and the related descriptions are as follows:

A. Settlement and clearing fund

(a) As required by the Competent Authority, securities companies make cash deposits to the settlement and clearing fund, which is administrated by a special management committee of the joint responsibility system clearing and settlement fund (the "committee") and deposited in the name of the Company, and this fund is distinguished from the other funds owned by the Company. Under the "Securities and Exchange Act", the settlement and clearing fund can only be (a) invested in government bonds; (b) deposited in banks or in the postal savings system; or (c) invested in other instruments as approved by the Competent Authority. The income on the settlement and clearing fund, after deducting related expenses and taxes, is distributed to the securities companies every six months.

(b) For the price difference and all other fees arising from and in connection with the handling of any default of settlement obligations by a securities company, deductions are first made against the portion of the contributions made by the defaulting securities company to the settlement and clearing fund and any undistributed income thereon. When that is insufficient, compensation on behalf of the defaulting securities company is made from the special clearing fund in the following order:

i. The special clearing fund in excess of $1 billion will be used, and the utilized portion will not be subsequently made up.

ii. The initial deposit of the special clearing fund of $1 billion and the deposit to the settlement and clearing fund by other securities companies will be used proportionately to the amounts of their contributions.

(c) As of December 31, 2019 and 2018, the balances of the settlement and clearing fund were $3,427,484 and $3,416,203, respectively, and the balance of the special clearing fund was $3 billion. The funds are invested in time deposits pursuant to the relevant regulations. In addition, as of December 31, 2019, the Company had entered into a loan agreement with financial institutions in the amount of $11 billion and US$10 million and provided time deposits of $2 billion in total to financial institutions as collaterals to provide for future advances that may be required by securities companies in fulfilling settlements and other revolving funds for emergency use as a result of securities companies defaulting on their settlement obligations or natural disasters. As of December 31, 2019, the loan amount has not been drawn down. The aforementioned time deposits were recorded under the compensation reserve in the amount of $750 million, the special clearing fund in the amount of $550 million, and the settlement and clearing fund in the amount of $700 million.

(d) As the Company is only responsible for the custodianship of the settlement and clearing fund deposited by securities companies, yield and income generated from the funds belong to the securities companies. Furthermore, the Company does not bear any related expenses and losses, and the recovery or reimbursement of the settlement and clearing fund is made to the individual securities companies. Therefore, the assets and liabilities arising from the settlement and clearing fund are offset in the Company and its subsidiaries' financial statements and the net amount presented is $0.

B. Settlement consideration

The receipts or payments from/to each securities company arising from the Company's clearing and settlement of securities are shown as "settlement and clearing debit items" and "settlement and clearing credit items". Pursuant to "Operating Rules of the Taiwan Stock Exchange Corporation", net settlement is carried out on the second business day following the trade date. Balances of settlement and clearing debit (credit) items as of December 31, 2019 and 2018 are as follows:

	December 31, 2019	December 31, 2018
Settlement and clearing debit items	$ 7,710,487	$ 10,245,195
Settlement and clearing credit items	$ 7,710,487	$ 10,245,195

(9) Investments accounted for using the equity method

	December 31, 2019	December 31, 2018
Taiwan Ratings Co. (TRC)	$ 54,322	$ 54,190

The carrying amount of the Company and its subsidiaries' interests in the individually immaterial associate and the Company and its subsidiaries' share of the operating results from this associate are summarized below:

	Taiwan Ratings Co.	
	Years ended December 31,	
	2019	2018
Share of profit of the associate accounted for using the equity method	$ 15,044	$ 14,847
Share of other comprehensive loss of the associate accounted for using the equity method	($ 685)	($ 738)

The percentage of ownership held by the Company and its subsidiaries in the above associate was both 39% as of December 31, 2019 and 2018.

The share of profit of the associate accounted for using the equity method was based on the financial statements audited by other auditors.

(10) Property and equipment

2019	Land	Buildings and structures	Computer equipment	Other equipment	Rental assets	Total
Cost						
At January 1 (including revaluation of $45,374)	$ 938,888	$1,273,878	$2,389,714	$1,413,692	$ 267,617	$6,283,789
Additions	-	563	199,004	24,304	-	223,871
Disposals	-	-	(491,410)	(69,264)	-	(560,674)
Transfers (Note)	-	-	44,726	-	-	44,726
Closing book amount	$ 938,888	$1,274,441	$2,142,034	$1,368,732	$ 267,617	$5,991,712
(including revaluation of $45,374)						
Accumulated depreciation						
At January 1	$ -	$ 153,748	$1,842,210	$ 458,426	$ 71,536	$2,525,920
Depreciation	-	24,723	305,602	152,447	33,452	516,224
Disposals	-	-	(491,245)	(69,264)	-	(560,509)
Closing book amount	$ -	$ 178,471	$1,656,567	$ 541,609	$ 104,988	$2,481,635
At January 1 net book amount	$ 938,888	$1,120,130	$ 547,504	$ 955,266	$ 196,081	$3,757,869
At December 31 net book amount	$ 938,888	$1,095,970	$ 485,467	$ 827,123	$ 162,629	$3,510,077

2018	Land	Buildings and structures	Computer equipment	Other equipment	Rental assets	Total
Cost						
At January 1 (including revaluation of $45,374)	$ 938,888	$1,267,992	$2,440,255	$1,328,082	$ 267,099	$6,242,316
Additions	-	5,886	220,656	99,767	-	326,309
Disposals	-	-	(430,001)	(14,989)	-	(444,990)
Transfers (Note)	-	-	158,804	832	518	160,154
Closing book amount (including revaluation of $45,374)	$ 938,888	$1,273,878	$2,389,714	$1,413,692	$ 267,617	$6,283,789
Accumulated depreciation						
At January 1	$ -	$ 130,119	$1,961,187	$ 326,252	$ 38,110	$2,455,668
Depreciation	-	23,629	310,943	147,163	33,426	515,161
Disposals	-	-	(429,920)	(14,989)	-	(444,909)
Closing book amount	$ -	$ 153,748	$1,842,210	$ 458,426	$ 71,536	$2,525,920
At January 1 net book amount	$ 938,888	$1,137,873	$ 479,068	$1,001,830	$ 228,989	$3,786,648
At December 31 net book amount	$ 938,888	$1,120,130	$ 547,504	$ 955,266	$ 196,081	$3,757,869

Note: Transfers pertain to prepayments for equipment transferred from other non-current assets.

The estimated useful lives of property and equipment are as follows:

Buildings and structures	55 years
Computer equipment	3 ~ 5 years
Other equipment	3 ~ 15 years
Rental assets	3 ~ 8 years

(11) Lease transactions-lessee

Effective 2019

A. Right-of-use assets

(a) The Company and its subsidiaries lease various assets including buildings and other equipment. Lease contracts are typically made for periods between two to seven years. Lease terms are negotiated on an individual basis and contain various different terms and conditions. Apart from the general provisions found in commercial contracts that leased assets may not be transferred, subleased or used as collaterals for borrowing purposes, the lease contracts do not impose other covenants.

(b) Carrying amounts of right-of-use assets:

	December 31, 2019
Buildings	$ 1,665,388
Other equipment	7,564
	$ 1,672,952

(c) For the year ended December 31, 2019, the additions to right-of-use assets were $229,584.

(d) Depreciation on right-of-use assets is as follows:

	Year ended December 31, 2019
Buildings	$ 332,346
Other equipment	5,515
	$ 337,861

B. Lease liabilities

(a) The carrying amounts of lease liabilities are as follows:

	December 31, 2019
Current portion	$ 266,931
Non-current portion	1,482,476
	$ 1,749,407

(b) Information on profit or loss in relation to lease liabilities is as follows:

	Year ended December 31, 2019
Items affecting profit or loss	
Interest expense on lease liabilities	$ 34,089

C. Other information on leases is as follows:

(a) For the year ended December 31, 2019, the Company and its subsidiaries' total cash outflows for leases was $295,495.

(b) Information on lease transactions with related parties is provided in Note 7.

(c) Extension options:

Extension options are included in the Company and its subsidiaries' lease contracts pertaining to buildings. In determining the lease term, the Company and its subsidiaries take into consideration all facts and circumstances that create an economic incentive to exercise an extension option. The assessment of a lease term is reviewed if a significant event occurs which affects the assessment.

(12) Investment properties

2019	Land	Buildings and structures	Total
Cost			
At January 1 and December 31	$ 248,749	$ 352,932	$ 601,681
(both including revaluation of $36,248)			
Accumulated depreciation			
At January 1	$ -	$ 156,508	$ 156,508
Depreciation	-	6,307	6,307
Closing book amount	$ -	$ 162,815	$ 162,815
At January 1 net book amount	$ 248,749	$ 196,424	$ 445,173
At December 31 net book amount	$ 248,749	$ 190,117	$ 438,866

2018	Land	Buildings and structures	Total
Cost			
At January 1 and December 31	$ 248,749	$ 352,932	$ 601,681
(both including revaluation of $36,248)			
Accumulated depreciation			
At January 1	$ -	$ 150,201	$ 150,201
Depreciation	-	6,307	6,307
Closing book amount	$ -	$ 156,508	$ 156,508
At January 1 net book amount	$ 248,749	$ 202,731	$ 451,480
At December 31 net book amount	$ 248,749	$ 196,424	$ 445,173

A. Rental income and direct operating expenses arising from the investment properties are shown below:

	Years ended December 31, 2019	Years ended December 31, 2018
Rental income from investment properties	$ 36,233	$ 31,277
Direct operating expenses arising from the investment properties that generated rental income during the year (depreciation expense)	$ 4,361	$ 3,972

B. The fair values of the investment properties held by the Company and its subsidiaries as of December 31, 2019 and 2018 were $1,158,890 and $1,107,850, respectively. The fair values of the above assets were determined by the valuation from independent appraisers, and by comparing with the transaction information of similar properties in the market and appropriate adjustments have been applied in the valuations. The comparative approach and income approach were used for the valuations which are categorized within Level 3 in the fair value hierarchy.

C. Except for land, investment properties are depreciated on a straight-line basis over the estimated useful life of 55 years.

(13) Intangible assets

2019	Goodwill	Software	Others	Total
Cost				
At January 1	$ 237,545	$ 1,233,192	$ 1,669	$ 1,472,406
Additions	-	188,014	-	188,014
Disposals	-	(133,227)	(923)	(134,150)
Transfer from prepayments for equipment	-	40,716	-	40,716
Closing book amount	$ 237,545	$ 1,328,695	$ 746	$ 1,566,986
Accumulated amortization				
At January 1	$ -	$ 520,073	$ 882	$ 520,955
Amortization	-	290,985	587	291,572
Disposals	-	(133,227)	(923)	(134,150)
Closing book amount	$ -	$ 677,831	$ 546	$ 678,377
At January 1 net book amount	$ 237,545	$ 713,119	$ 787	$ 951,451
At December 31 net book amount	$ 237,545	$ 650,864	$ 200	$ 888,609

2018	Goodwill	Software	Others	Total
Cost				
At January 1	$ 237,545	$ 844,318	$ 2,574	$ 1,084,437
Additions	-	286,561	854	287,415
Disposals	-	(182,646)	(1,759)	(184,405)
Transfer from prepayments for equipment	-	284,959	-	284,959
Closing book amount	$ 237,545	$ 1,233,192	$ 1,669	$ 1,472,406
Accumulated amortization				
At January 1	$ -	$ 479,013	$ 1,582	$ 480,595
Amortization	-	223,706	1,059	224,765
Disposals	-	(182,646)	(1,759)	(184,405)
Closing book amount	$ -	$ 520,073	$ 882	$ 520,955
At January 1 net book amount	$ 237,545	$ 365,305	$ 992	$ 603,842
At December 31 net book amount	$ 237,545	$ 713,119	$ 787	$ 951,451

Computer software is stated at historical cost and is amortized on a straight-line basis over its estimated useful life of three years.

(14) Other non-current assets

	December 31, 2019	December 31, 2018
Operations guarantee deposits	$ 434,800	$ 417,400
Refundable deposits and other assets	284,304	257,489
Prepayments for equipment and intangible assets	33,361	39,261
	$ 752,465	$ 714,150

A. As of December 31, 2019 and 2018, the Company has pledged time deposits amounting to $364,800 and $347,400, respectively, with the Central Bank of the Republic of China (Taiwan) as operations guarantee deposits.

B. As of December 31, 2019 and 2018, Fundrich Securities Co., Ltd. has pledged time deposits amounting to $70 million with the bank designated by the Securities and Futures Bureau, based on the Regulations Governing Securities Firms and other laws.

(15) Securities lending and borrowing collateral payable

The Company has provided securities lending and borrowing services since June 2003. The borrower is required to deposit collaterals based on certain percentages (the “stipulated collateral ratio”) of borrowed securities’ daily market prices to the Company. In addition, the individual collateral maintenance ratio of each transaction will be calculated on a daily basis, and further collaterals will be required if the maintenance ratio is below the stipulated collateral ratio. As of December 31, 2019 and 2018, the Company has received the following collaterals:

	December 31, 2019	December 31, 2018
Cash (Note A)	$ 525,525	$ 28,206,367
Bank drafts (Note B)	$ 4,118,055	$ 8,068,219
Securities (Notes B and C)	$ 55,663,011	$ 40,779,397

Note A: Interest will be paid based on the bank's current interest rate upon refund of cash collaterals.

Note B: Pursuant to "Taiwan Stock Exchange Corporation Securities Borrowing and Lending Rules", bank drafts and securities will be returned to the borrowers upon the completion of the transaction. Accordingly, these are not reflected as assets of the Company. The Company is only responsible for the custodianship of these collaterals.

Note C: Securities are remeasured based on their closing prices as of December 31, 2019 and 2018.

(16) Other current liabilities

	December 31, 2019	December 31, 2018
Receipts under custody (Note A)	$ 11,257,304	$ 1,437,851
Security borrowing performance bond payable (Note B)	2,808,549	1,431,549
Contract liabilities (Note C)	556,151	525,654
Deposits received for borrowing securities collateral	190,000	110,000
Others	199,062	153,038
	$ 15,011,066	$ 3,658,092

Note A: Receipts under custody pertain to payments received and paid by the subsidiaries on behalf of others which relate to the purchase or redemption of offshore and domestic mutual funds and for custody of cross-border securities starting from August 2006, July 2016 and November 2015 for the aforementioned services, respectively.

Note B: Since February 1, 2016, in order to meet the requirements of market participants and improve the liquidity of the securities market, apart from lending out marketable securities to its customers, a securities company can also borrow marketable securities from its customers, other securities companies, and securities finance enterprises. If marketable securities are borrowed from a customer, the securities companies should appropriate a performance guarantee in proportion to the total amount of borrowed marketable securities to the Company.

Note C: Contract liabilities include call (put) warrant listing fees received in advance, system construction service fees received in advance, internet user authorization service fees received in advance and others.

(17) Pensions

A. Defined benefit plans

As of December 31, 2019 and 2018, amounts recognized based on actuarial reports are as follows:

	December 31, 2019	December 31, 2018
Present value of defined benefit obligations	$ 4,901,468	$ 4,794,507
Fair value of plan assets	(4,235,799)	(4,155,593)
Net defined benefit liability	$ 665,669	$ 638,914

(a) Movements in net defined benefit liability are as follows:

	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
Year ended December 31, 2019			
Balance at January 1	$ 4,794,507	$ 4,155,593	$ 638,914
Current service cost	301,331	-	301,331
Interest expense/income	40,557	36,697	3,860
	5,136,395	4,192,290	944,105
Remeasurements:			
Return on plan assets (Note)	-	90,992	(90,992)
Change in demographic assumptions	(12)	-	(12)
Change in financial assumptions	31,905	-	31,905
Experience adjustments	88,267	-	88,267
	120,160	90,992	29,168
Pension fund contribution	-	302,128	(302,128)
Pension paid	(355,087)	(349,611)	(5,476)
Balance at December 31	$ 4,901,468	$ 4,235,799	$ 665,669

	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
Year ended December 31, 2018			
Balance at January 1	$ 4,758,257	$ 4,155,166	$ 603,091
Current service cost	301,152	-	301,152
Past service cost	33,897	-	33,897
Gains on settlement	(571)	-	(571)
Interest expense/income	49,752	44,907	4,845
	5,142,487	4,200,073	942,414
Remeasurements:			
Return on plan assets (Note)	-	61,817	(61,817)
Change in demographic assumptions	(43)	-	(43)
Change in financial assumptions	56,181	-	56,181
Experience adjustments	35,931	-	35,931
	92,069	61,817	30,252
Pension fund contribution	-	288,661	(288,661)
Pension paid	(440,049)	(394,958)	(45,091)
Balance at December 31	$ 4,794,507	$ 4,155,593	$ 638,914

Note: Excluding amounts included in interest income or expense.

(b) Based on the internal policies and procedures for employees' retirement and termination of employment of the Company, the TDCC and its subsidiaries, the Company, the TDCC and its subsidiaries make monthly contributions to the workers' pension fund and the employees' retirement fund based on certain percentages of employees' salaries. These funds are administrated by the Labor Pension Fund Supervisory Committee and the Committee of Employee Pension Fund, respectively. The contributed amounts are deposited with the Bank of Taiwan under the names of the respective committees. Employees who have retired and resigned will receive benefits from the aforementioned funds.

(c) TWCA has a pension plan covering all regular employees. Under the pension plan, pension benefits are based on the number of units accrued and the average monthly salary for the six-month period prior to retirement.

(d) The Bank of Taiwan was commissioned to manage the pension fund (the "Fund") under the Company and its subsidiaries' defined benefit pension plans and the Fund is administrated by the Labor Pension Fund Supervisory Committee in accordance with the Fund's annual investment and utilization plan and the "Regulations for Revenues, Expenditures, Safeguard and Utilization of the Labor Retirement Fund" (Article 6: The scope of utilization for the Fund includes deposit in domestic or foreign financial institutions, investment in domestic or foreign listed, over-the-counter, or private placement equity securities, investment in domestic or foreign real estate securitization products, etc.). The minimum earnings from the utilization of the Fund in the annual distributions shall be no less than the earnings calculated using the two-year time deposits interest rates offered by local banks. If the minimum earnings are less than the earnings calculated under the aforementioned rates, the government shall make up for the shortfall after being authorized by the Competent Authority. The Company and its subsidiaries have no right to participate in managing and operating the Fund and hence the Company and its subsidiaries are unable to disclose the classification of the fair value of plan assets in accordance with paragraph 142 of IAS 19. The composition of the fair value of plan assets as of December 31, 2019 and 2018 is published in the "Annual Labor Retirement Fund Utilization Report" announced by the government. As of December 31, 2019 and 2018, the funds of the Company and its subsidiaries that were administrated by the Committee of Employee Pension Fund consist of bank deposits only.

(e) The principal actuarial assumptions used were as follows:

	2019	2018
Discount rate	0.65%~1.125%	0.75%~1.375%
Future salary increases	2%~3%	2%~3%

Assumptions regarding future mortality experience are set based on actuarial advice in accordance with published statistics and experience in each territory.

The sensitivity of the present value of defined benefit obligation to changes in the significant actuarial assumptions was as follows:

	Discount rate		Future salary increases	
	Increase 0.25%	Decrease 0.25%	Increase 0.25%	Decrease 0.25%
December 31, 2019				
Effect on present value of defined benefit obligation	($ 101,611)	$ 105,054	$ 67,315	($ 63,069)
December 31, 2018				
Effect on present value of defined benefit obligation	($ 104,810)	$ 108,385	$ 75,867	($ 69,944)

The sensitivity analysis above is based on a change in an assumption while holding all other assumptions constant. In practice, changes in some of the assumptions may be correlated.

(f) Expected contributions to the defined benefit pension plans of the Company and its subsidiaries for the year ending December 31, 2020 amount to $315,572.

B. Defined contribution plans

(a) Effective July 1, 2005, the Company and its subsidiaries have established defined contribution pension plan (the "New Plan") under the Labor Pension Act (the "Act"), covering all regular employees with R.O.C. nationality. Under the New Plan, the Company and its subsidiaries make a monthly contribution of an amount based on 6% of the employees' monthly salaries and wages to the employees' individual pension accounts at the Bureau of Labor Insurance. Employees will receive pension benefits based on the regulations of the Act. The benefits accrued are paid monthly or in lump sum upon termination of employment.

(b) The pension costs under the defined contribution pension plans of the Company and its subsidiaries for the years ended December 31, 2019 and 2018 were $133,774 and $121,888, respectively.

(c) TWCA has an employee severance pay plan. Under the plan, TWCA provides on a monthly basis a certain percentage of the employees' monthly salaries and wages as reserve for severance pay.

(18) Share capital

A. In accordance with the resolution adopted at the shareholders' meeting on June 14, 2019, the Company issued 34,694 thousand shares of common stock by capitalizing the unappropriated retained earnings. The registration of this capital increase was approved by the Competent Authority.

B. As of December 31, 2019, the Company's authorized and paid-in capital was $7,285,627 with a par value of $10 (in New Taiwan dollars) per share. All proceeds from shares issued have been collected.

C. Pursuant to an amendment to Article 128 of the "Securities and Exchange Act" promulgated on July 19, 2000, the Company's common stocks can only be sold to authorized securities companies starting January 15, 2001.

(19) Capital reserve

Pursuant to the R.O.C. "Company Act", capital surplus arising from paid-in capital in excess of par value on issuance of common stocks and donations can be used to cover accumulated deficit or to issue new stocks or cash to shareholders in proportion to their share ownership, provided that the Company has no accumulated deficit. However, capital surplus should not be used to cover accumulated deficit unless the legal reserve is insufficient.

(20) Legal reserve/Special reserve

A. According to the R.O.C. "Company Act", the annual net income should be used initially to cover any accumulated deficit; thereafter 10% of the annual net income should be set aside as the legal reserve until it has reached 100% of contributed capital. The legal reserve shall be exclusively used to cover accumulated deficit or to issue new stocks or distribute cash to shareholders in proportion to their share ownership and shall not be used for any other purpose. The use of the legal reserve for the issuance of stocks or distribution of cash to shareholders in proportion to their share ownership is permitted, provided that the balance of the reserve exceeds 25% of the Company's paid-in capital.

B. As required under the regulations of the Securities and Futures Bureau (“SFB”), the Company shall appropriate a special reserve based on its net income annually. The rate of the appropriation was determined by the Competent Authority, which is at most 80% of the net income. Furthermore, pursuant to the regulations of the Competent Authority, the Company and its subsidiaries had reclassified the provision for the compensation reserve to a special reserve in their first financial statements prepared in accordance with IFRSs in 2013. The special reserve, as resolved by the shareholders, can only be used upon the Competent Authority’s approval to offset against deficit or transferred to capital.

(21) Unappropriated retained earnings

	2019	2018
At January 1	$ 4,065,842	$ 3,050,933
Effects of retrospective application	-	552,222
Balance at January 1 after adjustments	4,065,842	3,603,155
Profit for the year	3,375,060	3,535,071
Losses on remeasurements of defined benefit plans	(17,085)	(26,275)
Losses on remeasurements of defined benefit plans of associate accounted for using the equity method	(685)	(738)
Legal reserve	(353,507)	(285,425)
Special reserve	(1,629,668)	(1,021,820)
Cash dividends	(1,734,673)	(1,734,673)
Stock dividends	(346,935)	-
Difference between consideration and carrying amount	-	(3,453)
At December 31	$ 3,358,349	$ 4,065,842

A. The annual net income should be used initially to cover any accumulated deficit; 10% of the annual net income should be appropriated as the legal reserve and the special reserve upon the Competent Authority’s approval. The remaining amount can be distributed by a resolution passed during a meeting of the Board of Directors and approved at the shareholders’ meeting.

B. As approved by the shareholders during their meeting, cash dividends declared for 2018 and 2017 were both $2.5 (in New Taiwan dollars) per share, and the stock dividends for 2018 and 2017 were $0.5 (in New Taiwan dollars) per share and $0 (in New Taiwan dollars) per share, respectively.

(22) Other equity items

	2019
	Unrealized losses from investments in equity instruments measured at fair value through other comprehensive income
At January 1	$ 3,494,405
Revaluation	(6,874)
At December 31	$ 3,487,531

	2018		
	Unrealized losses on available-for-sale financial assets	Unrealized gains from investments in equity instruments measured at fair value through other comprehensive income	Total
At January 1	$ 3,557,991	$ -	$ 3,557,991
Effects of retrospective application	(3,557,991)	2,998,213	(559,778)
Balance at January 1 after adjustments	-	2,998,213	2,998,213
Revaluation	-	496,192	496,192
At December 31	$ -	$ 3,494,405	$ 3,494,405

(23) Trading fees

Trading fees mainly represent fees collected for the use of the Company’s services for trading and settlement of securities. The fees are computed as a percentage of the value of the transactions of securities traded and the rate is 0.000065 per New Taiwan dollar for dealers and brokers. After reaching an agreement with the Taiwan Securities Association, which was approved by the Board of Directors of the Company and the Competent Authority in No. 0950156625 bulletin (December 14, 2006), the rate has been reduced by 12% from the time that the Company ceased to set it aside to the compensation reserve. Effective December 1, 2011, as approved by the Board of Directors of the Company and the Competent Authority in No. 1000058644 bulletin (November 29, 2011), the rate (0.000065 per New Taiwan dollar) has been reduced by 20%.

(24) Expenses by nature

	Operating expenses	
	Years ended December 31,	
	2019	2018
Employee benefit expense		
Salaries	$ 2,444,381	$ 2,259,599
Insurance	141,631	138,074
Pension	438,965	461,211
Others	35,847	28,853
	$ 3,060,824	$ 2,887,737
Depreciation	$ 860,392	$ 521,468
Amortization	$ 291,572	$ 224,765

A. Under the Company's Articles of Incorporation, the Company shall distribute 1%~12% of annual profit as employees' compensation for each accounting year. However, the distribution of annual profit shall be first reserved to offset against accumulated deficit, if any.

B. For the years ended December 31, 2019 and 2018, employees' compensation was accrued in the amounts of $129,936 and $130,368, respectively. The aforementioned amounts were recognized in salary expenses.

(25) Other income

	Years ended December 31,	
	2019	2018
Dividend income	$ 260,397	$ 249,891
Rental income	92,303	84,904
Others	23,609	21,380
	$ 376,309	$ 356,175

(26) Other gains and losses

	Years ended December 31,	
	2019	2018
Gains (losses) on financial assets at fair value through profit or loss	$ 392,873	($ 99,515)
Foreign exchange (losses) gains	(23,596)	16,982
Others	(89,996)	(103,136)
	$ 279,281	($ 185,669)

(27) Finance costs

	Years ended December 31,	
	2019	2018
Interest expense-lease liabilities	$ 34,089	$ -
Interest expense-securities lending and borrowing collateral	655	1,751
	$ 34,744	$ 1,751

(28) Income tax

A. Income tax expense

(a) Components of income tax expense

	Years ended December 31,	
	2019	2018
Current tax:		
Current tax on profits for the year	$ 1,026,446	$ 1,153,537
Tax on unappropriated earnings	-	503
Prior year income tax over estimation	(658)	(35,896)
Total current tax	1,025,788	1,118,144
Deferred tax:		
Origination and reversal of temporary differences	(26,036)	15,380
Effect of tax rate change	-	(7,974)
Total deferred tax	(26,036)	7,406
Income tax expense	$ 999,752	$ 1,125,550

(b) Reconciliation between income tax expense and accounting profit

	Years ended December 31,	
	2019	2018
Tax calculated based on profit before tax and statutory tax rate	$ 1,389,296	$ 1,458,299
Tax on unappropriated earnings	-	503
Effect from permanent differences of income tax	(396,369)	(306,302)
Taxable loss not recognized	10,984	13,491
Effect of tax rate change	-	(7,974)
Deferred tax assets (under) over estimation	(3,501)	3,429
Prior year income tax over estimation	(658)	(35,896)
Income tax expense	$ 999,752	$ 1,125,550

B. Amounts of deferred tax assets or liabilities as a result of temporary differences are as follows:

	Year ended December 31, 2019		
	January 1	Recognized in profit or loss	December 31
-Deferred tax assets (recorded as "other non-current assets")			
Employees' welfare	$ 1,504	$ 732	$ 2,236
Unused annual paid leave	16,682	5,995	22,677
Unrealized exchange loss	9,628	4,947	14,575
Lease contracts	-	15,101	15,101
Others	1,254	(76)	1,178
	$ 29,068	$ 26,699	$ 55,767
-Deferred tax liabilities			
Goodwill	$ 35,103	$ 570	$ 35,673
Reserve for land value increment tax	44,599	-	44,599
	$ 79,702	$ 570	$ 80,272

	Year ended December 31, 2018		
	January 1	Recognized in profit or loss	December 31
-Deferred tax assets (recorded as "other non-current assets")			
Employees' welfare	$ 1,708	($ 204)	$ 1,504
Unused annual paid leave	21,346	(4,664)	16,682
Unrealized exchange loss	10,919	(1,291)	9,628
Others	1,256	(2)	1,254
	$ 35,229	($ 6,161)	$ 29,068
-Deferred tax liabilities			
Goodwill	$ 34,007	$ 1,096	$ 35,103
Reserve for land value increment tax	44,599	-	44,599
	$ 78,606	$ 1,096	$ 79,702

C. The amounts of deductible temporary differences that were not recognized as deferred tax assets are as follows:

	December 31, 2019	December 31, 2018
Deductible temporary differences	$ 600,812	$ 559,596

D. The Company's income tax returns through 2017 have been assessed and approved by the Tax Authority.

E. Under the amendments to the "Income Tax Act" which was promulgated by the President of the Republic of China on February 7, 2018, the Company's applicable income tax rate was raised from 17% to 20% effective from January 1, 2018. The Company and its subsidiaries have already assessed the income tax effects based on the new income tax rate.

(29) Earnings per share

	Year ended December 31, 2019		
	Amount after tax	Weighted-average number of shares outstanding (in thousands of shares)	Earnings per share (in dollars)
Basic earnings per share			
Profit attributable to ordinary shareholders of the Company	$ 3,375,060	728,563	$ 4.63

	Year ended December 31, 2018		
	Amount after tax	Weighted-average number of shares outstanding (in thousands of shares)	Earnings per share (in dollars)
Basic earnings per share			
Profit attributable to ordinary shareholders of the Company	$ 3,535,071	728,563	$ 4.85

The stock dividends were granted from the appropriation of 2018 retained earnings, and the effective date was on July 31, 2019. The weighted-average number of shares outstanding and basic earnings per share had been adjusted retrospectively from 693,869 thousand shares to 728,563 thousand shares, and from $5.09 (in New Taiwan dollars) to $4.85 (in New Taiwan dollars) per share, respectively.

(30) Supplemental cash flow information

	Years ended December 31, 2019	Years ended December 31, 2018
Additions and transfers from property and equipment	$ 268,597	$ 486,463
Additions and transfers from intangible assets	228,730	572,374
Less: Opening balance of prepayments for equipment and intangible assets	(39,261)	(243,090)
Add: Ending balance of prepayments for equipment and intangible assets	33,361	39,261
Cash paid during the year	$ 491,427	$ 855,008

7. RELATED PARTY TRANSACTIONS

(1) Names of related parties and relationship

Names of related parties	Relationship with the Company
Yuanta Securities Co., Ltd. (“YUANTA”)	Corporate Director
Land Bank of Taiwan Co., Ltd.	〃
CDIB Capital Group (Note 1)	〃
Taiwan Cement Corporation	〃
Fubon Securities Co., Ltd.	〃
SinoPac Securities Corporation (Note 1)	〃
YFY Inc. (Note 2)	〃
IBF Securities Co., Ltd. (Note 2)	
Mega International Commercial Bank Co., Ltd.	〃
Yuanta Securities Finance Co., Ltd.	〃
KGI Securities Co., Ltd. (Note 3)	〃
Taipei Financial Center Corporation (the “TFCC”)	Other related party
Taiwan Futures Exchange Corporation (the “TAIFEX”)	〃
Jih Sun Securities Co., Ltd.	〃
First Commercial Bank, Ltd. (Note 4)	〃
Taipei Exchange Corporation (the “TPEx”)	〃

Note 1: The Company’s corporate director whose term expired on June 30, 2019.

Note 2: The Company’s corporate director appointed since July 1, 2019.

Note 3: The corporate director of the Company’s subsidiary appointed since June 24, 2019.

Note 4: The Company’s supervisor whose term expired on June 30, 2019.

(2) Significant related party transactions

	Years ended December 31, 2019	2018
A. Trading fees:		
Corporate Directors		
YUANTA	$ 377,808	$ 410,668
Others	269,348	374,715
Other related parties	100,811	115,464
	$ 747,967	$ 900,847
B. Listing fees:		
Corporate Directors		
YUANTA	$ 238,784	$ 208,531
Others	120,274	141,365
Other related parties	16,301	30,667
	$ 375,359	$ 380,563
C. Securities recording service fees:		
Corporate Directors		
YUANTA	$ 130,694	$ 139,263
Others	149,860	130,681
Other related parties	37,366	41,304
	$ 317,920	$ 311,248
D. Transfer process service fees:		
Corporate Directors	$ 90,821	$ 102,445
Other related parties	4,610	9,497
	$ 95,431	$ 111,942
E. Future clearing fees:		
Other related parties		
The TAIFEX	$ 310,626	$ 376,267
F. Royalty fees:		
Other related parties		
The TAIFEX	$ 254,564	$ 317,334
Others	300	630
Corporate Directors	1,500	1,050
	$ 256,364	$ 319,014
G. Information processing fees:		
Other related parties		
The TPEx	$ 198,986	$ 200,650

	Years ended December 31,	
	2019	2018
H. Securities settlement service fees (recorded as operating revenue-others):		
Other related parties		
The TPEx	$ 200,884	$ 201,238

	December 31, 2019	December 31, 2018
I. Receivables from related parties:		
Other related parties	$ 110,567	$ 100,558
Corporate Directors	116,010	92,810
	$ 226,577	$ 193,368

J. Lease transactions-lessee

(a) The Company leased buildings and structures from the TFCC, and rents were paid monthly. On January 1, 2019 (the date of initial application of IFRS 16), the Company increased its right-of-use assets and lease liabilities by $1,360,096.

(b) Acquisition of right-of-use assets:

For the year ended December 31, 2019, the Company has no right-of-use assets acquired from related parties.

(c) Lease liabilities

	December 31, 2019
The TFCC	$ 1,237,686

For the year ended December 31, 2019, the Company recognized interest expense arising from lease liabilities amounting to $27,386.

(3) Key management compensation

	Years ended December 31,	
	2019	2018
Salaries and other short-term employee benefits	$ 102,696	$ 102,271
Pensions	9,585	9,505
	$ 112,281	$ 111,776

8. PLEDGED ASSETS

Refer to Note 6(8) for the information on time deposits pledged by the Company as collateral for the credit facility with banks and Note 6(14) for collaterals for operation guarantee deposits.

9. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED CONTRACT COMMITMENTS

(1) Contingencies

None.

(2) Commitments

Future payments required for the contracts in relation to the acquisitions of computer equipments and information systems are as follows:

	December 31, 2019	December 31, 2018
Computer equipment and other equipment	$ 185,472	$ 67,933

10. SIGNIFICANT DISASTER LOSS

None.

11. SIGNIFICANT EVENTS AFTER THE BALANCE SHEET DATE

None.

12. OTHERS

(1) Capital management

The Company and its subsidiaries' objectives of capital management are as follows:

A. Ensuring continued operations and returns to shareholders;

B. Supporting stability and growth of the Company; and

C. Providing capital to improve risk management ability.

(2) Financial instruments

A. Fair value information of financial instruments

	December 31, 2019	December 31, 2018
Financial assets		
Fair value through profit or loss	$ 5,589,073	$ 5,133,853
Fair value through other comprehensive income	5,756,881	5,668,034
Amortized cost (Note 1)	79,677,274	96,436,961
	$ 91,023,228	$ 107,238,848
Financial liabilities		
Amortized cost (Note 2)	$ 24,406,307	$ 43,105,565
Lease liabilities	1,749,407	-
	$ 26,155,714	$ 43,105,565

Note 1: Including cash and cash equivalents, financial assets at amortized cost, accounts receivable, other receivables, other financial assets, settlement and clearing debit items, payments under cross-border custody, receipt and payment for mutual funds on behalf of others, receipt and payment for bills and bonds on behalf of others, compensation reserve, operations guarantee deposits and refundable deposits.

Note 2: Including securities lending and borrowing collateral payable, accrued expenses, settlement and clearing credit items, receipts under custody, security borrowing performance bond payable, deposits received for borrowing securities collateral and guarantee deposits received.

B. Financial risk management policies

(a) The objective of financial risk management is to manage the following financial risks: market risk (including foreign exchange risk, interest rate risk and securities price risk), credit risk and liquidity risk.

(b) The Company and its subsidiaries have sufficient mechanisms to manage and control all financial risks to which the Company and its subsidiaries are exposed. Except for market risk that is controlled by external factors, other risks can be controlled internally or eliminated and the target is to minimize the risks to zero. The Company and its subsidiaries' overall risk management program focuses on the unpredictability of financial markets and seeks to optimize the overall positions to minimize potential adverse effects on the Company and its subsidiaries' financial performance.

(c) Risk management is carried out by a central finance department ("Finance Department") in accordance with the capital management policies approved by the Board of Directors. The Finance Department identifies and evaluates a variety of financial instruments, transaction flow, and transaction counterparties. Moreover, the Finance Department regularly proposes recommendation reports and reviews the business performance. The internal auditor is in charge of conducting the audit of the business function.

C. Significant financial risks and degrees of exposure

(a) Market risk

The market risk the Company and its subsidiaries is exposed to is caused by losses resulting from fluctuations in exchange rates and securities prices.

<u>Foreign exchange risk</u>

Foreign exchange risk arises from value changes in assets and liabilities denominated in foreign currencies due to fluctuations in exchange rates. The Company and its subsidiaries provide services for securities borrowing and lending transactions, and according to the regulations, specific security borrowers can deposit cash denominated in United States Dollars or other currencies. Some funds of the Company and its subsidiaries are also denominated in foreign currencies.

(Foreign currency: functional currency)	December 31, 2019 Foreign Currency Amount (in thousands)	Exchange Rate	Book Value (NTD)	Sensitivity analysis Degree of variation	Effect on profit or loss
Financial assets					
Monetary items					
USD:NTD	22,884	29.98	$ 686,062	1%	$ 6,861
RMB:NTD	45,227	4.305	194,702	1%	1,947

(Foreign currency: functional currency)	December 31, 2018 Foreign Currency Amount (in thousands)	Exchange Rate	Book Value (NTD)	Sensitivity analysis Degree of variation	Effect on profit or loss
Financial assets					
Monetary items					
USD:NTD	23,760	30.715	$ 729,788	1%	$ 7,298
RMB:NTD	43,484	4.472	194,460	1%	1,945
JPY:NTD	50,243,192	0.2782	13,977,656	1%	139,777
EUR:NTD	347,515	35.2	12,232,528	1%	122,325
Financial liabilities					
Monetary items					
USD:NTD	2,729	30.715	83,821	1%	838
JPY:NTD	50,243,133	0.2782	13,977,640	1%	139,776
EUR:NTD	347,511	35.2	12,232,387	1%	122,324

The total exchange gains (losses) arising from significant fluctuations in foreign exchange rates on the monetary items held by the Company and its subsidiaries for the years ended December 31, 2019 and 2018 amounted to ($23,596) and $16,982, respectively.

Interest rate risk

Interest rate risk arises from changes in fair value of financial instruments resulting from fluctuations in market interest rates, and the risk mainly arises from bond investments and investments in money market funds. As of December 31, 2019 and 2018, the financial assets measured at amortized cost consisted of fixed-rate products amounting to $13,214,172 and $14,568,424, respectively. Changes in market interest rates will result in fluctuations in the fair value of the financial instruments. However, as these financial instruments are held until maturity in order to receive returns based on the effective interest rates during the expected lives of these instruments, consequently no disposal or valuation gains or losses will arise as a result of the fluctuations in fair values.

The Company and its subsidiaries are exposed to the risk of changes in the net value of funds arising from investments in money market funds. If the net value of funds had increased/decreased by 1% for the years ended December 31, 2019 and 2018, due to the effects of the fair value movement of financial assets at fair value through profit or loss, the profit or loss for the year, net of tax, would have increased/decreased by $36,003 and $29,889, respectively.

Price risk of other equity interests

The Company and its subsidiaries are exposed to the equity price risk arising from financial assets classified as financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income for the years ended December 31, 2019 and 2018.

The market risk of holding these equity securities includes the specific risks related to changes in market quoted prices of individual equity securities and general market risks related to changes in market quoted prices in the overall markets. In order to manage the equity price risks, investments in beneficiary certificates are made in accordance with the Company and its subsidiaries' related policies and procedures on capital management, and the Company and its subsidiaries choose appropriate investment targets, set maximum amounts and limitations for prudent investments practice, and prepare summaries of investment gains/losses and capital usage reports regularly. Equity investment has to be approved by the Company's Board of Directors before initialization.

Except for money market funds, sensitivity analysis of price risk of beneficiary certificates is based on calculations of the changes in fair value at the end of the reporting period. If the prices of equity instruments had increased/decreased by 1% for the years ended December 31, 2019 and 2018, due to the effects of the fair value movement of financial assets at fair value through profit or loss, the profit or loss for the year, net of tax, would have increased/decreased by $19,888 and $21,449, respectively.

The Company and its subsidiaries' unlisted stocks are susceptible to market price risk arising from uncertainties in the future values of the underlying investments. The fair value level of these unlisted stocks belongs to level 3. The sensitivity analysis is provided in Notes 12(3)H and 12(3)I.

(b) Credit risk

i. Credit risk arises from the risk that a client or a counterparty defaults on its contractual obligations resulting in financial losses to the Company and its subsidiaries. The Company and its subsidiaries are exposed to the credit risks from cash and cash equivalents, other financial assets and accounts receivable for which counterparties could not repay in full based on the agreed terms, and the contract cash flows of debt instruments stated at amortized cost.

ii. The Company and its subsidiaries' policy requires that all transactions be conducted with the counterparties meeting the specified credit rating requirements. As the counterparties are all well-known domestic financial institutions with good credit standing, probabilities of the defaults by the counterparties are remote. As for the transaction objects, the default on the underlying assets of the financial assets held by the Company and its subsidiaries might result in losses to the Company and its subsidiaries.

iii. The Company and its subsidiaries adopt the assumption under IFRS 9, that is, the default occurs when the contract payments are past due over 90 days.

iv. If the credit rating grade of an investment target drops two scales, there has been a significant increase in the credit risk on that instrument since initial recognition.

v. The following indicators are used to determine whether the credit impairment of debt instruments has occurred:

(i) It becomes probable that the issuer will enter bankruptcy or other financial reorganization due to their financial difficulties;

(ii) Default or delinquency in interest or principal repayments; and

(iii) Adverse changes in national or regional economic conditions that are expected to cause a default.

vi. The credit quality information of financial assets is as follows:

Cash and cash equivalents

The Company and its subsidiaries transact with a variety of financial institutions all with high credit quality to disperse credit risk, and thus, it expects that the probability of counterparty default is remote. The Company and its subsidiaries recognize the impairment loss allowance for 12 months expected credit losses. No loss allowance was provided by the Company and its subsidiaries against cash and cash equivalents for the years ended December 31, 2019 and 2018.

Accounts receivable

(i) The Company and its subsidiaries apply the simplified approach using the loss rate methodology to estimate expected credit loss under the provision matrix basis.

(ii) The Company and its subsidiaries used the forecastability to adjust historical and timely information over a specified period to assess the probabilities of defaults of accounts receivable. As of December 31, 2019 and 2018, the loss rate methodology is as follows:

The Company and other subsidiaries:

	Group 1		Group 2		Total	
At December 31, 2019						
Expected loss rate	0%		100%			
Total book value	$	399,807	$	169	$	399,976
Loss allowance	$	-	$	169	$	169
At December 31, 2018						
Expected loss rate	0%		100%			
Total book value	$	336,768	$	-	$	336,768
Loss allowance	$	-	$	-	$	-

TDCC:

	Not past due	1~180 days past due	181~365 days past due	Over 365 days past due	Total
At December 31, 2019					
Expected loss rate	0%	0%	0%	0%	
Total book value	$ 473,971	$ 1,832	$ -	$ -	$ 475,803
Loss allowance	$ -	$ -	$ -	$ -	$ -
At December 31, 2018					
Expected loss rate	0%	0%	0%	0%	
Total book value	$ 395,339	$ -	$ -	$ 16	$ 395,355
Loss allowance	$ -	$ -	$ -	$ -	$ -

(iii) Movements in relation to the Company and its subsidiaries applying the simplified approach to provide loss allowance for accounts receivable are as follows:

	2019
At January 1	$ -
Provision for impairment	169
At December 31	$ 169

	2018
At January 1_IAS 39	$ 3,240
Adjustments under new standards	-
At January 1_IFRS 9	3,240
Write-offs	(2,240)
Gains on reversal of impairment	(1,000)
At December 31	$ -

(iv) The aging analysis of accounts receivable that were past due but not impaired is as follows:

	December 31, 2019	December 31, 2018
Not past due	$ 862,970	$ 724,416
Up to 30 days	5,895	5,258
31 to 90 days	4,518	1,146
91 to 180 days	2,227	1,287
Over 180 days	169	16
	$ 875,779	$ 732,123

Other financial assets

The Company and its subsidiaries transact with multiple financial institutions counterparties with high credit ratings to mitigate credit risk, and thus, it expects that the probability of counterparty's default to be remote. The Company and its subsidiaries recognize the impairment loss allowance for 12 months expected credit losses. No loss allowance was provided by the Company and its subsidiaries for the years ended December 31, 2019 and 2018.

Debt instruments at amortized cost

(i) The Company and its subsidiaries' investments in debt instruments at amortized cost were all issued by banks with high credit rating or companies with investment grade rating, and they were all classified as Group 1. As the probability of default is remote, the Company and its subsidiaries recognize the impairment loss allowance for 12 months expected credit losses.

Internal credit risk ratings	Company credit ratings by Taiwan Ratings
Group 1	twAAA～twA-
Group 2	twBBB+～twBBB-
Group 3	twBB+～twC
Impaired	twD

(ii) Movements in loss allowance for investments in debt instruments carried at amortized cost are as follows:

	2019		
		Lifetime	
	12 months	Significant increase in credit risk	Impairment of credit
At January 1	$ 5,825	$ -	$ -
Gains on reversal of impairment	(1,359)	-	-
At December 31	$ 4,466	$ -	$ -

	2018		
		Lifetime	
	12 months	Significant increase in credit risk	Impairment of credit
At January 1_IAS 39	$ -	$ -	$ -
Adjustments under new standards	7,346	-	-
At January 1_IFRS 9	7,346	-	-
Gains on reversal of impairment	(1,521)	-	-
At December 31	$ 5,825	$ -	$ -

(c) Liquidity risk

Liquidity risk refers to the risk that the Company and its subsidiaries will be unable to repay financial debts with cash or other financial assets. The Company and its subsidiaries apply the expected cash flow approach to manage liquidity risk, and to ensure that the Company and its subsidiaries have sufficient funds to pay for all maturing debts and to meet all known capital requirements. The amounts disclosed here are the contractual undiscounted cash flows. The Company and its subsidiaries' non-derivative financial liabilities will all mature within one year, except for non-current lease liabilities and guarantee deposits received which will mature over one year. As of December 31, 2019, the lease liabilities maturing within one year amounted to $298,523, and the lease liabilities maturing over one year amounted to $1,554,722.

(3) Fair value estimation

A. The different levels that the inputs to valuation techniques are used to measure fair value of financial and non-financial instruments have been defined as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. A market is regarded as active where a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. The fair values of the Company and its subsidiaries' investments in beneficiary certificates are included in Level 1.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. The fair values of the Company and its subsidiaries' investments in bank debentures, bonds and government bonds are included in Level 2.

Level 3: Unobservable inputs for the asset or liability. The fair values of the Company and its subsidiaries' investments in unlisted stocks are included in Level 3.

B. Financial instruments not measured at fair value

Except for those listed in the table below, the carrying amounts of the Company and its subsidiaries' financial instruments not measured at fair value (including cash and cash equivalents, accounts receivable, net, other receivables, other financial assets, settlement and clearing debit items, payments under cross-border custody, receipt and payment for mutual funds on behalf of others, receipt and payment for bills and bonds on behalf of others, compensation reserve, operations guarantee deposits, refundable deposits, securities lending and borrowing collateral payable, accrued expenses, settlement and clearing credit items, security borrowing performance bond payable, deposits received for borrowing securities collateral and guarantee deposits received) approximate their fair values.

	December 31, 2019			
		Fair value		
	Book value	Level 1	Level 2	Level 3
Financial assets:				
Financial assets at amortized cost	$ 13,214,172	$ -	$ 13,338,846	$ -

	December 31, 2018			
		Fair value		
	Book value	Level 1	Level 2	Level 3
Financial assets:				
Financial assets at amortized cost	$ 14,568,424	$ -	$ 14,695,798	$ -

The methods and assumptions of fair value measurement are as follows:

Financial assets at amortized cost: If there is a quoted price in an active market, the fair value is based on the market price; if there is no quoted market price available, the fair value is determined by using valuation techniques or quotes from counterparties.

C. The related information of financial and non-financial instruments measured at fair value by level on the basis of the nature, characteristics and risks of the assets and liabilities is as follows:

December 31, 2019	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurements				
Financial assets at fair value through profit or loss:				
Beneficiary certificates	$ 5,589,073	$ -	$ -	$ 5,589,073
Financial assets at fair value through other comprehensive income:				
Unlisted stocks	-	-	5,756,881	5,756,881
	$ 5,589,073	$ -	$ 5,756,881	$ 11,345,954

December 31, 2018	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurements				
Financial assets at fair value through profit or loss:				
Beneficiary certificates	$ 5,133,853	$ -	$ -	$ 5,133,853
Financial assets at fair value through other comprehensive income:				
Unlisted stocks	-	-	5,668,034	5,668,034
	$ 5,133,853	$ -	$ 5,668,034	$ 10,801,887

D. The methods and assumptions the Company and its subsidiaries used to measure fair value are as follows:

(a) If the Company and its subsidiaries used market quoted prices as the fair values of the instruments (that is, Level 1), the market quoted prices are the net value of funds or closing prices.

(b) Except for financial instruments with active markets, the fair value of other financial instruments is measured by using valuation techniques. The fair value of financial instruments measured by using valuation techniques which refer to the current fair value of instruments with substantially similar terms and characteristics, discounted cash flow method or other valuation methods, including calculations based on models using market information available on the consolidated balance sheet date.

(c) When assessing non-standard and low-complexity financial instruments, the Company and its subsidiaries adopt a valuation technique that is widely used by market participants. The inputs used in the valuation method to measure these financial instruments are normally observable in the market.

(d) The output of a valuation model is an estimated value and the valuation technique may not be able to capture all relevant factors of the Company and its subsidiaries' financial and non-financial instruments. Therefore, the estimated value derived from using a valuation model is adjusted accordingly with additional inputs, for example, model risk or liquidity risk, etc. In accordance with the Company and its subsidiaries' management policies and relevant control procedures relating to the valuation models used for fair value measurement, management believes adjustments to valuation are necessary in order to reasonably represent the fair value of financial and non-financial instruments on the consolidated balance sheet. The inputs and pricing information used during valuation are carefully assessed and adjusted based on current market conditions.

E. For the years ended December 31, 2019 and 2018, there was no transfer between Level 1 and Level 2.

F. For the years ended December 31, 2019 and 2018, there was no transfer into or out from Level 3.

G. The Finance Department and commissioned appraisers are in charge of valuation procedures for fair value measurements being categorized within Level 3, which is to verify the independent fair value of financial instruments. Such assessment is to ensure that the valuation results are reasonable by applying independent information to make results close to current market conditions, confirming the source of information is independent, reliable and in line with other resources and represented as the exercisable price, and frequently calibrating the valuation model, performing back-testing, updating inputs used to the valuation model and making any other necessary adjustments to the fair value.

H. The following is the qualitative information of significant unobservable inputs and sensitivity analysis of changes in significant unobservable inputs to the valuation model used in Level 3 fair value measurement:

	Fair value at December 31, 2019	Valuation technique	Significant unobservable input		Relationship of inputs to fair value
Unlisted stocks:					
Taiwan Futures Exchange Corporation	$ 3,411,241	Dividend discount method	Dividend growth rate (Note 1)	1.75%	The higher the dividend growth rate, the higher the fair value
			Discount rate (Note 2)	7.62%	The lower the discount rate, the higher the fair value
			Average cash dividends over the last 5 years (in New Taiwan dollars)	2.73	The higher the average cash dividends over the last 5 years, the higher the fair value
Taipei Financial Center Corporation	2,334,462	Discounted cash flow method	Discount rate (Note 2)	4.50%	The lower the discount rate, the higher the fair value
Taiwan Mobile Payment Co., Ltd.	11,178	Net asset value	N/A	-	N/A

	Fair value at December 31, 2018	Valuation technique	Significant unobservable input		Relationship of inputs to fair value
Unlisted stocks:					
Taiwan Futures Exchange Corporation	$ 3,065,928	Dividend discount method	Dividend growth rate (Note 1)	1.75%	The higher the dividend growth rate, the higher the fair value
			Discount rate (Note 2)	7.38%	The lower the discount rate, the higher the fair value
			Average cash dividends over the last 5 years (in New Taiwan dollars)	2.36	The higher the average cash dividends over the last 5 years, the higher the fair value
Taipei Financial Center Corporation	2,590,213	Discounted cash flow method	Discount rate (Note 2)	4.12%	The lower the discount rate, the higher the fair value
Taiwan Mobile Payment Co., Ltd.	11,893	Net asset value	N/A	-	N/A

Note 1: Dividend growth rate was estimated based on Taiwan's long-run economic growth rate.

Note 2: Discount rate was estimated taking into consideration the capital cost structure and operational risk of Taiwan Futures Exchange Corporation and Taipei Financial Center Corporation, respectively.

I. The Company and its subsidiaries have carefully assessed the valuation models and assumptions used to measure fair value; therefore, the fair value measurement is reasonable. However, use of different valuation models or assumptions may result in different measurements. The following is the effect on profit or loss or on other comprehensive income from financial assets and liabilities categorized within Level 3 if the inputs used to the valuation models have changed:

	Input	Change	December 31, 2019: Recognized in profit or loss: Favourable Change	December 31, 2019: Recognized in profit or loss: Unfavourable Change	December 31, 2019: Recognized in other comprehensive income: Favourable Change	December 31, 2019: Recognized in other comprehensive income: Unfavourable Change
Financial assets						
Taiwan Futures Exchange Corporation	Dividend growth rate	±1%	$ -	$ -	$ 374,686	$ 266,415
	Discount rate	±1%	$ -	$ -	$ 355,557	$ 251,363
	Average cash dividends over the last 5 years (in New Taiwan dollars)	± $0.5	$ -	$ -	$ 316,636	$ 316,231
Taipei Financial Center Corporation	Discount rate	±1%	$ -	$ -	$ 576,069	$ 437,712

	Input	Change	December 31, 2018: Recognized in profit or loss: Favourable Change	December 31, 2018: Recognized in profit or loss: Unfavourable Change	December 31, 2018: Recognized in other comprehensive income: Favourable Change	December 31, 2018: Recognized in other comprehensive income: Unfavourable Change
Financial assets						
Taiwan Futures Exchange Corporation	Dividend growth rate	±1%	$ -	$ -	$ 335,431	$ 234,458
	Discount rate	±1%	$ -	$ -	$ 317,837	$ 222,219
	Average cash dividends over the last 5 years (in New Taiwan dollars)	± $0.5	$ -	$ -	$ 312,100	$ 312,100
Taipei Financial Center Corporation	Discount rate	±1%	$ -	$ -	$ 680,046	$ 511,502

J. Changes to level 3 financial instruments for the years ended December 31, 2019 and 2018 are as follows:

		Equity instrument
At January 1, 2019	$	5,668,034
Gains recognized in other comprehensive income		88,847
At December 31, 2019	$	5,756,881

		Equity instrument
At January 1, 2018_IAS 39	$	5,097,636
Adjustments under new standards		12,872
At January 1, 2018_IFRS 9		5,110,508
Gains recognized in other comprehensive income		557,526
At December 31, 2018	$	5,668,034

13. SUPPLEMENTARY DISCLOSURES

(1) Significant transactions information

A. Loans to others: None.

B. Provision of endorsements and guarantees to others: None.

C. Holding of marketable securities at the end of the period (not including subsidiaries and associates): Please refer to table 1.

D. Acquisition or sale of the same security with the accumulated cost exceeding $300 million or 20% of the Company and its subsidiaries' paid-in capital: Please refer to table 2.

E. Acquisition of real estate reaching $300 million or 20% of paid-in capital or more: None.

F. Disposal of real estate reaching $300 million or 20% of paid-in capital or more: None.

G. Purchases or sales of goods from or to related parties reaching $100 million or 20% of paid-in capital or more: None.

H. Receivables from related parties reaching $100 million or 20% of paid-in capital or more: None.

I. Trading in derivative instruments undertaken during the reporting periods: None.

J. Significant inter-company and its subsidiaries' transactions during the reporting periods: Please refer to Note 7 on the parent company only financial statement.

(2) Information on investees

Names, locations and other information of investees: Please refer to table 3.

14. SEGMENT INFORMATION

(1) General information

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker.

(2) Segment information

The segment information provided to the chief operating decision-maker for the reportable segments is as follows:

	Year ended December 31, 2019		
	Stock exchange	Stock custodian	Total
Revenue from external customers	$ 5,812,791	$ 4,722,654	$ 10,535,445
Inter-segment revenue	1,257	622,466	623,723
Total segment revenue	$ 5,814,048	$ 5,345,120	$ 11,159,168
Segment income before tax	$ 3,752,644	$ 3,110,087	$ 6,862,731

	Year ended December 31, 2018		
	Stock exchange	Stock custodian	Total
Revenue from external customers	$ 6,157,010	$ 4,640,122	$ 10,797,132
Inter-segment revenue	-	697,015	697,015
Total segment revenue	$ 6,157,010	$ 5,337,137	$ 11,494,147
Segment income before tax	$ 4,020,411	$ 3,188,853	$ 7,209,264

(3) Reconciliation for reportable segment revenue and income (loss)

Revenue between segments is carried out at arm's length. The revenue from external parties reported to the chief operating decision-maker is measured in a manner consistent with that in the statement of comprehensive income. A reconciliation of reportable segment revenue and operating revenue and reportable segment profit or loss to the profit before tax and continued operations for the years ended December 31, 2019 and 2018 is provided as follows:

	Years ended December 31,	
Revenue	2019	2018
Reportable segments revenue	$ 11,159,168	$ 11,494,147
Other segments revenue	413,281	378,701
Elimination of revenue among segments	(623,723)	(697,015)
Operating revenue	$ 10,948,726	$ 11,175,833

	Years ended December 31,	
Profit (loss)	2019	2018
Reportable segments profit and loss	$ 6,862,731	$ 7,209,264
Other segments profit and loss	83,462	82,226
Elimination of profit and loss among segments	(1,307,911)	(1,352,395)
Profit before tax	$ 5,638,282	$ 5,939,095

(4) Information on product

The Company and its subsidiaries' product information is consistent with operating revenue information in the statements of comprehensive income. Details are provided in the statements of comprehensive income.

(5) Geographical information

The major location where services are rendered by the Company and its subsidiaries is Taiwan.

(6) Major customer information

The Company and its subsidiaries have no customer which accounts for more than 10% of the consolidated revenue.

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES

HOLDING OF MARKETABLE SECURITIES AT THE END OF THE PERIOD (NOT INCLUDING SUBSIDIARIES AND ASSOCIATES)

DECEMBER 31, 2019

Table 1

Expressed in thousands of New Taiwan Dollars
(Except as otherwise indicated)

Securities held by	Marketable securities	Relationship with the securities issuer	General ledger account	As of December 31, 2019 Number of shares (in thousands)	Book value	Fair value	Footnote
	Beneficiary Certificates						
Taiwan Stock Exchange Corporation	Yuanta Taiwan Top 50	None	Financial assets at fair value through profit or loss - current	538	$ 52,159	$ 52,159	None
"	SinoPac Strategies Fund No.1	"	Financial assets at fair value through profit or loss - current	38,820	505,435	505,435	"
"	TIP TAIEX+ Blue Chip 30 Index	"	Financial assets at fair value through profit or loss - current	167	4,046	4,046	"
"	Cathay fund	"	Financial assets at fair value through profit or loss - current	25,000	317,750	317,750	"
"	Cathay Korea/Taiwan IT Premier ETF	"	Financial assets at fair value through profit or loss - current	214	4,635	4,635	"
"	Fubon FTSE TWSE Taiwan 50 ETF	"	Financial assets at fair value through profit or loss - current	200	10,720	10,720	"
"	Fubon TWSE Corporate Governance 100 ETF	"	Financial assets at fair value through profit or loss - current	258	6,208	6,208	"
"	Fubon Taiwan Strategic No.1	"	Financial assets at fair value through profit or loss - current	12,983	214,225	214,225	"
"	Fubon Taiwan Strategic No.2	"	Financial assets at fair value through profit or loss - current	29,105	527,965	527,965	"
"	Fubon Interest Income fund	"	Financial assets at fair value through profit or loss - current	29,940	296,707	296,707	"
Taiwan Depository & Clearing Corporation	Mega Diamond Bond Fund	"	Financial assets at fair value through profit or loss - current	39,715	500,056	500,056	"
"	FSITC Taiwan Money Market Fund	"	Financial assets at fair value through profit or loss - current	32,549	500,052	500,052	"
"	Franklin Templeton Sinoam Money Market Fund	"	Financial assets at fair value through profit or loss - current	24,089	250,027	250,027	"
"	Hua Nan Kirin Money Market Fund	"	Financial assets at fair value through profit or loss - current	30,642	500,052	500,052	"
"	Capital Money Market Fund	"	Financial assets at fair value through profit or loss - current	15,437	250,026	250,026	"
"	Yuanta De-Li Money Market Fund	"	Financial assets at fair value through profit or loss - current	15,273	250,024	250,024	"
"	Tcb-Bank Money Market Fund	"	Financial assets at fair value through profit or loss - current	49,028	500,000	500,000	"
"	CTBC Hwa-win Money Market Fund	"	Financial assets at fair value through profit or loss - current	22,602	250,022	250,022	"
"	Fubon Chi-Hsiang Money Market	"	Financial assets at fair value through profit or loss - current	15,880	250,017	250,017	"
"	Taishin 1699 Money Market Fund.	"	Financial assets at fair value through profit or loss - current	18,406	250,028	250,028	"
"	Cathay Taiwan Money Market	"	Financial assets at fair value through profit or loss - current	6,567	82,001	82,001	"
"	Yuanta/P-shares Taiwan Top 50	"	Financial assets at fair value through profit or loss - current	419	40,622	40,622	"
"	Yuanta/P-shares Taiwan Dividend Plus ETF	"	Financial assets at fair value through profit or loss - current	285	8,256	8,256	"
Taiwan-Ca Inc.	Capital Money Market Fund	"	Financial assets at fair value through profit or loss - current	557	9,019	9,019	"
"	UPAMC James Bond Fund	"	Financial assets at fair value through profit or loss - current	538	9,021	9,021	"
			Total financial assets at fair value through profit or loss - current		$ 5,589,073	$ 5,589,073	

Securities held by	Marketable securities	Relationship with the securities issuer	General ledger account	As of December 31, 2019 Number of shares (in thousands)	Book value	Fair value	Footnote
	Stocks						
Taiwan Stock Exchange Corporation	Taiwan Futures Exchange Corporation	None	Financial assets at fair value through other comprehensive income - non-current	17,707	$ 1,489,853	$ 1,489,853	None
"	Taipei Financial Center Corporation	"	Financial assets at fair value through other comprehensive income - non-current	83,853	2,334,462	2,334,462	"
Taiwan Depository & Clearing Corporation	Taiwan Futures Exchange Corporation	"	Financial assets at fair value through other comprehensive income - non-current	22,836	1,921,388	1,921,388	"
"	Taiwan Mobile Payment Co., Ltd.	"	Financial assets at fair value through other comprehensive income - non-current	1,200	7,452	7,452	"
Taiwan-Ca Inc.	Taiwan Mobile Payment Co., Ltd.	"	Financial assets at fair value through other comprehensive income - non-current	600	3,726	3,726	"
			Total financial assets at fair value through other comprehensive income - non-current		$ 5,756,881	$ 5,756,881	
	Financial bonds						
Taiwan Stock Exchange Corporation	Taiwan Cooperative Bank bond (G12425)	None	Financial assets at amortized cost - current	-	$ 199,955	$ 200,411	None
"	Taiwan Cooperative Bank bond(G12425)-1	"	Financial assets at amortized cost - current	-	300,369	300,617	"
"	Deutsche Bank bond P15DBSG7	"	Financial assets at amortized cost - current	-	172,170	199,218	"
"	Taipei Fubon Bank bond (G107B9)	"	Financial assets at amortized cost - current	-	199,956	201,015	"
"	Hua Nan Commercial Bank bond (G189AB)	"	Financial assets at amortized cost - current	-	499,889	504,483	"
Taiwan Depository & Clearing Corporation	102 Taipei Fubon Bank 1A	"	Financial assets at amortized cost - current	-	199,909	199,995	"
"	Taiwan Cooperative Bank 102 1B	"	Financial assets at amortized cost - current	-	49,949	50,072	"
"	Taiwan Cooperative Bank 102 2A	"	Financial assets at amortized cost - current	-	199,909	200,000	"
"	102 Land Bank of Taiwan 1	"	Financial assets at amortized cost - current	-	199,938	200,000	"
"	Taiwan Business Bank 1st Unsecured Subordinate Financial Debentures - Issue in 2013	"	Financial assets at amortized cost - current	-	300,019	300,621	"
					2,322,063	2,356,432	
	Government bonds						
Taiwan Depository & Clearing Corporation	89 Jia 7 Bond	None	Financial assets at amortized cost - current	-	100,060	100,288	None
			Total financial assets at amortized cost - current		$ 2,422,123	$ 2,456,720	

Securities held by	Marketable securities	Relationship with the securities issuer	General ledger account	As of December 31, 2019 Number of shares (in thousands)	Book value	Fair value	Footnote
	Financial bonds						
Taiwan Stock Exchange Corporation	Mega Bank bond (G11836)	None	Financial assets at amortized cost - non-current	-	$ 301,765	$ 303,654	None
"	Mega Bank bond (G11837)	"	Financial assets at amortized cost - non-current	-	202,667	202,715	"
"	Chinatrust Commercial Bank bond (G11469)	"	Financial assets at amortized cost - non-current	-	199,955	205,278	"
"	Bank SinoPac bond(G11092)	"	Financial assets at amortized cost - non-current	-	200,482	204,312	"
"	Agricultural Bank of Taiwan bond (G13104)	"	Financial assets at amortized cost - non-current	-	201,493	204,421	"
"	Agricultural Bank of Taiwan bond (G13104-1)	"	Financial assets at amortized cost - non-current	-	99,987	102,211	"
"	Land Bank of Taiwan bond (G12719)	"	Financial assets at amortized cost - non-current	-	202,141	204,298	"
"	Shin Kong Bank bond (G11649)	"	Financial assets at amortized cost - non-current	-	201,558	204,506	"
"	Shin Kong Bank bond (G11652)	"	Financial assets at amortized cost - non-current	-	102,002	102,213	"
"	Cathay United Bank bond (G179C1)	"	Financial assets at amortized cost - non-current	-	304,337	308,459	"
"	Taishin International Bank bond (G19983)	"	Financial assets at amortized cost - non-current	-	103,960	106,204	"
"	KGI Bank bond (G12808)	"	Financial assets at amortized cost - non-current	-	199,968	199,764	"
Taiwan Depository & Clearing Corporation	101 E.Sun Bank 2	"	Financial assets at amortized cost - non-current	-	201,278	203,694	"
"	102 Cathay United Bank 1B	"	Financial assets at amortized cost - non-current	-	201,897	204,794	"
"	101 Taiwan Cooperative Bank 2B	"	Financial assets at amortized cost - non-current	-	201,515	203,209	"
"	103 MEGA Bank 2	"	Financial assets at amortized cost - non-current	-	201,100	202,702	"
"	103 MEGA Bank 1	"	Financial assets at amortized cost - non-current	-	201,156	202,198	"
"	101 Cathay United Bank 2	"	Financial assets at amortized cost - non-current	-	202,248	204,499	"
"	105 Taiwan Cooperative Bank 1A	"	Financial assets at amortized cost - non-current	-	199,909	199,998	"
"	105 Chang Hwa Commercial Bank 1A	"	Financial assets at amortized cost - non-current	-	498,028	504,949	"
"	101 Land Bank of Taiwan 4B	"	Financial assets at amortized cost - non-current	-	403,376	407,383	"
"	101 Shanghai Commercial Bank 3B	"	Financial assets at amortized cost - non-current	-	202,680	202,244	"
"	105 Taiwan Business Bank 2	"	Financial assets at amortized cost - non-current	-	402,665	405,535	"
"	106 Shanghai Commercial Bank 1	"	Financial assets at amortized cost - non-current	-	199,938	199,994	"

Securities held by	Marketable securities	Relationship with the securities issuer	General ledger account	As of December 31, 2019 Number of shares (in thousands)	Book value	Fair value	Footnote
Taiwan Depository & Clearing Corporation	Bank Sinopac 1nd Unsecured Subordinate Financial Debentures-B Issue in 2012	None	Financial assets at amortized cost - non-current	-	$ 200,979	$ 203,540	None
"	106 Taiwan Business Bank 1	"	Financial assets at amortized cost - non-current	-	199,928	199,996	"
"	106 Chang Hwa Commercial Bank 1A	"	Financial assets at amortized cost - non-current	-	199,909	199,996	"
"	First Commercial Bank 1st Issue B Tranche Subordinate Financial Debentures Issue in 2012	"	Financial assets at amortized cost - non-current	-	201,183	203,597	"
"	106 Cathay United Bank 2A	"	Financial assets at amortized cost - non-current	-	199,909	199,995	"
"	104 Shanghai Commercial Bank 1	"	Financial assets at amortized cost - non-current	-	101,669	101,702	"
"	106 Shanghai Commercial Bank 2	"	Financial assets at amortized cost - non-current	-	199,938	199,999	"
"	106 Taipei Fubon Bank 3	"	Financial assets at amortized cost - non-current	-	199,909	199,997	"
"	106 Taiwan Cooperative Bank 1A	"	Financial assets at amortized cost - non-current	-	199,909	199,997	"
"	104 Taiwan Business Bank 3	"	Financial assets at amortized cost - non-current	-	208,491	208,569	"
"	107 E.Sun Bank 1A	"	Financial assets at amortized cost - non-current	-	453,348	456,399	"
"	106 Taiwan Business Bank 4	"	Financial assets at amortized cost - non-current	-	206,204	208,527	"
"	107 Shanghai Commercial Bank 1	"	Financial assets at amortized cost - non-current	-	299,907	299,994	"
"	103 Chang Hwa Commercial Bank 1B	"	Financial assets at amortized cost - non-current	-	206,667	206,626	"
"	107 Taipei Fubon Bank 2A	"	Financial assets at amortized cost - non-current	-	199,909	199,997	"
"	103 Taipei Fubon Bank 2	"	Financial assets at amortized cost - non-current	-	208,595	208,783	"
"	06 Cathay United Bank 2B	"	Financial assets at amortized cost - non-current	-	157,393	157,468	"
"	08 Taiwan Business Bank 1A	"	Financial assets at amortized cost - non-current	-	199,928	199,998	"
"	00 First Bank 1B	"	Financial assets at amortized cost - non-current	-	303,614	303,742	"
"	00 Cathay United Bank 2B	"	Financial assets at amortized cost - non-current	-	202,847	200,000	"
"	08 :Land Bank 2	"	Financial assets at amortized cost - non-current	-	100,036	100,066	"
"	05 Hua Nan Bank 1	"	Financial assets at amortized cost - non-current	-	104,131	104,157	"
					9,990,508	10,052,379	
	Corporate bonds						
Taiwan Stock Exchange Corporation	Taiwan Power Company 4th Unsecured Corporate Bond-B Issue in 2011 (B903UK)	None	Financial assets at amortized cost - non-current	-	$ 101,296	$ 101,811	None
"	CPC Corporation 101-2 Secured C (B71872)	"	Financial assets at amortized cost - non-current	-	100,704	101,655	"
"	Taiwan Power Company 5th Unsecured Corporate Bond-B Issue in 2012 (B903V3)	"	Financial assets at amortized cost - non-current	-	100,645	102,041	"
Taiwan Depository & Clearing Corporation	Taipower 106 1A Corporate Bond	"	Financial assets at amortized cost - non-current	-	199,947	201,829	"
					502,592	507,336	
	Government bonds						
Taiwan Stock Exchange Corporation	Taiwan Government Bond A097105	None	Financial assets at amortized cost - non-current	-	$ 52,902	$ 58,190	None
Taiwan Depository & Clearing Corporation	92 Jia 3 Bond	"	Financial assets at amortized cost - non-current	-	246,047	264,221	"
					298,949	322,411	
			Total financial assets at amortized cost - non-current		$ 10,792,049	$ 10,882,126	

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES

ACQUISITION OR SALE OF THE SAME SECURITY WITH THE ACCUMULATED COST EXCEEDING $300 MILLION OR 20% OF THE COMPANY'S PAID-IN CAPITAL

FOR THE YEAR ENDED DECEMBER 31, 2019

Expressed in thousands of New Taiwan Dollars

Table 2

(Except as otherwise indicated)

					Balance as of January 1, 2019		Acquisition		Disposal				Balance as of December 31, 2019		
Investor	Marketable securities	General ledger account	Counterparty	Relationship with the investor	Number of shares (in thousands)	Amount	Number of shares (in thousands)	Amount	Number of shares (in thousands)	Selling price	Book value	Gain (loss) on disposal	Number of shares (in thousands)	Amount	
Taiwan Stock Exchange Corporation	Yuanta Taiwan Top 50	Financial assets at fair value through profit or loss - current	-	-	7,315	$ 552,283	3,954	$ 323,071	(10,731)	$ 942,283	$ (942,283)	$ -	538	$ 52,159	Note
"	Sinopac TWD Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	21,926	304,838	-	-	(21,926)	304,972	(304,972)	-	-	-	"
"	Fubon Interest Income fund	Financial assets at fair value through profit or loss - current	-	-	-	-	29,940	300,000	-	-	-	-	29,940	296,707	"
Taiwan Depository & Clearing Corporation	Mega Diamond Bond Fund	Financial assets at fair value through profit or loss - current	-	-	19,087	239,009	506,742	6,362,973	(486,115)	6,104,574	(6,104,574)	-	39,714	500,056	"
"	FSITC Taiwan Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	32,732	500,023	391,578	6,000,000	(391,760)	6,002,795	(6,002,795)	-	32,550	500,052	"
"	Franklin Templeton Sinoam Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	24,224	250,012	289,812	3,000,000	(289,947)	3,001,392	(3,001,392)	-	24,089	250,027	"
"	Hua Nan Kirin Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	41,821	500,017	83,587	1,000,000	(125,408)	1,500,581	(1,500,581)	-	-	-	"
"	Capital Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	15,518	250,011	192,921	3,117,000	(193,003)	3,118,220	(3,118,220)	-	15,436	250,026	"
"	Yuanta De-Li Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	15,356	250,012	183,732	3,000,000	(183,814)	3,001,353	(3,001,353)	-	15,274	250,024	"
"	Cathay Taiwan Money Market	Financial assets at fair value through profit or loss - current	-	-	-	-	45,988	573,000	(39,421)	491,060	(491,060)	-	6,567	82,001	"
"	Tcb-Bank Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	42,877	435,013	544,243	5,536,954	(538,092)	5,473,609	(5,473,609)	-	49,028	500,000	"
"	CTBC Hwa-win Money Market Fund	Financial assets at fair value through profit or loss - current	-	-	20,357	224,006	278,288	3,070,996	(276,043)	3,046,201	(3,046,201)	-	22,602	250,022	"
"	Fubon Chi-Hsiang Money Market	Financial assets at fair value through profit or loss - current	-	-	-	-	121,605	1,910,000	(105,725)	1,660,309	(1,660,309)	-	15,880	250,017	"
"	Taishin 1699 Money Market Fund.	Financial assets at fair value through profit or loss - current	-	-	-	-	73,676	1,000,000	(55,270)	750,377	(750,377)	-	18,406	250,028	"
"	Hua Nan Phoenix Money Market	Financial assets at fair value through profit or loss - current	-	-	-	-	354,131	5,765,989	(323,488)	5,267,964	(5,267,964)	-	30,643	500,052	"

Note: The ending balance would not exactly reconcile to the beginning balance add/deduct the amount of acquisitions/disposals, as the fair value adjustments were included in the selling price and the carrying amount of securities.

TAIWAN STOCK EXCHANGE CORPORATION AND SUBSIDIARIES

NAMES, LOCATIONS AND OTHER INFORMATIONS OF INVESTEES

FOR THE YEAR ENDED DECEMBER 31, 2019

Table 3

Expressed in thousands of New Taiwan Dollars

(Except as otherwise indicated)

				Initial investment amount		Shares held as of December 31, 2019					
Investor	Investee	Location	Main business activities	Balance as of December 31, 2019	Balance as of December 31, 2018	Number of shares (in thousands)	Ownership (%)	Book value	Net profit (loss) of the investee for the year ended December 31, 2019	Investment income recognized by the Company for the year ended December 31, 2019	Footnote
Taiwan Stock Exchange Corporation	Taiwan Depository & Clearing Corporation	11F, No. 363, Fusing N. Rd., Taipei City	Custodian of securities and other services	$ 583,107	$ 583,107	192,050	50.59%	$ 13,524,205	$ 2,514,076	$ 1,271,887	The Company's subsidiaries
"	Taiwan-Ca Inc.	10F, No. 85, Yanping S. Rd., Taipei City	Online verification services	87,720	87,720	7,557	30.23%	106,142	50,981	15,668	"
"	Taiwan Index Plus Corporation	11F.-1, No.36, Songren Rd., Taipei City	Index compilation, maintenance and dissemination	150,000	150,000	15,000	100.00%	164,025	11,395	11,395	"
"	Taiwan Ratings Corporation	49F, No. 7, Sec. 5, Sinyi Rd., Taipei City	Credit rating services	15,045	15,045	1,399	19.99%	27,849	38,583	7,713	The investee company accounted for using the equity method
Taiwan Depository & Clearing Corporation	Fundrich Securitites Co., Ltd.	8F, No. 365, Fusing N. Rd., Songshan Dis., Taipei City	Sales of funds	439,834	439,834	33,985	56.64%	354,641	(11,695)	-	-
"	Taiwan-Ca Inc.	10F, No. 85, Yanping S. Rd., Taipei City	Online verification services	9,700	9,700	4,521	18.08%	61,568	50,981	-	-
"	Taiwan Ratings Corporation	49F, No. 7, Sec. 5, Sinyi Rd., Taipei City	Credit rating services	13,300	13,300	1,330	19.00%	26,470	38,583	-	-
Taiwan- Ca Inc.	Taiwan Ratings Corporation	49F, No. 7, Sec. 5, Sinyi Rd., Taipei City	Credit rating services	4	4	1	0.01%	4	38,583	-	-