# Taiwan Cooperative Bank, Ltd. and Subsidiary

## Consolidated Financial Statements for the Years Ended December 31, 2019 and 2018 and Independent Auditors' Report

## INDEPENDENT AUDITORS' REPORT

The Board of Directors and the Stockholder
Taiwan Cooperative Bank, Ltd.

### Opinion

We have audited the accompanying consolidated financial statements of Taiwan Cooperative Bank, Ltd. (the Bank) and its subsidiary (collectively, the Company), which comprise the consolidated balance sheets as of December 31, 2019 and 2018, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of Taiwan Cooperative Bank, Ltd. and its subsidiary as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Public Banks, Regulations Governing the Preparation of Financial Reports by Securities Firms, International Financial Reporting Standards, International Accounting Standards, Interpretation of IFRS and Interpretations of IAS endorsed and issued into effect by the Financial Supervisory Commission (FSC) of the Republic of China.

### Basis for Opinion

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

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of Taiwan Cooperative Bank, Ltd. and its subsidiary for the year ended December 31, 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters in our audit of the consolidated financial statements for the year ended December 31, 2019 were as follows:

Impairment Assessment on Discounts and Loans

The discounts and loans of Taiwan Cooperative Bank, Ltd. and its subsidiary as of December 31, 2019 were $2,220,541,093 thousand, consisting 63% of the total consolidated assets. Therefore, the assessment on the impairment loss of discounts and loans may have significant impacts on the consolidated financial statements. The Company was required to assess the impairment on loans in accordance with IFRS 9 "Financial Instruments" and the "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans."

For the accounting policies and critical accounting judgements and estimations of the Bank's impairment assessment of loans, refer to Notes 4 and 5 to the consolidated financial statements; for the relevant information on the impairment assessment of loans, refer to Note 13 to the consolidated financial statements.

When assessing whether to recognize impairment loss on loans in accordance with the FSC guidelines, the main judgment of the management of the Bank is the assessment of possible loss of the credit assets, including whether the credit assets are classified based on the length of time the loans have been overdue and the value of the collateral when assessing the impairment loss. As the impairment assessment of loans involves many significant judgments and estimates and are material to the financial statements, it was identified as a key audit matter.

With respect to the critical judgements, estimations, and assumptions used in the assessment of impairment loss, the main audit procedures we performed were as follows:

1. Understand and test the internal controls of impairment assessment on loans performed by the Bank.

2. Test the classification of credit assets of the Bank to evaluate whether the classification of credit assets and provisions of impairment loss are appropriate and in accordance with the FSC guidelines by considering the length of time the loans have been overdue and the value of the collaterals.

**Other Matters**

Taiwan Cooperative Bank, Ltd. has prepared the parent company only financial statements for the years ended December 31, 2019 and 2018. We have an unqualified audit opinion on the parent company only financial statements.

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

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Public Banks, Regulations Governing the Preparation of Financial Reports by Securities Firms, International Financial Reporting Standards, International Accounting Standards, Interpretation of IFRS and Interpretations of IAS endorsed by the Financial Supervisory Commission of the Republic of China, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

Those charged with governance, including supervisors, are responsible for overseeing the financial reporting process of Taiwan Cooperative Bank, Ltd. and its subsidiary.

**Auditors' Responsibilities for the Audit of the Consolidated Financial Statements**

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

As part of an audit in accordance with auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Taiwan Cooperative Bank, Ltd. and its subsidiary's internal control.

3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on Taiwan Cooperative Bank, Ltd. and its subsidiary's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause Taiwan Cooperative Bank, Ltd. and its subsidiary to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient appropriate audit evidence of the consolidated financial information of the components of Taiwan Cooperative Bank, Ltd. and its subsidiary to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision, and performance of the group audit. We remain solely responsible for our audit opinion.

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

From the matters communicated with those charged with governance, we determine those matters that were of the most significance in the audit of the consolidated financial statements for the year ended December 31, 2019 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Yin-Chou Chen and Cheng-Hung Kuo.

Deloitte & Touche
Taipei, Taiwan
Republic of China

March 23, 2020

*Notice to Readers*

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

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

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED BALANCE SHEETS**
**DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars)**

| | 2019 | | 2018 | |
|---|---|---|---|---|
| **ASSETS** | **Amount** | **%** | **Amount** | **%** |
| CASH AND CASH EQUIVALENTS (Notes 4 and 6) | $ 59,011,728 | 2 | $ 54,926,251 | 2 |
| DUE FROM THE CENTRAL BANK AND CALL LOANS TO OTHER BANKS (Notes 4, 7, 36 and 37) | 267,127,306 | 8 | 264,471,052 | 8 |
| FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS (Notes 4, 8 and 36) | 13,105,474 | - | 9,490,716 | - |
| FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME (Notes 4 and 9) | 329,128,892 | 9 | 256,663,367 | 8 |
| INVESTMENT IN DEBT INSTRUMENTS AT AMORTIZED COST (Notes 4, 10 and 37) | 555,630,712 | 16 | 556,155,565 | 17 |
| SECURITIES PURCHASED UNDER RESELL AGREEMENTS (Notes 4, 11 and 36) | - | - | 3,521,000 | - |
| RECEIVABLES, NET (Notes 4, 12, 36 and 43) | 18,831,979 | - | 18,462,006 | - |
| CURRENT TAX ASSETS (Notes 4, 33 and 36) | 1,182,787 | - | 1,509,126 | - |
| DISCOUNTS AND LOANS, NET (Notes 4, 13, 36 and 37) | 2,192,653,230 | 63 | 2,059,699,683 | 63 |
| INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD (Notes 4 and 14) | 131,500 | - | 127,094 | - |
| OTHER FINANCIAL ASSETS, NET (Notes 4, 15, 36 and 37) | 18,843,570 | 1 | 18,727,650 | 1 |
| PROPERTIES AND EQUIPMENT, NET (Notes 4 and 16) | 33,522,454 | 1 | 33,630,953 | 1 |
| RIGHT-OF-USE ASSETS, NET (Notes 4 and 17) | 1,700,122 | - | - | - |
| INVESTMENT PROPERTIES, NET (Notes 4 and 18) | 7,443,865 | - | 7,151,574 | - |
| INTANGIBLE ASSETS (Notes 4 and 19) | 3,635,766 | - | 3,551,969 | - |
| DEFERRED TAX ASSETS (Notes 4 and 33) | 2,221,537 | - | 1,388,293 | - |
| OTHER ASSETS (Notes 4, 17 and 20) | 1,662,444 | - | 1,102,618 | - |
| TOTAL | $ 3,505,833,366 | 100 | $ 3,290,578,917 | 100 |
| **LIABILITIES AND EQUITY** | | | | |
| DUE TO THE CENTRAL BANK AND OTHER BANKS (Notes 21 and 36) | $ 232,626,241 | 7 | $ 213,670,353 | 7 |
| FINANCIAL LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS (Notes 4, 8, 25 and 36) | 16,021,128 | 1 | 12,953,221 | 1 |
| SECURITIES SOLD UNDER REPURCHASE AGREEMENTS (Notes 4, 8, 9 and 22) | 7,976,909 | - | 9,602,141 | - |
| PAYABLES (Notes 23 and 36) | 37,887,301 | 1 | 43,903,047 | 1 |
| CURRENT TAX LIABILITIES (Notes 4, 33 and 36) | 2,131,559 | - | 1,120,604 | - |
| DEPOSITS AND REMITTANCES (Notes 24 and 36) | 2,898,544,814 | 83 | 2,728,752,030 | 83 |
| BANK DEBENTURES (Note 25) | 65,000,000 | 2 | 55,000,000 | 2 |
| OTHER FINANCIAL LIABILITIES (Notes 18, 26 and 36) | 4,137,499 | - | 3,166,974 | - |
| PROVISIONS (Notes 4, 27 and 28) | 8,221,785 | - | 8,025,529 | - |
| LEASE LIABILITIES (Notes 4 and 17) | 1,627,816 | - | - | - |
| DEFERRED TAX LIABILITIES (Notes 4, 16 and 33) | 3,216,996 | - | 3,292,854 | - |
| OTHER LIABILITIES | 1,191,720 | - | 1,137,459 | - |
| Total liabilities | 3,278,583,768 | 94 | 3,080,624,212 | 94 |
| EQUITY ATTRIBUTABLE TO OWNERS OF THE BANK | | | | |
| Capital stock | | | | |
| Common stock | 96,765,300 | 3 | 90,310,300 | 2 |
| Capital surplus | | | | |
| Additional paid-in capital from share issuance in excess of par value | 58,664,088 | 1 | 58,664,088 | 2 |
| From treasury stock transactions | 103,157 | - | 103,157 | - |
| Total capital surplus | 58,767,245 | 1 | 58,767,245 | 2 |
| Retained earnings | | | | |
| Legal reserve | 41,281,015 | 1 | 36,852,305 | 1 |
| Special reserve | 1,291,395 | - | 1,282,079 | - |
| Unappropriated earnings | 21,839,759 | 1 | 20,018,974 | 1 |
| Total retained earnings | 64,412,169 | 2 | 58,153,358 | 2 |
| Other equity | 7,085,073 | - | 2,503,338 | - |
| Total equity attributable to owners of the Bank | 227,029,787 | 6 | 209,734,241 | 6 |
| NON-CONTROLLING INTEREST | 219,811 | - | 220,464 | - |
| Total equity | 227,249,598 | 6 | 209,954,705 | 6 |
| TOTAL | $ 3,505,833,366 | 100 | $ 3,290,578,917 | 100 |

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

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
## FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
## (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

| | 2019 | | 2018 | | Percentage Increase (Decrease) |
|---|---|---|---|---|---|
| | Amount | % | Amount | % | % |
| INTEREST REVENUE (Notes 4, 29 and 36) | $ 58,860,164 | 126 | $ 55,502,295 | 125 | 6 |
| INTEREST EXPENSE (Notes 4, 29 and 36) | (24,535,358) | (52) | (21,544,412) | (49) | 14 |
| NET INTEREST | 34,324,806 | 74 | 33,957,883 | 76 | 1 |
| NET REVENUES AND GAINS OTHER THAN INTEREST | | | | | |
| Service fee income, net (Notes 4, 30, 36 and 43) | 6,546,582 | 14 | 6,188,619 | 14 | 6 |
| Gains on financial assets and liabilities at fair value through profit or loss (Notes 4, 31 and 36) | 1,124,514 | 2 | 3,536,147 | 8 | (68) |
| Realized gains on financial assets at fair value through other comprehensive income (Notes 4 and 9) | 2,000,992 | 4 | 1,701,355 | 4 | 18 |
| Gain on derecognition of financial assets at amortized cost, net (Notes 4 and 10) | 18,489 | - | - | - | - |
| Foreign exchange gains (losses), net (Note 4) | 2,148,711 | 5 | (1,726,192) | (4) | 224 |
| Impairment losses on assets (Notes 4, 9 and 10) | (20,283) | - | (18,718) | - | 8 |
| Share of gains of associates and joint ventures accounted for using the equity method (Notes 4 and 14) | 10,475 | - | 11,346 | - | (8) |
| Other noninterest gains, net (Notes 18, 36 and 43) | 481,870 | 1 | 757,714 | 2 | (36) |
| Total net revenues and gains other than interest | 12,311,350 | 26 | 10,450,271 | 24 | 18 |
| TOTAL NET REVENUES | 46,636,156 | 100 | 44,408,154 | 100 | 5 |

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# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars, Except Earnings Per Share)**

| | 2019 | | 2018 | | Percentage Increase (Decrease) |
|---|---|---|---|---|---|
| | Amount | % | Amount | % | % |
| BAD-DEBT EXPENSES AND PROVISION FOR LOSSES ON COMMITMENT AND GUARANTEES (Notes 4 and 13) | $ (4,131,094) | (9) | $ (4,414,481) | (10) | (6) |
| OPERATING EXPENSES (Notes 4, 16, 17, 18, 19, 28, 32 and 36) | | | | | |
| Employee benefits | (15,580,384) | (34) | (15,194,765) | (34) | 3 |
| Depreciation and amortization | (1,758,728) | (4) | (1,233,886) | (3) | 43 |
| General and administrative | (6,249,358) | (13) | (6,597,894) | (15) | (5) |
| Total operating expenses | (23,588,470) | (51) | (23,026,545) | (52) | 2 |
| INCOME BEFORE INCOME TAX | 18,916,592 | 40 | 16,967,128 | 38 | 11 |
| INCOME TAX EXPENSE (Notes 4 and 33) | (2,911,685) | (6) | (2,198,595) | (5) | 32 |
| NET INCOME | 16,004,907 | 34 | 14,768,533 | 33 | 8 |
| OTHER COMPREHENSIVE INCOME | | | | | |
| Items that will not be reclassified subsequently to profit or loss (Notes 4 and 28) | | | | | |
| Remeasurement of defined benefit plans | (331,269) | (1) | (277,249) | - | 19 |
| Unrealized gains (losses) on investments in equity instruments at fair value through other comprehensive income | 2,640,684 | 6 | (904,885) | (2) | 392 |
| Changes in the fair value attributable to changes in the credit risk of financial liabilities designated as at fair value through profit or loss | (14,696) | - | 13,252 | - | (211) |
| Items that will not be reclassified subsequently to profit or loss, net of income tax | 2,294,719 | 5 | (1,168,882) | (2) | 296 |

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# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
## FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
## (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

| | 2019 | | 2018 | | Percentage Increase (Decrease) |
|---|---|---|---|---|---|
| | Amount | % | Amount | % | % |
| Items that may be reclassified subsequently to profit or loss (Notes 4, 14 and 33) | | | | | |
| Exchange differences on the translation of financial statements of foreign operations | $ (1,168,205) | (2) | $ 1,082,231 | 2 | (208) |
| Share of other comprehensive losses of associates and joint ventures accounted for using the equity method | - | - | (3,034) | - | 100 |
| Unrealized gains (losses) on investments in debt instruments at fair value through other comprehensive income | 2,949,073 | 6 | (923,759) | (2) | 419 |
| Income tax attributable to other comprehensive income | 167,399 | - | (169,391) | - | 199 |
| Items that may be reclassified subsequently to profit or loss, net of income tax | 1,948,267 | 4 | (13,953) | - | 14,063 |
| Other comprehensive income (losses), net of income tax | 4,242,986 | 9 | (1,182,835) | (2) | 459 |
| TOTAL COMPREHENSIVE INCOME | $ 20,247,893 | 43 | $ 13,585,698 | 31 | 49 |
| NET INCOME ATTRIBUTABLE TO: | | | | | |
| Owner of the Bank | $ 15,995,656 | 34 | $ 14,762,366 | 33 | 8 |
| Non-controlling interest | 9,251 | - | 6,167 | - | 50 |
| | $ 16,004,907 | 34 | $ 14,768,533 | 33 | 8 |
| TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO: | | | | | |
| Owner of the Bank | $ 20,248,546 | 43 | $ 13,581,244 | 31 | 49 |
| Non-controlling interest | (653) | - | 4,454 | - | (115) |
| | $ 20,247,893 | 43 | $ 13,585,698 | 31 | 49 |

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# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars, Except Earnings Per Share)**

| | 2019 | | 2018 | | Percentage Increase (Decrease) |
|---|---|---|---|---|---|
| | Amount | % | Amount | % | % |
| EARNINGS PER SHARE (NEW TAIWAN DOLLARS; Note 34) | | | | | |
| Basic | $1.65 | | $1.53 | | |

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

## TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY**
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars)**

| | Equity Attributable to Owners of the Bank | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Other Equity | | | | | |
| | Capital Stock (Note 35) | | | Retained Earnings (Notes 4 and 35) | | | | | | | | |
| | Shares (In Thousands) | Common Stock | Capital Surplus (Notes 4 and 35) | Legal Reserve | Special Reserve | Unappropriated Earnings | Exchange Differences on Translation of Financial Statement of Foreign Operations (Note 4) | Unrealized Valuation Gains (Losses) on Financial Assets at Fair Value Through Other Comprehensive Income (Notes 4 and 9) | Unrealized Gains (Losses) on Available-for-sale Financial Assets | Changes in the Fair Value Attributable to Changes in the Credit Risk of Financial Liabilities Designated as at Fair Value through Profit or Loss (Note 4) | Non-controlling Interest (Note 35) | Total Equity |
| BALANCE, JANUARY 1, 2018 | 8,808,130 | $ 88,081,300 | $ 58,767,245 | $ 32,982,547 | $ 1,280,201 | $ 18,723,762 | $ (1,120,071) | $ - | $ 1,543,255 | $ 2,414 | $ 216,019 | $ 200,476,672 |
| Effect of retrospective application | - | - | - | - | - | (314,712) | - | 4,200,311 | (1,543,255) | - | (9) | 2,342,335 |
| BALANCE AT JANUARY 1, 2018 AS RESTATED | 8,808,130 | 88,081,300 | 58,767,245 | 32,982,547 | 1,280,201 | 18,409,050 | (1,120,071) | 4,200,311 | - | 2,414 | 216,010 | 202,819,007 |
| Reversal of special reserve | - | - | - | - | (62,618) | 62,618 | - | - | - | - | - | - |
| Appropriation of the 2017 earnings | | | | | | | | | | | | |
| Legal reserve | - | - | - | 3,869,758 | - | (3,869,758) | - | - | - | - | - | - |
| Special reserve | - | - | - | - | 64,496 | (64,496) | - | - | - | - | - | - |
| Cash dividends | - | - | - | - | - | (6,450,000) | - | - | - | - | - | (6,450,000) |
| Stock dividends | 222,900 | 2,229,000 | - | - | - | (2,229,000) | - | - | - | - | - | - |
| Disposal of investments in equity instruments at fair value through other comprehensive income | - | - | - | - | - | (324,557) | - | 324,557 | - | - | - | - |
| Total comprehensive income | | | | | | | | | | | | |
| Net income for the year ended December 31, 2018 | - | - | - | - | - | 14,762,366 | - | - | - | - | 6,167 | 14,768,533 |
| Other comprehensive income for the year ended December 31, 2018 | - | - | - | - | - | (277,249) | 905,546 | (1,822,671) | - | 13,252 | (1,713) | (1,182,835) |
| Total comprehensive income for the year ended December 31, 2018 | - | - | - | - | - | 14,485,117 | 905,546 | (1,822,671) | - | 13,252 | 4,454 | 13,585,698 |
| BALANCE, DECEMBER 31, 2018 | 9,031,030 | 90,310,300 | 58,767,245 | 36,852,305 | 1,282,079 | 20,018,974 | (214,525) | 2,702,197 | - | 15,666 | 220,464 | 209,954,705 |
| Reversal of special reserve | - | - | - | - | (64,496) | 64,496 | - | - | - | - | - | - |
| Appropriation of the 2018 earnings | | | | | | | | | | | | |
| Legal reserve | - | - | - | 4,428,710 | - | (4,428,710) | - | - | - | - | - | - |
| Special reserve | - | - | - | - | 73,812 | (73,812) | - | - | - | - | - | - |
| Cash dividends | - | - | - | - | - | (2,953,000) | - | - | - | - | - | (2,953,000) |
| Stock dividends | 645,000 | 6,455,000 | - | - | - | (6,455,000) | - | - | - | - | - | - |
| Disposal of investments in equity instruments at fair value through other comprehensive income | - | - | - | - | - | 2,424 | - | (2,424) | - | - | - | - |
| Total comprehensive income | | | | | | | | | | | | |
| Net income for the year ended December 31, 2019 | - | - | - | - | - | 15,995,656 | - | - | - | - | 9,251 | 16,004,907 |
| Other comprehensive income for the year ended December 31, 2019 | - | - | - | - | - | (331,269) | (926,641) | 5,525,496 | - | (14,696) | (9,904) | 4,242,986 |
| Total comprehensive income for the year ended December 31, 2019 | - | - | - | - | - | 15,664,387 | (926,641) | 5,525,496 | - | (14,696) | (653) | 20,247,893 |
| BALANCE, DECEMBER 31, 2019 | 9,676,030 | $ 96,765,300 | $ 58,767,245 | $ 41,281,015 | $ 1,291,395 | $ 21,839,759 | $ (1,141,166) | $ 8,225,269 | $ - | $ 970 | $ 219,811 | $ 227,249,598 |

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

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars)**

| | 2019 | 2018 |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| Income before income tax | $ 18,916,592 | $ 16,967,128 |
| Adjustments for : | | |
| Depreciation expenses | 1,601,202 | 1,089,226 |
| Amortization expenses | 157,526 | 144,660 |
| Expected credit losses/bad-debt expenses | 4,000,442 | 4,305,008 |
| Gains on financial assets and liabilities at fair value through profit or loss | (1,124,514) | (3,536,147) |
| Interest expense | 24,535,358 | 21,544,412 |
| Gain on derecognition of financial assets at amortized cost | (18,489) | - |
| Interest revenue | (58,860,164) | (55,502,295) |
| Dividend income | (981,973) | (617,800) |
| Provision for losses on guarantees | 79,661 | 103,036 |
| Net changes in reserves for other liabilities | 50,991 | 6,437 |
| Share of gains of associates and joint ventures accounted for using equity method | (10,475) | (11,346) |
| Losses on disposal of properties and equipment | 2,686 | 2,034 |
| Gains on disposal of investment properties | - | (258) |
| Gains on disposal of investments | (1,019,019) | (1,083,555) |
| Impairment losses on financial assets | 20,283 | 18,718 |
| Other lease gains | (45) | - |
| Net changes in operating assets and liabilities | | |
| Decrease (increase) in due from the Central Bank and call loans to other banks | 14,927,112 | (24,051,635) |
| Decrease in financial assets at fair value through profit or loss | 9,920,133 | 18,631,853 |
| Increase in financial assets at fair value through other comprehensive income | (69,198,924) | (17,063,086) |
| Increase in investments in debt instruments at amortized cost | (1,815,131) | (38,823,010) |
| Decrease (increase) in receivables | (267,139) | 1,406,523 |
| Increase in discount and loans | (136,417,716) | (61,547,268) |
| Decrease (increase) in other financial assets | (284,944) | 1,713,336 |
| Increase in other assets | (987,468) | (52,756) |
| Increase in due to the Central Bank and other banks | 18,955,888 | 294,322 |
| Decrease in financial liabilities at fair value through profit or loss | (8,652,243) | (12,893,386) |
| Decrease in securities sold under repurchase agreements | (1,625,232) | (775,001) |
| Decrease in payables | (6,914,375) | (2,277,931) |
| Increase in deposits and remittances | 169,792,784 | 104,013,033 |
| Increase (decrease) in other financial liabilities | 630,352 | (241,078) |
| Decrease in provision for employee benefits | (262,807) | (148,244) |
| Increase in other liabilities | 64,800 | 16,680 |
| Cash used in operations | (24,784,848) | (48,368,390) |
| Interest received | 60,252,086 | 55,589,803 |
| Dividends received | 1,030,896 | 639,178 |

(Continued)

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

## CONSOLIDATED STATEMENTS OF CASH FLOWS
## FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
## (In Thousands of New Taiwan Dollars)

| | 2019 | 2018 |
|---|---|---|
| Interest paid | $ (24,218,322) | $ (21,126,420) |
| Income tax paid | (2,306,434) | (2,352,843) |
| Net cash generated from (used in) operating activities | 9,973,378 | (15,618,672) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Acquisition of properties and equipment | (1,219,509) | (966,457) |
| Increase in refundable deposits | - | (441,936) |
| Decrease in refundable deposits | 350,790 | - |
| Acquisition of intangible assets | (234,771) | (194,214) |
| Acquisition of investment properties | (30,604) | (95) |
| Disposal of investment properties | - | 379 |
| Increase in other assets | (15,621) | (12) |
| Net cash used in investing activities | (1,149,715) | (1,602,335) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | |
| Proceeds of the issuance of bank debentures | 11,000,000 | 5,000,000 |
| Repayment of bank debentures | (1,000,000) | (14,610,000) |
| Increase in guarantee deposits received | 362,034 | - |
| Decrease in guarantee deposits received | - | (341,493) |
| Repayments of the principal portion of lease liabilities | (571,419) | - |
| Dividends paid | (2,953,000) | (6,450,000) |
| Net cash generated from (used in) financing activities | 6,837,615 | (16,401,493) |
| EFFECTS OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS | 2,359,155 | 914,857 |
| NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS | 18,020,433 | (32,707,643) |
| CASH AND CASH EQUIVALENTS, BEGINNING OF THE YEAR | 73,343,729 | 106,051,372 |
| CASH AND CASH EQUIVALENTS, END OF THE YEAR | $ 91,364,162 | $ 73,343,729 |

(Continued)

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars)**

Cash and cash equivalent reconciliations:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Cash and cash equivalents in the consolidated balance sheets | $ 59,011,728 | $ 54,926,251 |
| Due from the Central Bank and call loans to other banks in accordance with the definition of cash and cash equivalents under IAS 7 "Statement of Cash Flows" | 32,172,494 | 14,589,128 |
| Securities purchased under resell agreements in accordance with the definition of cash and cash equivalents under IAS 7 "Statement of Cash Flows" | - | 3,521,000 |
| Other items in accordance with the definition of cash and cash equivalents under IAS 7 "Statement of Cash Flows" | 179,940 | 307,350 |
| Cash and cash equivalents, end of the year | $ 91,364,162 | $ 73,343,729 |

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

## 1. ORGANIZATION AND OPERATIONS

Taiwan Cooperative Bank, Ltd. (the Bank) was officially established on October 5, 1946 to regulate the supply of and demand for funds for cooperative organizations by accepting their surplus funds as deposits and extending working funds to them. On February 10, 2006, the Bank changed its Chinese name upon approval by the Ministry of Economic Affairs. However, the Bank's English name remains unchanged. The Bank became a legal entity in 1985 in accordance with the Banking Law. At the start of 2001, the Bank was converted into a corporate entity engaged in (a) all commercial banking operations allowed under the Banking Law; (b) international banking operations; (c) overseas branch operations as authorized by the respective foreign governments; and (d) other operations as authorized by the central authority-in-charge.

The Bank's shares have been listed on the Taiwan Stock Exchange since November 17, 2004.

The Bank merged with the Farmers Bank of China (FBC) on May 1, 2006, with the Bank as the survivor entity.

On June 24, 2011, the Bank's stockholders approved the establishment of Taiwan Cooperative Financial Holding Company, Ltd. (TCFHC) by swapping the Bank's shares with those Co-operative Asset Management Co., Ltd. (CAM) and Taiwan Cooperative Bills Finance Corporation Ltd. (TCBF) in accordance with the "Financial Holding Company Act" and other regulations. The boards of directors of the Bank, CAM and TCBF designated December 1, 2011 as the effective date of the share swap. After the shares transfer, the Bank became a 100% subsidiary of TCFHC. Also on December 1, 2011, the trading of the Bank's stock on the Taiwan Stock Exchange (TSE) was stopped, and TCFHC's stock started to be traded on the TSE.

On December 2, 2011, the Bank reduced its capital by NT$3 billion and spun off its Security Department to incorporate Taiwan Cooperative Securities Corp. (TCS), which became a 100% subsidiary of TCFHC.

The Bank has its Head Office in Taipei. It had a Business, International Banking, Finance, Credit Card, Trust and Insurance Agent Departments as well as 269 domestic branches, an offshore banking unit (OBU), 12 overseas branches, 8 overseas sub-branches and 2 representative offices as of December 31, 2019.

The operations of the Bank's Trust Department are (1) planning, managing and operating the trust business and (2) custodianship of nondiscretionary trust fund in domestic and overseas securities and mutual funds. These operations are regulated under the Banking Law and Trust Law of the Republic of China (ROC).

The Bank set up United Taiwan Bank S.A. (UTB) in Belgium through the raising of funds with Bank of Taiwan, Land Bank of Taiwan and Taiwan Business Bank and acquired 70% of the shares in UTB. On October 9, 2009, the Bank bought shares of UTB held by Taiwan Business Bank for $127,279 thousand. Thus, the Bank's holdings in UTB increased to 80%. In July 2010, the Bank subscribed for all the new shares issued by UTB for EUR20,000 thousand ($785,770 thousand). Thus, the Bank's holdings in UTB increased to 90.02%. UTB started its operation, mainly the general deposits and loans business, on December 23, 1992 and is a subsidiary of the Bank.

In order to integrate resources and enhance operating effectiveness, the board of directors of the Bank and Cooperative Insurance Brokers Co., Ltd. (CIB) decided to merge the Bank and CIB on April 25, 2016. The effective date of the merger was June 24, 2016. In this merger, the Bank was the surviving entity.

As of December 31, 2019 and 2018, the Bank and its subsidiary (the Company) had 8,585 and 8,286 employees, respectively.

The operating units of the Company maintain their accounts in their respective functional currencies. The consolidated financial statements are presented in New Taiwan dollars.

## 2. APPROVAL OF CONSOLIDATED FINANCIAL STATEMENTS

The consolidated financial statements were approved by the Bank's board of directors on March 23, 2020.

## 3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS AND INTERPRETATIONS

a. Effects of initial application of the amended Regulations Governing the Preparation of Financial Reports by Public Banks, Regulations Governing the Preparation of Financial Reports by Securities Firms, and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) endorsed and issued into effect by the Financial Supervisory Commission (FSC)

Except for the following, the initial application of the above New IFRSs in 2019 and related amendments to the Regulations Governing the Preparation of Financial Reports by Public Banks, Regulations Governing the Preparation of Financial Reports by Securities Firms did not have any material impact on the Company's accounting policies:

- IFRS 16 "Leases"

IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessee and lessor. It supersedes IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", and a number of related interpretations. Refer to Note 4 for information relating to the relevant accounting policies.

Definition of a lease

Upon initial application of IFRS 16, the Company reassesses whether a contract is, or contains, a lease in accordance with the definition of a lease under IFRS 16. Contracts that are reassessed as containing leases are accounted for in accordance with the transitional provisions under IFRS 16.

The Company as lessee

The Company recognizes right-of-use assets or investment properties if the right-of-use assets meet the definition of investment properties, and lease liabilities for all leases on the consolidated balance sheets except for those whose payments under low-value asset and short-term leases are recognized as expenses on a straight-line basis. On the consolidated statements of comprehensive income, the Company presents the depreciation expense charged on right-of-use assets separately from the interest expense accrued on lease liabilities; interest is computed using the effective interest method. On the consolidated statements of cash flows, cash payments for the principal portion of lease liabilities are classified within financing activities; cash payments for the interest portion are classified within operating activities. Prior to the application of IFRS 16, payments under operating lease contracts, were recognized as expenses on a straight-line basis. Cash flows for operating leases were classified within operating activities on the consolidated statements of cash flows. Leased assets and finance lease payables were recognized on the consolidated balance sheets for contracts classified as finance leases.

The Company elects to apply IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized in retained earnings on January 1, 2019. Comparative information is not restated. However, the Company do not adjust retained earnings on January 1, 2019 due to effect of IFRS 16 retrospective application.

Lease liabilities were recognized on January 1, 2019 for leases previously classified as operating leases under IAS 17. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019. Right-of-use assets are measured at an amount equal to the lease liabilities, adjusted by the amount of any prepaid or accrued lease payments, the Company applies IAS 36 to all right-of-use assets.

The Company also applies the following practical expedients:

1) The Company applies a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.

2) The Company accounts for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.

3) The Company excludes initial direct costs from the measurement of right-of-use assets on January 1, 2019.

4) The Company uses hindsight, such as in determining lease terms, to measure lease liabilities.

For leases previously classified as finance leases under IAS 17, the carrying amounts of right-of-use assets and lease liabilities on January 1, 2019 are determined as at the carrying amounts of the respective leased assets and finance lease payables on December 31, 2018.

The weighted average lessee's incremental borrowing rate applied to lease liabilities recognized on January 1, 2019 is 3.015%. The difference between the (i) lease liabilities recognized and (ii) operating lease commitments disclosed under IAS 17 on December 31, 2018 is explained as follows:

| | |
|---|---|
| The future minimum lease payments of operating lease commitments on December 31, 2018 | $ 1,904,452 |
| Less: The future minimum lease payments of cancellable operating lease commitments on December 31, 2018 | (197,814) |
| The future minimum lease payments of non-cancellable operating lease commitments on December 31, 2018 | 1,706,638 |
| Less: Recognition exemption for short-term leases and leases of low-value assets | (61,326) |
| Undiscounted amounts on January 1, 2019 | $ 1,645,312 |
| Discounted amounts using the incremental borrowing rate on January 1, 2019 | $ 1,438,246 |
| Add: Lease payables on December 31, 2018 | 21,861 |
| Add: Others | 39,428 |
| Lease liabilities recognized on January 1, 2019 | $ 1,499,535 |

The Company as lessor

The Company does not make any adjustments for leases in which it is a lessor, and it accounts for those leases with the application of IFRS 16 starting from January 1, 2019.

The impact on assets, liabilities and equity as of January 1, 2019 from the initial application of IFRS 16 is set out as follows:

| | Carrying Amount as of December 31, 2018 | Adjustments Arising from Initial Application | Adjusted Carrying Amount as of January 1, 2019 |
|---|---|---|---|
| Properties and equipment, net | $ 33,630,953 | $ (21,298) | $ 33,609,655 |
| Right-of-use assets | $ - | 1,579,056 | $ 1,579,056 |
| Other assets | $ 1,102,618 | (92,452) | $ 1,010,166 |
| Total effect on assets | | $ 1,465,306 | |
| Lease liabilities | $ - | $ 1,499,535 | $ 1,499,535 |
| Accounts payable | $ 43,903,047 | (12,368) | $ 43,890,679 |
| Other financial liabilities - lease payables | $ 21,861 | (21,861) | $ - |
| Total effect on liabilities | | $ 1,465,306 | |
| Retained earnings | $ 58,153,358 | $ - | $ 58,153,358 |
| Other equity | $ 2,503,338 | - | $ 2,503,338 |
| Total effect on equity | | $ - | |

b. Impact of IFRSs endorsed by the FSC for application starting from 2020, but not yet applied by the Company

| New IFRSs | Effective Date Announced by IASB |
|---|---|
| Amendments to IFRS 3 "Definition of a Business" | January 1, 2020 (Note 1) |
| Amendments to IFRS 9, IAS 39 and IFRS 7 "Interest Rate Benchmark Reform" | January 1, 2020 (Note 2) |
| Amendments to IAS 1 and IAS 8 "Definition of Material" | January 1, 2020 (Note 3) |

Note 1: The Company shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.

Note 2: The Company shall apply these amendments retrospectively for annual reporting periods beginning on or after January 1, 2020.

Note 3: The Company shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

The Company assessed the application of the standards above would not have any material impact on the Company's financial position and financial performance. As of the date the consolidated financial statements were authorized for issue, the Company is continuously assessing the possible impact that the application of other standards and interpretations will have on the Company's financial position and financial performance and will disclose the relevant impact when the assessment is completed.

c. Impact of the new IFRSs announced by IASB but not yet endorsed and issued into effect by the FSC and not yet applied by the Company

| New IFRSs | Effective Date Announced by IASB (Note) |
|---|---|
| Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture" | To be determined by IASB |
| IFRS 17 "Insurance Contracts" | January 1, 2021 |
| Amendments to IAS 1 "Classification of Liabilities as Current or Non-current" | January 1, 2022 |

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual reporting periods beginning on or after their respective effective dates.

As of the date the financial statements were authorized for issue, the Company assessed that the above amendments have no significant impact on the Company. The Company is continuously assessing the possible impact that the application of other standards and interpretations will have on the Company's financial position and financial performance and will disclose the relevant impact when the assessment is completed.

## 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Statement of Compliance**

The consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Public Banks, Regulations Governing the Preparation of Financial Reports by Securities Firms, and IFRSs as endorsed and issued into effect by the FSC.

**Basis of Preparation**

The consolidated financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair value and net defined benefit liabilities which are measured at the present value of the defined benefit obligation less the fair value of plan assets.

The fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

a. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;

b. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and

c. Level 3 inputs are unobservable inputs for the asset or liability.

**Basis of Consolidation**

The consolidated financial statements incorporate the financial statements of the Bank and the entity controlled by the Bank (United Taiwan Bank S.A.).

The accounting policies of the Bank and its subsidiary are consistent.

All significant intercompany transactions and balances have been eliminated for consolidation purposes. The accompanying consolidated financial statements also include accounts of the Bank's Head Office, OBU, and all branches. All interoffice account balances and transactions have been eliminated.

Total comprehensive income of subsidiary is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

For more information on the consolidated entity, please see Table 1 (attached).

**Foreign-currency Transactions**

The Company records foreign-currency transactions in the respective currencies in which these are denominated. Every month-end, foreign currency income and expenses are translated into New Taiwan dollars at the prevailing exchange rates. At month-end, monetary assets and liabilities denominated in foreign currencies are reported using the prevailing exchange rates, and exchange differences are recognized in profit or loss. Nonmonetary assets and liabilities measured at fair value are translated using the prevailing exchange rates at month-end. Translation differences on nonmonetary assets and liabilities measured at fair value are recognized in profit or loss, except for translation difference arising from nonmonetary items of which the change in fair values is recognized in other comprehensive income, in which case, the translation differences are also recognized directly in other comprehensive income. Nonmonetary assets and liabilities that are classified as carried at cost are recognized at the exchange rate on the transaction date.

In preparing the consolidated financial statements, foreign operations' financial statements are translated at the following rates: Assets and liabilities - the prevailing exchange rates on the balance sheet date; and income and expenses - at the average exchange rate for the year. Translation difference net of income tax is recorded as "other comprehensive income" and accumulated in equity, FSC and is attributed to the owner of the Company and non-controlling interests.

**Classification of Current and Noncurrent Assets and Liabilities**

Since the operating cycle in the banking industry cannot be reasonably identified, accounts included in the consolidated financial statements are not classified as current or noncurrent. Nevertheless, these accounts are properly categorized in accordance with the nature of each account and sequenced by liquidity.

**Cash and Cash Equivalents**

In the balance sheet, cash and cash equivalents comprise cash on hand and demand deposits, together with short-term, highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. In the consolidated statement of cash flows, cash and cash equivalents comprise cash and cash equivalents defined in the consolidated balance sheet, due from the Central Bank and call loans to other banks, securities purchased under resell agreements and call loans to securities firms that correspond to the definition of cash and cash equivalents in IAS 7 "Cash Flow Statements," as endorsed by the FSC.

**Financial Instruments**

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

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

Financial assets

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

a. Measurement category

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

1) Financial asset at FVTPL

Financial asset is classified as at FVTPL when the financial asset is mandatorily classified or it is designated as at FVTPL.

Financial assets mandatorily classified as at FVTPL include investments in equity instruments which are not designated as at FVTOCI and debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria.

A financial asset may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise.

Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset. Fair value is determined in the manner described in Note 39.

2) Financial assets at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

a) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and

b) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition, financial assets at amortized cost, including cash and cash equivalents, due from the Central Bank and call loans to other bank, call loans to securities firms, receivables and discounts and debt instruments are measured at amortized cost, which equals to gross carrying amount determined by the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Interest revenue is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for:

a) Purchased or originated credit-impaired financial asset, for which interest revenue is calculated by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset; and

b) Financial asset that has subsequently become credit-impaired, for which interest revenue is calculated by applying the effective interest rate to the amortized cost of the financial asset.

A financial asset is credit impaired when one or more of the following events have occurred:

i. Significant financial difficulty of the issuer or the borrower;

ii. Breach of contract, such as a default;

iii. It is becoming probable that the borrower will enter bankruptcy or undergo a financial reorganization; or

iv. The disappearance of an active market for that financial asset because of financial difficulties.

3) Investments in debt instruments at FVTOCI

Debt instruments that meet the following conditions are subsequently measured at FVTOCI:

a) The financial asset is held within a business model whose objective is achieved by both the collecting of contractual cash flows and the selling of the financial assets; and

b) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Investments in debt instruments at FVTOCI are subsequently measured at fair value. Changes in the carrying amounts of these debt instruments relating to changes in foreign currency exchange rates, interest income calculated using the effective interest method and impairment losses or reversals are recognized in profit or loss. Other changes in the carrying amount of these debt instruments are recognized in other comprehensive income and will be reclassified to profit or loss when the investment is disposed of.

4) Investments in equity instruments at FVTOCI

On initial recognition, the Company may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, instead, they will be transferred to retained earnings.

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

b. Impairment of financial assets

The Company recognizes a loss allowance for expected credit losses on financial assets at amortized cost (including loans and receivables), investments in debt instruments that are measured at FVTOCI, lease receivables, as well as contract assets.

The Company always recognizes lifetime Expected Credit Loss for receivables (excluding receivables of credits and credit cards and accrued interest from debt instruments), and lease receivables. For all other financial instruments, the Company recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on the financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Expected credit losses reflect the weighted average of credit losses with the respective risks of a default occurring as the weights. Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

For internal credit risk management purposes, the Company determines that the following situations indicate that a financial asset is in default (without taking into account any collateral held by the Company):

1) Internal or external information show that the debtor is unlikely to pay its creditors.

2) When a financial asset is overdue for at least 90 days unless the Company has reasonable and corroborative information to support a more lagged default criterion.

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

Under FSC guidelines, the Bank should classify credit assets as sound credit assets or unsound credit assets, with the unsound assets further categorized as special mention, substandard, with collectability highly doubtful and uncollectable, on the basis of the customers' financial position, valuation of collaterals and the length of time of the principal repayments or interest payments have become overdue.

The Bank made 100%, 50%, 10%, 2% and 1% provisions for credits deemed uncollectable, with collectability highly doubtful, substandard, special mention and sound credit assets (excluding assets that represent claims against an ROC government agency), respectively, as minimum provisions. In addition, the Bank was required to make provisions of at least 1.5% each for the sound credit assets on loans granted to Mainland China clients (including short-term trading financing) and for mortgage loans granted for housing acquisition, renovation and construction.

Credits deemed uncollectable may be written off if the write-off is approved by the board of directors.

c. Derecognition of financial assets

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

If the Bank neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Bank recognizes its retained interest in the asset and any associated liability for amounts it may have to pay. If the Bank retains substantially all the risks and rewards of ownership of a transferred financial asset, the Bank continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in a debt instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss that had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

Equity instruments

The Company classifies the debt and equity instruments issued either as financial liabilities or as equity in accordance with the substance of the contractual agreements and the definitions of a financial liability or an equity instrument.

Equity instruments issued by the Bank are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Bank's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Bank's own equity instruments.

Financial liabilities

a. Subsequent measurement

Except for the cases stated below, all financial liabilities are measured at amortized cost using the effective interest method:

1) Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or designated as at FVTPL.

A financial liability is classified as designated as at FVTPL upon initial recognition if:

a) Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or

b) The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Bank's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or

c) The contract contains one or more embedded derivatives so that the entire combined contract (asset or liability) can be designated as at fair value through profit or loss.

Financial liabilities at FVTPL are stated at fair value, with any gains or losses arising on remeasurement recognized in other profit or loss. The net gain or loss recognized in profit or loss incorporates any interest paid on the financial liability. For a financial liability designated as at fair value through profit or loss, the amount of changes in fair value attributable to changes in the credit risk of the liability is presented in other comprehensive income, and it will not be subsequently reclassified to profit or loss. The gain or loss accumulated in other comprehensive income will be transferred to retained earnings when the financial liabilities are derecognized. If this accounting treatment related to credit risk would create or enlarge an accounting mismatch, all changes in fair value of the liability are presented in profit or loss. Fair value is determined in the manner described in Note 39.

2) Financial guarantee contracts

The Company measures financial guarantee contract issued at the higher of:

a) The amount of the loss allowance determined in accordance with IFRS 9 endorsed by the FSC; and

b) The amount initially recognized less, where appropriate, cumulative amount of income recognized in accordance with IFRS 15 endorsed by the FSC.

Besides subsequently measuring financial guarantee contracts at the higher of the abovementioned amounts as IFRS assessment result, assessment is also performed under the "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" as regulatory assessment result. The higher adequacy provision between above IFRS and regulatory assessment results is recognized.

Financial guarantee contracts issued by the Company are measured at their fair values and, if not designated as at fair value through profit or loss, are subsequently measured at the higher of the amount of the expected credit loss allowance or the amount initially recognized less cumulative amortization recognized.

b. Derecognition of financial liabilities

The Company derecognizes financial liabilities only when the Company's obligations are discharged or cancelled or expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

Derivatives

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the balance sheet date. The resulting gain or loss is recognized in profit or loss immediately. If the fair value of a derivative is a positive number, the derivative is recognized as an asset and if the fair value is a negative number, the derivative is recognized as a liability.

Derivatives embedded in hybrid contracts that contain financial asset hosts within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets within the scope of IFRS 9 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

**Overdue Loans**

Loans and other credits (including accrued interest) that are overdue for at least six months are classified as overdue loans in accordance with the guideline issued by the FSC.

Overdue loans (except other credits) are classified as discounts and loans, and the remaining are classified as other financial assets.

**Securities Purchased/Sold Under Resell/Repurchase Agreements**

Securities purchased under resell agreements and securities sold under repurchase agreements are generally treated as collateralized financing transactions. Interest earned on resell agreements or interest incurred on repurchase agreements is recognized as interest revenue or interest expense on an accrual basis.

**Investment in Associates and Joint Ventures**

Investments in subsidiaries, associates and joint ventures are accounted for by the equity method.

Investment in subsidiaries

Subsidiaries (including structured entities) are the entities controlled by the Bank.

Under the equity method, the investment is initially recognized at cost and the carrying amount is increased or decreased to recognize the Bank's share of the profit or loss and other comprehensive income of the subsidiary after the date of acquisition. Besides, the Bank also recognizes the Bank's share of the change in other equity of the subsidiary.

Changes in the Bank's ownership interests in subsidiaries that do not result in the Bank's loss of control over the subsidiaries are accounted for as equity transactions. Any difference between the carrying amounts of the investment and the fair value of the consideration paid or received is recognized directly in equity.

When the Bank's share of losses of a subsidiary equals or exceeds its interest in that subsidiary (which includes any carrying amount of the investment in subsidiary accounted for by the equity method and long-term interests that, in substance, form part of the Bank's net investment in the subsidiary), the Bank continues recognizing its share of further losses.

The acquisition cost in excess of the acquisition-date fair value of the identifiable net assets acquired is recognized as goodwill. Goodwill is not amortized. The acquisition-date fair value of the net identifiable assets acquired in excess of the acquisition cost is recognized immediately in profit or loss.

When the Bank ceases to have control over a subsidiary, any retained investment is measured at fair value at that date and the difference between the previous carrying amount of the subsidiary attributable to the retained interest and its fair value is included in the determination of the gain or loss. Furthermore, the Bank accounts for all amounts previously recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Bank had directly disposed of the related assets or liabilities.

Profits and losses from downstream transactions with a subsidiary are eliminated in full. Profits and losses from upstream transactions with a subsidiary and sidestream transactions between subsidiaries are recognized in the Bank's financial statements only to the extent of interests in the subsidiary that are not related to the Bank.

Investment in associates and joint ventures

An associate is an entity over which the Bank has significant influence and that is neither a subsidiary nor an interest in a joint venture. Joint venture is a joint arrangement whereby the Bank and other parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The Bank uses the equity method to account for investments in associates and joint ventures. Under the equity method, investment in an associate or a joint ventures entity is initially recognized at cost and adjusted thereafter to recognize the Bank's share of the profit or loss and other comprehensive income of the associate or jointly controlled entity. The Bank also recognizes the changes in the Bank's share of equity of associates or joint ventures.

When the Bank subscribes for additional new shares of the associate or joint ventures at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Bank's proportionate interest in the associate or joint ventures. The Bank records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus. If the Bank's ownership interest is reduced due to the additional subscription of the new shares of the associate or joint ventures, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate or joint ventures is reclassified to profit or loss on the same basis as would be required if the investee had directly disposed of the related assets or liabilities. When the adjustment should be debited to capital surplus, but the capital surplus recognized from investments accounted for by the equity method is insufficient, the shortage is debited to retained earnings.

When the Bank's share of losses of an associate or a joint ventures equals or exceeds its interest in that associate or joint ventures, which includes any carrying amount of the investment accounted for by the equity method and long-term interests that, in substance, form part of the Bank's net investment in the associate or joint ventures, the Bank discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Bank has incurred legal obligations, or constructive obligations, or made payments on behalf of that associate or joint ventures.

Any excess of the cost of acquisition over the Bank's share of the net fair value of the identifiable assets and liabilities of an associate or a joint ventures recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Bank's share of the net fair value of the identifiable assets and liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

The entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized is deducted from the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Bank discontinues the use of the equity method from the date on which its investment ceases to be an associate and a joint venture. Any retained investment is measured at fair value at that date and the fair value is regarded as its fair value on initial recognition as a financial asset. The difference between the previous carrying amount of the associate and the joint venture attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate and the joint venture. The Bank accounts for all amounts previously recognized in other comprehensive income in relation to that associate and the joint venture on the same basis as would be required if that associate had directly disposed of the related assets or liabilities. If an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate, the Bank continues to apply the equity method and does not remeasure the retained interest.

When the Bank transacts with its associate or joint ventures, profits and losses resulting from the transactions with the associate or joint ventures are recognized in the Bank's financial statements only to the extent of interests in the associate or joint ventures that are not related to the Bank.

**Investment Properties**

Investment properties are properties held to earn rentals and/or for capital appreciation. Investment properties also include land held for a currently undetermined future use.

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are measured at cost less accumulated depreciation and accumulated impairment loss. Depreciation is recognized using the straight-line method.

Any gain or loss arising on derecognition of the property is calculated as the difference between the net disposal proceeds and the carrying amount of the asset and is included in profit or loss in the year in which the property is derecognized.

**Properties and Equipment**

Properties and equipment are initially measured at cost and subsequently measured at cost less accumulated depreciation and accumulated impairment loss. Before January 1, 2019, properties and equipment also included assets held under finance leases.

Except for freehold land which is not depreciated, the depreciation of properties and equipment is recognized using the straight-line method. Each significant part is depreciated separately. The estimated useful lives, residual values and depreciation methods are reviewed at the end of each reporting period, with the effects of any changes in the estimates accounted for on a prospective basis.

On derecognition of an item of properties and equipment, the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

**Leasing**

2019

At the inception of a contract, the Company assesses whether the contract is, or contains, a lease.

For a contract that contains a lease component and non-lease components, the Company allocates the consideration in the contract to each component on the basis of the relative stand-alone price and accounts for each component separately.

a. The Company as lessor

   Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

   Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases. Initial direct costs incurred in obtaining operating leases are added to the carrying amounts of the underlying assets and recognized as expenses on a straight-line basis over the lease terms.

   Variable lease payments that do not depend on an index or a rate are recognized as income in the periods in which they are incurred.

b. The Company as lessee

   The Company recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs needed to restore the underlying assets, and less any lease incentives received. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the consolidated balance sheets.

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

Lease liabilities are initially measured at the present value of the lease payments, which comprise fixed payments, in-substance fixed payments, variable lease payments which depend on an index or a rate, residual value guarantees, the exercise price of a purchase option if the Company is reasonably certain to exercise that option, and payments of penalties for terminating a lease if the lease term reflects such termination, less any lease incentives receivable. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Company uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, a change in the amounts expected to be payable under a residual value guarantee, a change in the assessment of an option to purchase an underlying asset, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Company remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the consolidated balance sheets.

Variable lease payments that do not depend on an index or a rate are recognized as expenses in the periods in which they are incurred.

For sale and leaseback transactions, if the transfer of an asset satisfies the requirements of IFRS 15 to be accounted for as a sale, the Company recognizes only the amount of any gain or loss which relates to the rights transferred to the buyer-lessor, and adjusts the off-market terms to measure the sale proceeds at fair value. If the transfer does not satisfy the requirements of IFRS 15 to be accounted for as a sale, it is accounted for as a financing transaction. However, for sale and leaseback transactions, if the transfer of an asset satisfies the requirements of IFRS 15 to be accounted for as a sale, TCB should defer the amount recognized of which sales price exceeds the carrying amount and allocate to the lease periods. If the lease periods are uncertain, TCB should recognize the amount within 10 years.

2018

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

a. The Company as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and amortized on a straight-line basis over the lease term.

Lease incentives included in an operating lease are recognized as an asset. The aggregate cost of incentives is recognized as a reduction of rental income on a straight-line basis. Lease incentives included in a finance lease are recognized as a reduction of minimum lease payments.

b. The Company as lessee

Assets held under finance leases are initially recognized as assets of the Company at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated balance sheets as a finance lease obligation.

Finance expenses implicit in lease payments for each period are recognized immediately in profit or loss, unless they are directly attributable to qualifying assets; in which case, they are capitalized.

Operating lease payments are recognized as expenses on a straight-line basis over the lease term.

Lease incentives received under operating leases are recognized as liabilities. The aggregate benefit of incentives is recognized as a reduction of rental expenses on a straight-line basis. Lease incentives received under a finance lease are recognized as a reduction of minimum lease payments.

For sale and leaseback transactions of real estate, TCB should defer the amount recognized of which sales price exceeds the carrying amount and allocate to the lease periods. If the lease periods are uncertain, TCB should recognize the amount within 10 years.

**Goodwill**

Goodwill (part of intangible assets) from business combination is recorded at acquisition cost and subsequently measured at cost less accumulated impairment.

For the purposes of impairment testing, goodwill is allocated to each of the Company's cash-generating units or groups of cash-generating units (referred to as cash-generating units (CGU)) that is expected to benefit from the synergies of the combination.

In testing assets for impairment, the Company compares the carrying amounts of operating segments (CGUs with allocated goodwill) to their recoverable amounts on a yearly basis (or when impairment indicators exist). CGUs with allocated goodwill arise from the current year should be tested for impairment before the end of the year. When the recoverable amount of CGUs is below the carrying amount, an impairment loss should be recognized to reduce first the carrying amount of goodwill of the CGU and then the carrying amounts of other assets of the CGU proportionately. Any impairment loss should be directly recognized as loss in the current year, and subsequent reversal of impairment loss is not allowed.

On disposal of the relevant cash-generating unit, the amount attributable to goodwill is included in the determination of the profit or loss on disposal.

**Intangible Assets Other Than Goodwill**

Separate acquisition

Intangible assets with finite useful lives that are acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis. At year-end, the Company examines its estimates of the useful lives, residual values and amortization method of the assets, and any changes in estimates are accounted for prospectively. Unless the Company expects to dispose of an intangible asset before the end of its useful life, the residual value of an intangible asset with limited useful life is estimated to be zero. The effect of any changes in estimates accounted for on a prospective basis.

Acquisition as part of a business combination

Intangible asset acquired through business combination is measured at its fair value on the acquisition date, and is recognized separately from goodwill. Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

Derecognition

Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the assets is derecognized.

**Impairment of Tangible and Intangible Assets Other Than Goodwill**

At the balance sheet date, the Company reviews the carrying amounts of its tangible and intangible assets (except goodwill) for any indication of impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. Corporate assets are allocated to the individual cash-generating units or a reasonable and consistent basis of allocation. The recoverable amount is the higher of fair value less selling costs or value in use.

If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount is reduced to its recoverable amount. If asset impairment loss reverses, the increase in the carrying amount resulting from reversal is credited to earnings. However, loss reversal should not be more than the carrying amount (net of depreciation or amortization) had the impairment loss not been recognized.

**Foreclosed Collaterals**

Foreclosed collaterals (part of other assets) are recorded at the fair value on recognition and recorded at the lower of cost or net fair value as of the balance sheet dates. Net fair value falling below book value indicates impairment, and impairment loss should be recognized. If the net fair value recovers, the recovery of impairment loss is recognized in gains. For foreclosed collaterals that should have been disposed of in the statutory term, unless the disposal period is prolonged, additional provision for losses should be made and impairment loss should be recognized, as required under a FSC directive.

**Provisions**

Provisions are the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties on the obligation. A provision is measured using the cash flows estimated to settle the present obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

**Recognition of Revenue**

Interest revenue on loans is recorded on an accrual basis. Under the guidance of the FSC, no interest revenue is recognized on loans that are classified as overdue loans. The interest revenue on these loans is recognized upon collection of the loans and credits.

Service fees are recognized when a major part of the earnings process is completed and cash is collected.

Dividend income from investments is recognized when the stockholder’s right to receive payment has been established (provided that it is probable that the economic benefits will flow to the Bank and the amount of income can be measured reliably).

Service that results in award credits for customers, under the Company's award scheme, is accounted for as multiple element revenue transactions and the fair value of the consideration received or receivable is allocated between the service rendered and the award credits granted. The consideration allocated to the award credits is measured by reference to their fair value. Such consideration is not recognized as revenue at the time of the initial sale transaction but is deferred and recognized as revenue when the award credits are redeemed and the Bank's obligations have been fulfilled.

**Employee Benefits**

Short-term employee benefits

Short-term and non-discounted employee benefits are recognized as expenses in the current year as services are rendered.

Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

Defined benefit costs (including service cost, net interest and remeasurement) under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost and net interest on the net defined benefit liability (asset) are recognized as employee benefits expense in the period they occur. Remeasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liability (asset) represents the actual deficit (surplus) in the Company's defined benefit plan. Any surplus resulting from this calculation is limited to the present value of any refunds from the plans or reductions in future contributions to the plans.

Preferential interest deposits for employees

The Company provides preferential interest deposits to current and retired employees, and these deposits, including payments of the preferential interest deposits, are within certain amounts. The preferential rates for employees' deposits in excess of market rate should be treated as employee benefits.

Under the Guidelines Governing the Preparation of Financial Reports by Public Banks, the Company should follow the requirement of IAS 19 "Employee Benefits" endorsed by FSC to determine the excess interest on the preferential interest deposits of retired employees by applying an actuarial valuation method when the employees retire. The actuarial assumptions should be in accordance with the requirements set by the authorities.

Termination benefits

A liability for a termination benefit is recognized at the earlier of when the Company can no longer withdraw the offer of the termination benefit and when the Company recognizes any related restructuring costs.

**Share-based Payment**

The Bank's employees subscribed for the reserved shares of Taiwan Cooperative Financial Holding Company, Ltd. (TCFHC) in accordance with the Financial Holding Company Act, and the Bank recognized the fair value of the stock options under salary expenses and under capital surplus for share-based payment on the grant date, i.e., the date when the Bank and its employees made an agreement for the employees to subscribe for TCFHC's shares.

**Taxation**

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

Current tax

According to the Income Tax Law, an additional tax of unappropriated earnings is provided for as income tax in the year the stockholders approve to retain the earnings.

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

Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and unused loss carryforwards to the extent that it is probable that taxable profits will be available against which these deductible temporary differences can be used. If the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit, the resulting deferred tax asset or liability is not recognized. In addition, a deferred tax liability is not recognized on taxable temporary difference arising from the initial recognition of goodwill.

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

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. A previously unrecognized deferred tax asset is also reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

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

Current and deferred tax for the year

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively. Where current tax or deferred taxes arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

TCFHC and its subsidiaries elected to file consolidated tax returns for periods starting from 2012. However, since the Bank applied the accounting treatment mentioned in the preceding paragraph to income tax, any distribution of cash payments and receipts among the consolidated group members is recorded as current tax assets or current tax liabilities.

**Business Combination**

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized as expense as incurred.

Goodwill is measured as the excess of the sum of the consideration transferred and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed.

Business combination involving entities under common control is not accounted for by acquisition method but accounted for at the carrying amounts of the entities. Prior period comparative information in the financial statements is restated as if a business combination involving entities under common control had already occurred in that period.

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

In the application of the Company's accounting policies, which are described in Note 4, the Company's management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered relevant. Actual results may differ from these estimates.

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

Unless stated in other notes, the following are the critical judgments, assumptions and estimation uncertainty estimations that the Company's management has made in the process of applying the Bank's accounting policies and that have the most significant effect on the amounts recognized in the financial statements:

**Impairment Losses on Loans**

Estimated impairment losses on the Company's loans is based on certain assumptions about the percentage of default and expected losses. The Company makes assumptions and selects the input values for the impairment assessment based on prior experience, the current market situation and forward-looking information.

The assessment of impairment loss also takes into consideration the classification of credit assets and the possible impairment losses based on the length of time the loans have become overdue and the status of collection of the collateral. The Company evaluates the amount of impairment losses based on whether the customer's repayments of principal and interest are overdue and the length of time the payments are overdue, the estimate of value of the collateral and the debtor's financial status. If future actual cash flows are lesser than expected, a material impairment loss may arise.

## 6. CASH AND CASH EQUIVALENTS

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Cash on hand | $ 38,835,986 | $ 22,724,658 |
| Notes and checks in clearing | 6,067,358 | 21,869,459 |
| Due from banks | 14,108,384 | 10,332,134 |
| | $ 59,011,728 | $ 54,926,251 |

Reconciliations of cash and cash equivalents between the consolidated statements of cash flows and the consolidated balance sheets as of December 31, 2019 and 2018 are shown in the consolidated statements of cash flows.

## 7. DUE FROM THE CENTRAL BANK AND CALL LOANS TO OTHER BANKS

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Reserves for deposits - account A | $ 22,529,019 | $ 62,508,712 |
| Reserves for deposits - account B | 74,559,407 | 71,549,801 |
| Reserves for deposits - community financial institutions | 60,777,063 | 58,185,258 |
| Reserves for deposits - foreign-currency deposits | 408,912 | 393,676 |
| Deposits in the Central Bank | 39,200,000 | 39,200,000 |
| Due from the Central Bank - others | 22,485,951 | 12,494,330 |
| Due from the Central Bank - central government agencies' deposits | 5,641,409 | 4,211,689 |
| Call loans to banks | 41,525,545 | 15,927,586 |
| | $ 267,127,306 | $ 264,471,052 |

The deposit reserves are determined monthly at prescribed rates based on the average balances of various types of deposit accounts held by the Company. The deposit reserves are subject to withdrawal restrictions, but deposit reserve - account A and foreign-currency deposit reserves may be withdrawn anytime.

Under the guideline issued by the Central Bank of the Republic of China (CBC), the Bank should deposit 60 percent of the deposits of central government agencies in the CBC, and the deposits are subject to withdrawal restrictions.

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

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Financial assets mandatorily classified as at fair value through profit or loss | | |
| Commercial paper | $ 7,193,761 | $ 4,238,682 |
| Investments in equity instruments | 2,034,296 | 807,279 |
| Corporate bonds | 1,803,150 | 755,699 |
| Beneficial certificates | 220,034 | - |
| Government bonds | 147,338 | 1,801,704 |
| Convertible bonds | - | 4,232 |
| Currency swap contracts | 967,953 | 1,644,083 |
| Interest rate swap contracts | 495,038 | - |
| Foreign-currency margin contracts | 119,049 | 145,684 |
| Forward contracts | 53,994 | 11,509 |
| Futures exchange margins | 32,101 | 59,339 |
| Currency option contracts - buy | 28,094 | 12,908 |
| Cross-currency swap contracts | 10,666 | 9,597 |
| | $ 13,105,474 | $ 9,490,716 |
| Held-for-trading financial liabilities | | |
| Currency swap contracts | $ 3,914,694 | $ 912,942 |
| Currency option contract - sell | 28,278 | 13,050 |
| Forward contracts | 13,462 | 127,435 |
| Interest rate swap contracts | 12,265 | 407,850 |
| Cross-currency swap contracts | - | 7,989 |
| | 3,968,699 | 1,469,266 |
| Financial liabilities designated as at fair value through profit or loss | | |
| Bank debentures (Note 25) | 12,052,429 | 11,483,955 |
| Financial liabilities at fair value through profit or loss | $ 16,021,128 | $ 12,953,221 |

As of December 31, 2019 and 2018, financial assets at fair value through profit or loss amounting to $1,510,692 thousand and $1,538,793 thousand, respectively, had been sold under repurchase agreements.

The Bank enters into derivative transactions mainly to accommodate customers' needs and to manage its exposure to adverse changes in exchange rates and interest rates. The Bank's strategy for hedging against risk is to reduce most of the market price risk or cash flow risk.

As of December 31, 2019 and 2018, the contract (notional) amounts of derivative transactions of the Bank were as follows:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Currency swap contracts | $ 348,423,428 | $ 474,321,932 |
| Interest rate swap contracts | 15,836,460 | 15,605,012 |
| Forward contracts | 6,701,883 | 9,483,058 |
| Currency option contracts - sell | 5,016,696 | 4,299,752 |
| Currency option contracts - buy | 5,016,696 | 4,299,752 |
| Cross-currency swap contracts | 605,798 | 2,150,028 |
| Foreign-currency margin contracts | 644,945 | 826,095 |

As of December 31, 2019 and 2018, the open position of futures transactions of the Company were as follows:

| | | December 31, 2019 | | | |
|---|---|---|---|---|---|
| | | Open Position | | Contract Amounts or Premium Paid | |
| **Items** | **Products** | **Buy/Sell** | **Number of Contracts** | **(Charged)** | **Fair Values** |
| Futures contracts | Stock index futures | Sell | 10 | $ 23,696 | $ 23,988 |

| | | December 31, 2018 | | | |
|---|---|---|---|---|---|
| | | Open Position | | Contract Amounts or Premium Paid | |
| **Items** | **Products** | **Buy/Sell** | **Number of Contracts** | **(Charged)** | **Fair Values** |
| Futures contracts | Stock index futures | Sell | 102 | $ 198,254 | $ 197,050 |
| | Interest rate futures | Sell | 170 | 624,855 | 635,060 |

## 9. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Investments in equity instruments at FVTOCI | | |
| Listed shares and emerging market shares | $ 11,873,370 | $ 6,354,937 |
| Unlisted shares | 5,284,827 | 4,259,767 |
| | 17,158,197 | 10,614,704 |
| Investments in debt instruments at FVTOCI | | |
| Government bonds | 165,618,283 | 113,769,704 |
| Corporate bonds | 95,427,644 | 88,111,540 |
| Bank debentures | 50,924,768 | 44,167,419 |
| | 311,970,695 | 246,048,663 |
| | $ 329,128,892 | $ 256,663,367 |

These investments in equity instruments are not held for trading. Instead, they are held for medium to long-term strategic purposes. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Company's strategy of holding these investments for long-term purposes.

For the purpose of risk diversification and profit strategy, the Company adjusted the investment position to sell part of the equity instruments in the amounts of $9,682,705 thousand and $4,119,407 thousand for the years ended December 31, 2019 and 2018, respectively. The accumulated unrealized gain or loss of financial assets at FVTOCI under other equity in the amount of gain $2,424 thousand and loss $324,557 thousand has been transferred to retained earnings, respectively.

The dividends revenue were $981,973 thousand and $617,800 thousand for the years ended December 31, 2019 and 2018. Those related to investments derecognized during the year was $354,057 thousand and $147,148 thousand and those related to investments held at the end of the reporting period was $627,916 thousand and $470,652 thousand, respectively.

As of December 31, 2019 and 2018, the allowance for possible losses of investment in debt instruments at FVTOCI recognized was $83,771 thousand and $71,742 thousand through expected credit loss. Impairment loss recognized in profit or loss was $20,275 thousand and $12,304 thousand for 2019 and 2018, respectively.

As of December 31, 2019 and 2018, financial assets at fair value through other comprehensive income amounting to $6,175,295 thousand and $7,681,381 thousand, respectively, had been sold under repurchase agreements.

## 10. INVESTMENTS IN DEBT INSTRUMENTS AT AMORTIZED COST

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Negotiable certificates of deposit in the Central Bank | $ 386,260,000 | $ 400,180,000 |
| Government bonds | 105,565,995 | 97,824,271 |
| Corporate bonds | 43,372,329 | 38,112,575 |
| Bank debentures | 20,201,378 | 19,801,261 |
| Certificates of deposit | 278,907 | 285,836 |
| | 555,678,609 | 556,203,943 |
| Less: Allowance for impairment loss | 47,897 | 48,378 |
| | $ 555,630,712 | $ 556,155,565 |

Impairment loss recognized in profit or loss in 2019 and 2018 was $8 thousand and $2,731 thousand, respectively.

Since the bond issuers announced a buyback in advance of the bonds they issued in August 2019, after assessment, the Company agreed to sell these bonds, and the gain on the sale of these bonds at fair value recognized under - derecognition of financial assets at amortized cost was $18,489 thousand.

## 11. SECURITIES PURCHASED UNDER RESELL AGREEMENTS

Securities acquired for $3,521,000 thousand under resell agreements as of December 31, 2018 will subsequently be sold for $3,521,527 thousand.

## 12. RECEIVABLES, NET

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Accrued interest | $ 9,090,701 | $ 8,852,260 |
| Credit cards | 4,397,510 | 3,654,314 |
| Acceptances | 3,139,891 | 3,533,576 |
| Receivables on merchant accounts in the credit card business | 1,051,907 | 832,720 |
| Accounts receivable | 569,774 | 502,186 |
| Credits receivable | 456,459 | 459,866 |
| Accounts receivable factored without recourse | 246,992 | 456,346 |
| Refundable deposits receivable in leasehold agreements | 183,993 | 183,993 |
| Receivable on securities | 138,642 | 147,499 |
| Others | 364,217 | 553,301 |
| | 19,640,086 | 19,176,061 |
| Less: Allowance for possible losses | 808,107 | 714,055 |
| | $ 18,831,979 | $ 18,462,006 |

Credits receivable recognized in the merger with the Farmers Bank of China on May 1, 2006 were recognized at the fair value of credits written off by the Farmers Bank of China in the past. The fair values were evaluated by PricewaterhouseCoopers Financial Advisory Service Co., Ltd.

The changes in the impairment assessment of receivables and allowance for possible losses of credits, credit cards, and accrued interest from debt instruments are summarized below:

| Gross Carrying Amount | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2019 | $ 15,705,978 | $ 44,951 | $ 154,180 | $ 15,905,109 |
| Transfers to | | | | |
| Lifetime ECL | (22,296) | 22,355 | (59) | - |
| Credit-impaired financial assets | (24,604) | (3,402) | 28,006 | - |
| 12-month ECL | 12,146 | (11,369) | (777) | - |
| New financial assets purchased or originated | 47,754,419 | 142,191 | 116,095 | 48,012,705 |
| Write-offs | - | - | (35,438) | (35,438) |
| Derecognition of financial assets in the current reporting period | (47,793,437) | (145,876) | (76,882) | (48,016,195) |
| Change in exchange rates and other changes | 277,890 | - | (121) | 277,769 |
| Balance at December 31, 2019 | $ 15,910,096 | $ 48,850 | $ 185,004 | $ 16,143,950 |

| Gross Carrying Amount | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2018 | $ 15,885,766 | $ 53,206 | $ 184,769 | $ 16,123,741 |
| Transfers to | | | | |
| Lifetime ECL | (18,479) | 18,643 | (164) | - |
| Credit-impaired financial assets | (9,738) | (7,192) | 16,930 | - |
| 12-month ECL | 13,661 | (13,263) | (398) | - |
| New financial assets purchased or originated | 43,587,227 | 128,368 | 109,098 | 43,824,693 |
| Write-offs | - | - | (67,856) | (67,856) |
| Derecognition of financial assets in the current reporting period | (44,812,531) | (134,812) | (88,233) | (45,035,576) |
| Change in exchange rates and other changes | 1,060,072 | 1 | 34 | 1,060,107 |
| Balance at December 31, 2018 | $ 15,705,978 | $ 44,951 | $ 154,180 | $ 15,905,109 |

| Allowance for Possible Losses | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Impairment Loss under IFRS 9 | Difference of Impairment Loss under Regulations | Total |
|---|---|---|---|---|---|---|
| Balance at January 1, 2019 | $ 46,043 | $ 11,458 | $ 36,154 | $ 93,655 | $ 105,414 | $ 199,069 |
| Changes from financial instruments recognized at the beginning of the current reporting period | | | | | | |
| Transfers to | | | | | | |
| Lifetime ECL | (343) | 351 | (8) | - | - | - |
| Credit-impaired financial assets | (643) | (780) | 1,423 | - | - | - |
| 12-month ECL | 3,113 | (2,817) | (296) | - | - | - |
| Derecognition of financial assets in the current reporting period | (48,114) | (52,183) | (36,649) | (136,946) | - | (136,946) |
| Reversal from financial instruments recognized at the beginning of the current reporting period | 3,746 | 9,645 | 34,070 | 47,461 | - | 47,461 |
| New financial assets purchased or originated | 37,703 | 48,195 | 84,360 | 170,258 | - | 170,258 |
| Difference of impairment loss under regulations | - | - | - | - | 43,981 | 43,981 |
| Write-offs | - | - | (35,438) | (35,438) | - | (35,438) |
| Recovery of written-off receivables | - | - | 621 | 621 | - | 621 |
| Changes in exchange rates and other changes | 6,310 | - | (6,949) | (639) | - | (639) |
| Balance at December 31, 2019 | $ 47,815 | $ 13,869 | $ 77,288 | $ 138,972 | $ 149,395 | $ 288,367 |

| Allowance for Possible Losses | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Impairment Loss under IFRS 9 | Difference of Impairment Loss under Regulations | Total |
|---|---|---|---|---|---|---|
| Balance at January 1, 2018 | $ 44,809 | $ 12,867 | $ 61,448 | $ 119,124 | $ 97,016 | $ 216,140 |
| Changes from financial instruments recognized at the beginning of the current reporting period | | | | | | |
| Transfers to | | | | | | |
| Lifetime ECL | (408) | 425 | (17) | - | - | - |
| Credit-impaired financial assets | (251) | (639) | 890 | - | - | - |
| 12-month ECL | 2,484 | (2,431) | (53) | - | - | - |
| Derecognition of financial assets in the current reporting period | (47,168) | (47,458) | (34,535) | (129,161) | - | (129,161) |
| Reversal from financial instruments recognized at the beginning of the current reporting period | (3,055) | 5,141 | 41,943 | 44,029 | - | 44,029 |
| New financial assets purchased or originated | 48,900 | 43,552 | 38,543 | 130,995 | - | 130,995 |
| Difference of impairment loss under regulations | - | - | - | - | 8,398 | 8,398 |
| Write-offs | - | - | (67,856) | (67,856) | - | (67,856) |
| Recovery of written-off receivables | - | - | 1,470 | 1,470 | - | 1,470 |
| Changes in exchange rates and other changes | 732 | 1 | (5,679) | (4,946) | - | (4,946) |
| Balance at December 31, 2018 | $ 46,043 | $ 11,458 | $ 36,154 | $ 93,655 | $ 105,414 | $ 199,069 |

Impairment assessment, except for the above receivables, was based on the expected credit loss model at the beginning of the current reporting period by the simplified method. On December 31, 2019 and 2018, the amounts of impairment assessment of receivables were assessed as $3,496,136 thousand and $3,270,952 thousand, respectively, and the amounts of allowance for possible losses were $519,740 thousand and $514,986 thousand, respectively.

The changes in allowance for possible losses by using simplified method are summarized below:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Balance at January 1 | $ 514,986 | $ 539,231 |
| Provision (reversal of provision) for possible losses | 4,754 | (24,245) |
| Balance at December 31 | $ 519,740 | $ 514,986 |

## 13. DISCOUNTS AND LOANS, NET

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Bills discounted | $ 1,958,364 | $ 2,342,530 |
| Overdraft | | |
| Unsecured | 76,441 | 116,491 |
| Secured | 33,123 | 67,220 |
| Import and export negotiations | 593,669 | 480,986 |
| Short-term loans | | |
| Unsecured | 303,476,993 | 270,175,609 |
| Accounts receivable financing | 417,844 | 599,595 |
| Secured | 215,171,974 | 203,826,944 |

(Continued)

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Medium-term loans | | |
| Unsecured | $ 337,513,275 | $ 305,619,561 |
| Secured | 308,947,041 | 291,276,124 |
| Long-term loans | | |
| Unsecured | 30,990,954 | 27,650,364 |
| Secured | 1,015,513,426 | 979,349,185 |
| Overdue loans | 5,847,989 | 5,056,933 |
| | 2,220,541,093 | 2,086,561,542 |
| Less: Allowance for possible losses | 27,376,392 | 26,398,310 |
| Less: Adjustment of discount | 511,471 | 463,549 |
| | $ 2,192,653,230 | $ 2,059,699,683 |

(Concluded)

The changes in gross carrying amount and allowance for possible losses of discounts and loans are summarized below:

| Gross Carrying Amount | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2019 | $ 2,051,190,069 | $ 2,960,372 | $ 32,411,101 | $ 2,086,561,542 |
| Transfers to | | | | |
| Lifetime ECL | (1,585,621) | 1,608,715 | (23,094) | - |
| Credit-impaired financial assets | (16,290,101) | (642,969) | 16,933,070 | - |
| 12-month ECL | 2,204,661 | (832,746) | (1,371,915) | - |
| New financial assets purchased or originated | 959,260,441 | 214,362 | 399,104 | 959,873,907 |
| Write-offs | - | - | (4,615,713) | (4,615,713) |
| Derecognition of financial assets in the current reporting period | (803,537,154) | (811,554) | (6,039,315) | (810,388,023) |
| Change in exchanges and other changes | (10,863,773) | 28,258 | (55,105) | (10,890,620) |
| Balance at December 31, 2019 | $ 2,180,378,522 | $ 2,524,438 | $ 37,638,133 | $ 2,220,541,093 |

| Gross Carrying Amount | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2018 | $ 1,991,013,900 | $ 6,619,720 | $ 30,231,174 | $ 2,027,864,794 |
| Transfers to | | | | |
| Lifetime ECL | (2,056,359) | 2,108,509 | (52,150) | - |
| Credit-impaired financial assets | (8,162,762) | (1,407,495) | 9,570,257 | - |
| 12-month ECL | 3,788,022 | (3,577,292) | (210,730) | - |
| New financial assets purchased or originated | 876,122,377 | 294,010 | 3,954,613 | 880,371,000 |
| Write-offs | (319,050) | (148,252) | (3,641,155) | (4,108,457) |
| Derecognition of financial assets in the current reporting period | (813,770,824) | (903,980) | (7,434,652) | (822,109,456) |
| Change in exchanges and other changes | 4,574,765 | (24,848) | (6,256) | 4,543,661 |
| Balance at December 31, 2018 | $ 2,051,190,069 | $ 2,960,372 | $ 32,411,101 | $ 2,086,561,542 |

| Allowance for Possible Losses | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Impairment Loss under IFRS 9 | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
|---|---|---|---|---|---|---|
| Balance at January 1, 2019 | $ 3,785,613 | $ 9,005 | $ 4,570,540 | $ 8,365,158 | $ 18,033,152 | $ 26,398,310 |
| Changes from financial instruments recognized at the beginning of the current reporting period | | | | | | |
| Transfers to | | | | | | |
| Lifetime ECL | (1,122) | 3,932 | (2,810) | - | - | - |
| Credit-impaired financial assets | (635,422) | (5,974) | 641,396 | - | - | - |
| 12-month ECL | 99,119 | 8,618 | (107,737) | - | - | - |
| Derecognition of financial assets in the current reporting period | (2,134,565) | (1,864) | (848,608) | (2,985,037) | - | (2,985,037) |
| Reversal from financial instruments recognized at the beginning of the current reporting period | 377,349 | (1,165) | 4,316,225 | 4,692,409 | - | 4,692,409 |
| New financial assets purchased or originated | 2,878,437 | 803 | 88,164 | 2,967,404 | - | 2,967,404 |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" | - | - | - | - | (845,456) | (845,456) |
| Write-offs | - | - | (4,615,713) | (4,615,713) | - | (4,615,713) |
| Recovery of write-off credits | - | - | 1,858,469 | 1,858,469 | - | 1,858,469 |
| Change in exchange rates and other changes | 14,065 | 1,797 | (109,856) | (93,994) | - | (93,994) |
| Balance at December 31, 2019 | $ 4,383,474 | $ 15,152 | $ 5,790,070 | $ 10,188,696 | $ 17,187,696 | $ 27,376,392 |

| Allowance for Possible Losses | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Impairment Loss under IFRS 9 | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
|---|---|---|---|---|---|---|
| Balance at January 1, 2018 | $ 3,366,360 | $ 36,992 | $ 5,674,719 | $ 9,078,071 | $ 16,113,076 | $ 25,191,147 |
| Changes from financial instruments recognized at the beginning of the current reporting period | | | | | | |
| Transfers to | | | | | | |
| Lifetime ECL | (1,322) | 6,765 | (5,443) | - | - | - |
| Credit-impaired financial assets | (92,599) | (8,114) | 100,713 | - | - | - |
| 12-month ECL | 41,052 | (21,841) | (19,211) | - | - | - |
| Derecognition of financial assets in the current reporting period | (1,893,794) | (3,003) | (1,606,715) | (3,503,512) | - | (3,503,512) |
| Reversal from financial instruments recognized at the beginning of the current reporting period | 211,204 | 144,565 | 2,356,094 | 2,711,863 | - | 2,711,863 |
| New financial assets purchased or originated | 2,368,976 | 1,694 | 738,311 | 3,108,981 | - | 3,108,981 |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" | - | - | - | - | 1,920,076 | 1,920,076 |
| Write-offs | (319,050) | (148,252) | (3,641,155) | (4,108,457) | - | (4,108,457) |
| Recovery of write-off credits | - | - | 983,259 | 983,259 | - | 983,259 |
| Change in exchange rates and other changes | 104,786 | 199 | (10,032) | 94,953 | - | 94,953 |
| Balance at December 31, 2018 | $ 3,785,613 | $ 9,005 | $ 4,570,540 | $ 8,365,158 | $ 18,033,152 | $ 26,398,310 |

The bad-debt expenses and provision for losses on commitment and guarantees for 2019 and 2018 were as follows:

| | 2019 | 2018 |
|---|---|---|
| Provision for possible losses on discounts and loans | $ 3,829,320 | $ 4,237,408 |
| Provision for possible losses on receivables | 129,508 | 30,016 |
| Provision for possible losses on overdue receivables | 41,614 | 37,584 |
| Provision for possible losses on guarantees | 79,661 | 103,036 |
| Provision (reversal of provision) for possible losses on loan commitment | 42,487 | (3,707) |
| Provision for possible losses on others | 8,504 | 10,144 |
| | $ 4,131,094 | $ 4,414,481 |

As of December 31, 2019 and 2018, the Bank was in compliance with the FSC-required provision for credit assets.

As of December 31, 2019 and 2018, accrual of interest on the above overdue loans had been stopped. Thus, the unrecognized interest revenue was $133,989 thousand and $119,914 thousand for the years ended December 31, 2019 and 2018, respectively, based on the average loan interest rate for the year.

## 14. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

| | December 31 | | | |
|---|---|---|---|---|
| | 2019 | | 2018 | |
| | Amount | Percentage of Ownership | Amount | Percentage of Ownership |
| Investment in associate | | | | |
| United Real Estate Management Co., Ltd. | $ 131,500 | 30.00 | $ 127,094 | 30.00 |

Aggregate information of associate that is not individually material:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| The Company's share of: | | |
| Net income | $ 10,475 | $ 11,346 |
| Other comprehensive income | - | (3,034) |
| Total comprehensive income for the year | $ 10,475 | $ 8,312 |

The Company received $6,069 thousand and $5,564 thousand of dividends from United Real Estate Management Co., Ltd. for the years ended December 31, 2019 and 2018, respectively. The dividends are recognized as a reduction of investments accounted for using equity method.

The investments accounted for using equity method and the share of profit or loss and other comprehensive income of those investments for the years ended December 31, 2019 and 2018 were based on the financial statements audited by the auditors for the same years.

## 15. OTHER FINANCIAL ASSETS, NET

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Overdue receivables | $ 14,089 | $ 53,679 |
| Less: Allowance for possible losses | 10,989 | 28,590 |
| Overdue receivables, net | 3,100 | 25,089 |
| Due from banks | 18,660,530 | 18,395,211 |
| Call loans to securities firms | 179,940 | 307,350 |
| | $ 18,843,570 | $ 18,727,650 |

Due from banks (part of other financial assets, net) held by the Company were demand deposits and time deposits that could not be withdrawn and time deposits that had maturity periods of more than three months and could not be withdrawn before maturity.

## 16. PROPERTIES AND EQUIPMENT, NET

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Carrying amount | | |
| Land | $ 20,710,622 | $ 20,928,940 |
| Buildings | 11,278,665 | 11,659,376 |
| Machinery and equipment | 911,869 | 367,881 |
| Transportation equipment | 99,027 | 74,454 |
| Other equipment | 153,992 | 161,959 |
| Leasehold improvements | 121,918 | 105,744 |
| Leased assets | - | 21,298 |
| Prepayments for equipment, land and buildings and construction in progress | 246,361 | 311,301 |
| | $ 33,522,454 | $ 33,630,953 |

| | Land | Buildings | Machinery and Equipment | Transportation Equipment | Other Equipment | Leasehold Improvements | Leased Assets | Prepayments for Equipment, Land and Buildings and Construction in Progress | Total |
|---|---|---|---|---|---|---|---|---|---|
| Cost | | | | | | | | | |
| Balance at January 1, 2019 | $ 20,944,117 | $ 19,058,668 | $ 4,003,602 | $ 606,673 | $ 1,157,720 | $ 845,194 | $ 26,125 | $ 311,301 | $ 46,953,400 |
| Effect of IFRS 16 retrospective application | - | - | - | - | - | - | (26,125) | - | (26,125) |
| Balance at January 1, 2019 as restated | 20,944,117 | 19,058,668 | 4,003,602 | 606,673 | 1,157,720 | 845,194 | - | 311,301 | 46,927,275 |
| Additions | 430 | 253,798 | 414,513 | 43,934 | 36,247 | 49,235 | - | 421,352 | 1,219,509 |
| Disposals | - | (5,284) | (331,508) | (33,333) | (34,930) | (10,082) | - | - | (415,137) |
| Reclassification | 37,554 | 81,357 | 333,515 | 3,951 | 7,697 | 13,825 | - | (477,899) | - |
| Transferred to investment properties | (256,239) | (106,677) | - | - | - | - | - | - | (362,916) |
| Transferred to intangible assets | - | - | - | - | - | - | - | (8,321) | (8,321) |
| Effects of exchange rate changes | (63) | (135) | (3,463) | (642) | (1,238) | (2,354) | - | (72) | (7,967) |
| Balance at December 31, 2019 | $ 20,725,799 | $ 19,281,727 | $ 4,416,659 | $ 620,583 | $ 1,165,496 | $ 895,818 | $ - | $ 246,361 | $ 47,352,443 |
| Cost | | | | | | | | | |
| Balance at January 1, 2018 | $ 21,117,980 | $ 18,670,874 | $ 4,319,112 | $ 631,893 | $ 1,135,576 | $ 808,880 | $ 13,352 | $ 104,269 | $ 46,801,936 |
| Additions | - | 440,525 | 52,067 | 13,702 | 53,867 | 56,871 | 12,773 | 336,652 | 966,457 |
| Disposals | - | - | (428,988) | (39,217) | (80,192) | (22,143) | - | - | (570,540) |
| Reclassification | - | 18,095 | 58,411 | - | 47,502 | 664 | - | (124,672) | - |
| Transferred to investment properties | (173,954) | (71,016) | - | - | - | - | - | - | (244,970) |
| Transferred to intangible assets | - | - | - | - | - | - | - | (4,976) | (4,976) |
| Effects of exchange rate changes | 91 | 190 | 3,000 | 295 | 967 | 922 | - | 28 | 5,493 |
| Balance at December 31, 2018 | $ 20,944,117 | $ 19,058,668 | $ 4,003,602 | $ 606,673 | $ 1,157,720 | $ 845,194 | $ 26,125 | $ 311,301 | $ 46,953,400 |

| | Land | Buildings | Machinery and Equipment | Transportation Equipment | Other Equipment | Leasehold Improvements | Leased Assets | Total |
|---|---|---|---|---|---|---|---|---|
| Accumulated depreciation and impairment | | | | | | | | |
| Balance at January 1, 2019 | $ 15,177 | $ 7,399,292 | $ 3,635,721 | $ 532,219 | $ 995,761 | $ 739,450 | $ 4,827 | $ 13,322,447 |
| Effect of IFRS 16 retrospective application | - | - | - | - | - | - | (4,827 ) | (4,827 ) |
| Balance at January 1, 2019 as restated | 15,177 | 7,399,292 | 3,635,721 | 532,219 | 995,761 | 739,450 | - | 13,317,620 |
| Disposals | - | (5,284 ) | (328,835 ) | (33,333 ) | (34,917 ) | (10,082 ) | - | (412,451 ) |
| Depreciation expenses | - | 662,447 | 200,886 | 22,336 | 53,557 | 46,439 | - | 985,665 |
| Transferred to investment properties | - | (53,273 ) | - | - | - | - | - | (53,273 ) |
| Effects of exchange rate changes | - | (120 ) | (2,982 ) | 334 | (2,897 ) | (1,907 ) | - | (7,572 ) |
| Balance at December 31, 2019 | $ 15,177 | $ 8,003,062 | $ 3,504,790 | $ 521,556 | $ 1,011,504 | $ 773,900 | $ - | $ 13,829,989 |
| Accumulated depreciation and impairment | | | | | | | | |
| Balance at January 1, 2018 | $ 15,177 | $ 6,777,566 | $ 3,799,787 | $ 541,804 | $ 1,022,465 | $ 716,626 | $ 1,748 | $ 12,875,173 |
| Disposals | - | - | (427,029 ) | (39,214 ) | (80,120 ) | (22,143 ) | - | (568,506 ) |
| Depreciation expenses | - | 653,619 | 260,351 | 29,471 | 52,683 | 44,286 | 3,079 | 1,043,489 |
| Transferred to investment properties | - | (32,042 ) | - | - | - | - | - | (32,042 ) |
| Effects of exchange rate changes | - | 149 | 2,612 | 158 | 733 | 681 | - | 4,333 |
| Balance at December 31, 2018 | $ 15,177 | $ 7,399,292 | $ 3,635,721 | $ 532,219 | $ 995,761 | $ 739,450 | $ 4,827 | $ 13,322,447 |

The Bank revalued its properties five times in 1979, 1998, 2007, 2011 and 2012. As of December 31, 2019, the reserve for land revaluation increment tax (part of deferred tax liabilities) was $2,596,230 thousand.

Properties and equipment are depreciated using the straight-line method over their estimated useful lives as follows:

| | |
|---|---|
| Buildings | |
| Main buildings | 50 years |
| Equipment installed in buildings | 10 to 15 years |
| Machinery and equipment | 3 to 10 years |
| Transportation equipment | 5 to 10 years |
| Other equipment | 3 to 20 years |
| Leasehold improvements | 3 to 5 years |
| Leased assets | 7 to 10 years |

In testing assets for impairment, the Bank defined each operating unit or operating segment as a cash-generating unit (CGU). The recoverable amount of a CGU was determined at its value in use for the properties and equipment. The discount rates for the CGUs' value in use were 7.54% and 8.69% as of December 31, 2019 and 2018, respectively.

## 17. LEASE ARRANGEMENTS

a. Right-of-use assets - 2019

| | December 31, 2019 |
|---|---|
| Carrying amounts | |
| Land | $ 14,838 |
| Buildings | 1,612,152 |
| Transportation equipment | 52,865 |
| Other equipment | 20,267 |
| | $ 1,700,122 |

| | For the Year Ended December 31, 2019 |
|---|---|
| Additions to right-of-use assets | $ 708,158 |
| Depreciation charge for right-of-use assets | |
| Land | $ 2,625 |
| Buildings | 539,937 |
| Transportation equipment | 20,891 |
| Other equipment | 4,128 |
| | $ 567,581 |

b. Lease liabilities - 2019

| | December 31, 2019 |
|---|---|
| Carrying amounts | $ 1,627,816 |

Range of discount rate for lease liabilities was as follows:

| | December 31, 2019 |
|---|---|
| Land | 1.617%-1.627% |
| Buildings | 1.615%-9.800% |
| Transportation equipment | 1.620%-8.880% |
| Other equipment | 2.445%-4.000% |

c. Material lease-in activities - 2019

The Company signed lease agreements on office premises due to operating activities. Rentals are calculated on the basis of leased areas and are receivable monthly, quarterly or semiannually. As of December 31, 2019, refundable deposits on these leases totaled $133,972 thousand.

d. Other lease information

2019

| | For the Year Ended December 31, 2019 |
|---|---|
| Expenses relating to short-term leases | $ 67,502 |
| Expenses relating to low-value asset leases | $ 152 |
| Expenses relating to variable lease payments not included in the measurement of lease liabilities | $ 3,020 |
| Total cash outflow for leases | $ (653,021) |

The Company leases certain land, buildings, transportation equipment and other equipment which qualify as short-term leases or low-value asset leases. The Company has elected to apply the recognition exemption and thus, did not recognize right-of-use assets and lease liabilities for these leases.

For the year ended December 31, 2019, expenses relating to short-term leases also include expenses relating to leases for which the lease terms end on or before December 31, 2019 and for which the recognition exemption is applied. The amount of lease commitments for short-term leases for which the recognition exemption is applied was $58,367 thousand as of December 31, 2019.

2018

Lease agreements on office premises are operating leases. Rentals are calculated on the basis of the leased areas and are payable monthly, quarterly or semiannually. As of December 31, 2018, refundable deposits on these leases totaled $132,821 thousand. Minimum future annual rentals are as follows:

| | December 31, 2018 |
|---|---|
| Within one year | $ 577,269 |
| One to five years | 1,194,014 |
| Over five years | 133,169 |
| | $ 1,904,452 |

The lease payments recognized as expenses are as follows:

| | For the Year Ended December 31, 2018 |
|---|---|
| Minimum lease payments | $ 628,905 |
| Contingent rentals | 1,083 |
| | $ 629,988 |

## 18. INVESTMENT PROPERTIES, NET

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Land | $ 5,998,516 | $ 5,742,277 |
| Buildings | 1,445,349 | 1,409,297 |
| | $ 7,443,865 | $ 7,151,574 |

| | Land | Buildings | Total |
|---|---|---|---|
| Cost | | | |
| Balance at January 1, 2019 | $ 5,742,277 | $ 2,129,560 | $ 7,871,837 |
| Additions | - | 30,604 | 30,604 |
| Reclassification | 256,239 | 106,677 | 362,916 |
| Balance at December 31, 2019 | $ 5,998,516 | $ 2,266,841 | $ 8,265,357 |
| Cost | | | |
| Balance at January 1, 2018 | $ 5,568,323 | $ 2,058,614 | $ 7,626,937 |
| Additions | - | 95 | 95 |
| Disposals | - | (165) | (165) |
| Reclassification | 173,954 | 71,016 | 244,970 |
| Balance at December 31, 2018 | $ 5,742,277 | $ 2,129,560 | $ 7,871,837 |
| Accumulated depreciation and impairment | | | |
| Balance at January 1, 2019 | $ - | $ 720,263 | $ 720,263 |
| Depreciation expenses | - | 47,956 | 47,956 |
| Disposal | | | |
| Reclassification | - | 53,273 | 53,273 |
| Balance at December 31, 2019 | $ - | $ 821,492 | $ 821,492 |
| Accumulated depreciation and impairment | | | |
| Balance at January 1, 2018 | $ - | $ 642,528 | $ 642,528 |
| Depreciation expenses | - | 45,737 | 45,737 |
| Disposal | - | (44) | (44) |
| Reclassification | - | 32,042 | 32,042 |
| Balance at December 31, 2018 | $ - | $ 720,263 | $ 720,263 |

Investment properties (except for land) are depreciated using the straight-line method over their estimated useful lives as follows:

| | |
|---|---|
| Main buildings | 50 years |
| Equipment installed in buildings | 10 to 15 years |

As of December 31, 2019 and 2018, the fair value of investment properties was $20,765,208 thousand and $20,840,621 thousand, respectively. The fair value was determined through calculations using the market value method.

The revenues generated from the investment properties are summarized as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Rental income from investment properties (part of other noninterest gains, net) | $ 519,729 | $ 425,037 |
| Direct operating expenses for investment properties that generate rental income | (103,832) | (106,584) |
| | $ 415,897 | $ 318,453 |

Lease agreements on investment properties owned by the Company and rented to others are operating lease. Rentals are calculated on the basis of the leased areas and are receivable monthly, quarterly or semiannually. The lessees have no preemptive rights to buy properties at the end of the lease agreements. As of December 31, 2019 and 2018, guarantee deposits on these leases totaled $102,743 thousand and $98,957 thousand, respectively. Minimum future annual rentals are as follows:

| | December 31, 2019 |
|---|---|
| Year 1 | $ 435,537 |
| Year 2 | 357,679 |
| Year 3 | 306,071 |
| Year 4 | 182,397 |
| Year 5 | 152,701 |
| Over five years | 33,506 |
| | $ 1,467,891 |

| | December 31, 2018 |
|---|---|
| Within one year | $ 438,978 |
| One to five years | 1,170,799 |
| Over five years | 183,120 |
| | $ 1,792,897 |

## 19. INTANGIBLE ASSETS

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Goodwill | $ 3,170,005 | $ 3,170,005 |
| Computer software | 465,761 | 381,964 |
| | $ 3,635,766 | $ 3,551,969 |

| | Goodwill | Computer Software | Total |
|---|---|---|---|
| Balance at January 1, 2019 | $ 3,170,005 | $ 381,964 | $ 3,551,969 |
| Separate acquisition | - | 234,771 | 234,771 |
| Amortization expenses | - | (157,505) | (157,505) |
| Reclassification | - | 8,321 | 8,321 |
| Effect of exchange rate changes | - | (1,790) | (1,790) |
| Balance at December 31, 2019 | $ 3,170,005 | $ 465,761 | $ 3,635,766 |
| Balance at January 1, 2018 | $ 3,170,005 | $ 343,487 | $ 3,513,492 |
| Separate acquisition | - | 194,214 | 194,214 |
| Amortization expenses | - | (144,637) | (144,637) |
| Reclassification | - | 4,976 | 4,976 |
| Effect of exchange rate changes | - | (16,076) | (16,076) |
| Balance at December 31, 2018 | $ 3,170,005 | $ 381,964 | $ 3,551,969 |

Computer software with limited useful lives is amortized on a straight-line basis over their useful lives of 5 years.

In testing assets for impairment, the Bank defined each operating unit or operating segment as a cash-generating unit (CGU). The recoverable amount of a CGU was determined at its value in use for the goodwill impairment test. The discount rates for the CGUs' value in use were 7.54% and 8.69% as of December 31, 2019 and 2018, respectively.

Goodwill resulting from the merger of the Bank with the Farmers Bank of China was allocated to operating units or operating segments (cash-generating units with allocated goodwill). There was no impairment loss on goodwill as of December 31, 2019 and 2018.

## 20. OTHER ASSETS, NET

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Refundable deposits | $ 382,724 | $ 733,514 |
| Prepaid expenses | 1,203,692 | 308,676 |
| Operating deposits | 63,000 | 48,000 |
| Others | 13,028 | 12,428 |
| | $ 1,662,444 | $ 1,102,618 |

As of December 31, 2019, prepaid expenses included that the Bank invested in overseas branch in the amounts of $1,038,095 thousand.

## 21. DUE TO THE CENTRAL BANK AND OTHER BANKS

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Due to banks | $ 142,115,517 | $ 138,794,751 |
| Call loans from banks | 87,972,279 | 71,477,732 |
| Bank overdraft | 1,523,969 | 1,569,412 |
| Deposits from Chunghwa Post Co., Ltd. | 589,604 | 1,474,134 |
| Due to the Central Bank | 424,872 | 354,324 |
| | $ 232,626,241 | $ 213,670,353 |

## 22. SECURITIES SOLD UNDER REPURCHASE AGREEMENTS

Securities sold for $7,976,909 thousand and $9,602,141 thousand under repurchase agreements as of December 31, 2019 and 2018, respectively, would subsequently be purchased for $7,981,891 thousand and $9,611,528 thousand, respectively.

## 23. PAYABLES

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Accrued interest | $ 6,290,747 | $ 5,377,153 |
| Checks for clearing | 6,067,358 | 21,869,459 |
| Accrued expenses | 5,041,960 | 4,686,273 |
| Collections payable | 4,827,343 | 4,336,559 |
| Collections of notes and checks for various financial institutions in other cities | 4,661,873 | 733,967 |
| Acceptances | 3,408,518 | 3,678,990 |
| Payable on securities | 3,288,016 | 21,038 |
| Payables on notes and checks collected for others | 1,493,452 | 368,090 |
| Tax payable | 472,954 | 467,404 |
| Dividends payable | 170,524 | 170,524 |
| Factored accounts payable | 85,645 | 125,071 |
| Others | 2,078,911 | 2,068,519 |
| | $ 37,887,301 | $ 43,903,047 |

## 24. DEPOSITS AND REMITTANCES

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Deposits | | |
| Checking | $ 45,158,665 | $ 48,922,628 |
| Demand | 558,837,479 | 514,158,995 |
| Savings - demand | 892,650,215 | 839,919,122 |
| Time | 616,754,919 | 556,294,717 |
| Negotiable certificates of deposit | 43,230,113 | 48,351,856 |

(Continued)

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Savings - time | $ 626,095,579 | $ 628,015,834 |
| Treasury | 115,377,291 | 92,894,432 |
| Remittances | 440,553 | 194,446 |
| | $ 2,898,544,814 | $ 2,728,752,030 |

(Concluded)

## 25. BANK DEBENTURES

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| First subordinated bonds in 2012: Fixed rate of 1.65%; maturity - June 28, 2022 | $ 11,650,000 | $ 11,650,000 |
| Second subordinated bonds in 2012, Type A: Fixed rate of 1.43%; maturity - December 25, 2019 | - | 1,000,000 |
| Second subordinated bonds in 2012, Type B: Fixed rate of 1.55%; maturity - December 25, 2022 | 7,350,000 | 7,350,000 |
| First subordinated bonds in 2013, Type A: Reuters' fixing rate for 90 day's New Taiwan dollar commercial paper refers to the TAIBOR plus 0.43%; maturity - March 28, 2020 | 4,000,000 | 4,000,000 |
| First subordinated bonds in 2013, Type B: Fixed rate of 1.48%; maturity - March 28, 2020 | 3,500,000 | 3,500,000 |
| Second subordinated bonds in 2013, Type A: Fixed rate of 1.72%; maturity - December 25, 2020 | 900,000 | 900,000 |
| Second subordinated bonds in 2013, Type B: Reuters' fixing rate for 90 day's New Taiwan dollar commercial paper refers to the TAIBOR plus 0.45%; maturity - December 25, 2023 | 4,600,000 | 4,600,000 |
| First subordinated bonds in 2014, Type A: Fixed rate of 1.70%; maturity - May 26, 2021 | 1,500,000 | 1,500,000 |
| First subordinated bonds in 2014, Type B: Fixed rate of 1.85%; maturity - May 26, 2024 | 2,700,000 | 2,700,000 |
| First subordinated bonds in 2014, Type C: Fixing rate for 90 day's New Taiwan dollar commercial paper refers to Taiwan Bills Index Rate 02 plus 0.43%; maturity - May 26, 2024 | 5,800,000 | 5,800,000 |
| First subordinated bonds in 2016, Type A: Fixed rate of 1.09%; maturity - September 26, 2023 | 950,000 | 950,000 |
| First subordinated bonds in 2016, Type B: Fixed rate of 1.20%; maturity - September 26, 2026 | 4,050,000 | 4,050,000 |
| First subordinated bonds in 2017, Type A: Fixed rate of 1.32%; maturity - September 26, 2024 | 600,000 | 600,000 |
| First subordinated bonds in 2017, Type B: Fixed rate of 1.56%; maturity - September 26, 2027 | 1,400,000 | 1,400,000 |
| First non-cumulative perpetual subordinated bonds in 2018: Fixed rate of 2.28%; the Bank may exercise its redemption rights after 5 years and 2 months | 5,000,000 | 5,000,000 |
| First non-cumulative perpetual subordinated bonds in 2019: Fixed rate of 1.90%; the Bank may exercise its redemption rights after 5 years and 1 month | 5,000,000 | - |

(Continued)

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Second unsecured bank debentures bonds in 2019: Fixed rate of 0.69%; maturity - November 28, 2022 | $ 1,000,000 | $ - |
| Third non-cumulative perpetual subordinated bonds in 2019: Fixed rate of 1.45%; the Bank may exercise its redemption rights after 5 years and 1 month | 5,000,000 | - |
| | $ 65,000,000 | $ 55,000,000 |

(Concluded)

To expand its long-term USD capital, the Bank applied for the issuance of unsecured bank debentures amounting to US$1,000,000 thousand. The application was approved by the Financial Supervisory Commission (FSC) on January 22, 2015. The Bank issued unsecured bank debentures with an aggregate face value of US$400,000 thousand, consisting of type A bonds worth US$300,000 thousand with 0% interest rate and type B bonds worth US$100,000 thousand with 0% interest rate; the Bank may exercise its redemption rights at an agreed price after two years and three years, respectively, from the issue dates. If the Bank does not exercise its redemption rights during issue period, all unsecured bank debentures will be refunded on the settlement date, March 30, 2045. To manage exposure to adverse changes in interest rates, the Bank enters into interest rate swap contracts measured at fair value through profit or loss and to eliminate measurement or recognition inconsistency, the unsecured bank debentures are reclassified as designated as at FVTPL upon initial recognition. They were as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Unsecured bank debentures bonds issued in 2015, Type A | $ 9,039,290 | $ 8,613,482 |
| Unsecured bank debentures bonds issued in 2015, Type B | 3,013,139 | 2,870,473 |
| | $ 12,052,429 | $ 11,483,955 |

The Bank obtained approval from the FSC to issue unsecured bank debentures amounting to US$1,000,000 thousand on November 18, 2019. As of December 31, 2019, the amount of unissued bank debentures was US$1,000,000 thousand.

## 26. OTHER FINANCIAL LIABILITIES

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Structured products - host contracts | $ 2,529,298 | $ 1,905,310 |
| Guarantee deposits received | 1,578,229 | 1,216,195 |
| Appropriation for loans | 29,972 | 23,608 |
| Lease payables | - | 21,861 |
| | $ 4,137,499 | $ 3,166,974 |

## 27. PROVISIONS

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Provision for employee benefits | | |
| Net defined benefit liability | $ 2,961,625 | $ 2,822,786 |
| Present value of retired employees' preferential interest deposits obligation | 3,971,611 | 4,041,988 |
| | 6,933,236 | 6,864,774 |
| Provision for losses on guarantees | 1,071,127 | 991,699 |
| Provision for losses on loan commitment | 182,585 | 142,335 |
| Provision for losses on others | 34,837 | 26,721 |
| | $ 8,221,785 | $ 8,025,529 |

The changes in the provision for losses on guarantees, provision for losses on loan commitments, and provision for losses on others are summarized below:

| | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Impairment Loss under IFRS 9 | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
|---|---|---|---|---|---|---|
| Balance at January 1, 2019 | $ 564,424 | $ 387 | $ 18,827 | $ 583,638 | $ 577,117 | $ 1,160,755 |
| Changes from financial instruments recognized at the beginning of the current reporting period | | | | | | |
| Transfers to | | | | | | |
| Lifetime ECL | (360) | 360 | - | - | - | - |
| Credit-impaired financial assets | (1) | (27) | 28 | - | - | - |
| Derecognition of financial assets in the current reporting period | (151,047) | (361) | (8,127) | (159,535) | - | (159,535) |
| Reversal from financial instruments recognized at the beginning of the current reporting period | (23,998) | (27) | 3,555 | (20,470) | - | (20,470) |
| New financial assets purchased or originated | 322,776 | - | 61,305 | 384,081 | - | 384,081 |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" | - | - | - | - | (73,424) | (73,424) |
| Change in exchange rates and other changes | (2,858) | - | - | (2,858) | - | (2,858) |
| Balance at December 31, 2019 | $ 708,936 | $ 332 | $ 75,588 | $ 784,856 | $ 503,693 | $ 1,288,549 |
| Balance at January 1, 2018 | $ 510,775 | $ 3,065 | $ 30,229 | $ 544,069 | $ 504,945 | $ 1,049,014 |
| Changes from financial instruments recognized at the beginning of the current reporting period | | | | | | |
| Transfers to | | | | | | |
| Lifetime ECL | (25) | 25 | - | - | - | - |
| Credit-impaired financial assets | (89) | - | 89 | - | - | - |
| Derecognition of financial assets in the current reporting period | (174,552) | (2,605) | (18,886) | (196,043) | - | (196,043) |
| Reversal from financial instruments recognized at the beginning of the current reporting period | (15,055) | (91) | 7,380 | (7,766) | - | (7,766) |

(Continued)

| | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Impairment Loss under IFRS 9 | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
|---|---|---|---|---|---|---|
| New financial assets purchased or originated | $ 241,095 | $ - | $ 15 | $ 241,110 | $ - | $ 241,110 |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" | - | - | - | - | 72,172 | 72,172 |
| Change in exchange rates and other changes | 2,275 | (7) | - | 2,268 | - | 2,268 |
| Balance at December 31, 2018 | $ 564,424 | $ 387 | $ 18,827 | $ 583,638 | $ 577,117 | $ 1,160,755 |

(Concluded)

## 28. EMPLOYEE BENEFITS PLAN

a. Defined contribution plan

The pension plan under the Labor Pension Act (the Act) is a defined contribution plan. Based on the Act, the Company's monthly contributions to individual pension accounts of employees covered by the defined contribution plan is at 6% of monthly salaries and wages. The funds are deposited in individual labor pension accounts at the Bureau of Labor Insurance.

The Company recognized expense of $168,907 thousand and $145,263 thousand in the consolidated statement of comprehensive income in 2019 and 2018, respectively, in accordance with the defined contribution plan.

b. Defined benefit plan

The defined benefit plan adopted by the Company in accordance with the Labor Standards Law is operated by the government. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the six months before retirement. The Company contributes amounts equal to 15% of total monthly salaries and wages to a pension fund administered by the pension fund monitoring committee. The pension fund is managed by the Bureau of Labor Funds, Ministry of Labor (the Bureau); the Company has no right to influence the investment policy and strategy. Pension contributions are deposited in the Bank of Taiwan in the committee's name. Before the end of each year, the Company assesses the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company is required to fund the difference in one appropriation that should be made before the end of March of the next year.

The amounts included in the consolidated balance sheets in respect of the Company's defined benefit plans were as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Present value of defined benefit obligation | $ 13,994,883 | $ 13,172,516 |
| Fair value of plan assets | (11,033,258) | (10,349,730) |
| Net defined benefit liability | $ 2,961,625 | $ 2,822,786 |

Movements in net defined benefit liability were as follows:

| | Present Value of the Defined Benefit Obligation | Fair Value of the Plan Assets | Net Defined Benefit Liability |
|---|---|---|---|
| Balance at January 1, 2018 | $ 12,724,492 | $ (9,997,044) | $ 2,727,448 |
| Service cost | | | |
| Current service cost | 790,584 | - | 790,584 |
| Net interest expense (revenue) | 134,549 | (109,006) | 25,543 |
| Recognized in profit or loss | 925,133 | (109,006) | 816,127 |
| Remeasurement | | | |
| Return on plan assets (excluding amounts included in net interest) | - | (294,498) | (294,498) |
| Actuarial loss - changes in financial assumptions | 130,709 | - | 130,709 |
| Actuarial loss - experience adjustments | 441,038 | - | 441,038 |
| Recognized in other comprehensive income | 571,747 | (294,498) | 277,249 |
| Contributions from the employer | - | (998,038) | (998,038) |
| Benefits paid | (1,048,856) | 1,048,856 | - |
| Balance at December 31, 2018 | 13,172,516 | (10,349,730) | 2,822,786 |
| Service cost | | | |
| Current service cost | 771,123 | - | 771,123 |
| Net interest expense (revenue) | 128,225 | (104,997) | 23,228 |
| Recognized in profit or loss | 899,348 | (104,997) | 794,351 |
| Remeasurement | | | |
| Return on plan assets (excluding amounts included in net interest) | - | (366,881) | (366,881) |
| Actuarial loss - changes in financial assumptions | 398,056 | - | 398,056 |
| Actuarial loss - experience adjustments | 300,094 | - | 300,094 |
| Recognized in other comprehensive income | 698,150 | (366,881) | 331,269 |
| Contributions from the employer | - | (986,781) | (986,781) |
| Benefits paid | (775,131) | 775,131 | - |
| Balance at December 31, 2019 | $ 13,994,883 | $ (11,033,258) | $ 2,961,625 |

Through the defined benefit plans under the Labor Standards Law, the Bank is exposed to the following risks:

1) Investment risk: The plan assets are invested in domestic/and foreign/equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the Bureau or under the mandated management. However, in accordance with relevant regulations, the return generated by plan assets should not be below the interest rate for a 2-year time deposit with local banks.

2) Interest risk: A decrease in the government bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the plan's debt investments.

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

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The significant assumptions used for the purposes of the actuarial valuations were as follows:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Discount rate(s) | 0.70% | 1.00% |
| Expected rate(s) of salary increase | 2.00% | 2.00% |
| Expected rate(s) of return on plan asset | 0.70% | 1.00% |

Assuming a possible reasonable change in each of the significant actuarial assumptions and all other assumptions remaining constant, the present value of the defined benefit obligation would have increased (decreased) as follows:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Discount rate(s) | | |
| 0.25% increase | $ (332,909) | $ (321,389) |
| 0.25% decrease | $ 345,264 | $ 333,660 |
| Expected rate(s) of salary increase | | |
| 0.25% increase | $ 324,852 | $ 315,369 |
| 0.25% decrease | $ (315,133) | $ (305,587) |

The sensitivity analysis presented above shows the effect on the present value of the defined benefit obligations of a change in single assumption while all other assumptions remain unchanged. The sensitivity analysis presented above might not be representative of the actual change in the present value of the defined benefit obligation as it was unlikely that the change in assumptions would occur independently of each other because some of the assumptions might be correlated.

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| The expected contributions to the plan for the next year | $ 1,050,000 | $ 1,000,000 |
| The average duration of the defined benefit obligation | 9.75 years | 10.01 years |

c. Employees' preferential deposit plan

The Bank's payment obligations on fixed-amount preferential interest deposits for retired employees and current employees after retirement are in compliance with the Bank's internal rules. Under the Guidelines Governing the Preparation of Financial Reports by Public Banks, the Bank should determine the excess interest from the preferential interest deposits of employees by applying an actuarial valuation method when the employees retire.

The amounts included in the consolidated balance sheet arising from the Bank's obligation in the employees' preferential interest deposits plan were as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Present value of retired employees' preferential interest deposits obligation (part of provisions) | $ 3,971,611 | $ 4,041,988 |

The changes in present value of retired employees' preferential interest deposits obligation were as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Present value of retired employees' preferential interest deposits obligation, January 1 | $ 4,041,988 | $ 4,008,321 |
| Interest expense | 153,204 | 155,711 |
| Actuarial losses | 622,169 | 715,807 |
| Benefits paid | (845,750) | (837,851) |
| Present value of retired employees' preferential interest deposits obligation, December 31 | $ 3,971,611 | $ 4,041,988 |

Amounts recognized in profit or loss in employee preferential deposit plans for retired employees in the statement of comprehensive income were as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Interest expense | $ 153,204 | $ 155,711 |
| Actuarial losses | 622,169 | 715,807 |
| Excessive interest of retired employees' preferential interest deposits | $ 775,373 | $ 871,518 |

Under Order No. 10110000850 issued by the Financial Supervisory Commission, effective March 15, 2012, the actuarial assumptions for calculating the expense for the retired employees' preferential interest deposit benefit are as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Discount rate | 4.00% | 4.00% |
| Return on deposit | 2.00% | 2.00% |
| Account balance decrease rate per year | 1.00% | 1.00% |
| Rate of probability of change in the preferential deposit system | 50.00% | 50.00% |

Assuming a possible reasonable change in each of the significant actuarial assumptions and all other assumptions remaining constant, the present value of the retired employees' preferential interest deposit benefit obligation would have increased (decreased) as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Discount rate(s) | | |
| 1% increase | $ (273,978) | $ (284,051) |
| 1% decrease | $ 314,312 | $ 326,681 |
| Return on deposit | | |
| 1% increase | $ (962,047) | $ (926,392) |
| 1% decrease | $ 962,047 | $ 926,392 |
| Account balance decrease rate per year | | |
| 1% increase | $ (289,598) | $ (300,225) |
| 1% decrease | $ 327,836 | $ 340,755 |
| Rate of probability of change in the preferential deposit system | | |
| 20% increase | $ (1,588,645) | $ (1,616,795) |
| 20% decrease | $ 1,588,645 | $ 1,616,795 |

The sensitivity analysis presented above shows the effect on the present value of the retired employees' preferential interest deposit benefit obligation of a change in a single assumption while all other assumptions remain unchanged. The sensitivity analysis presented above might not be representative of the actual change in the present value of the retired employees' preferential interest deposit benefit obligation because it was unlikely that the change in assumptions would occur independently of each other because some of the assumptions might be correlated.

## 29. NET INTEREST

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Interest revenue | | |
| From discounts and loans | $ 45,684,129 | $ 42,985,653 |
| From investments | 9,902,062 | 9,073,940 |
| From due from banks and call loans to other banks | 2,534,769 | 2,839,970 |
| Others | 739,204 | 602,732 |
| | 58,860,164 | 55,502,295 |
| Interest expense | | |
| From deposits | (20,354,782) | (18,035,883) |
| From funds borrowed from the Central Bank and other banks | (2,564,727) | (1,978,327) |
| From subordinated bank debentures | (876,474) | (800,742) |
| From due to the Central Bank and other banks | (612,383) | (646,742) |
| Others | (126,992) | (82,718) |
| | (24,535,358) | (21,544,412) |
| | $ 34,324,806 | $ 33,957,883 |

## 30. SERVICE FEE INCOME, NET

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Service fee income | | |
| From insurance service | $ 2,282,469 | $ 1,953,841 |
| From trust business | 1,472,805 | 1,502,644 |
| From loans | 830,898 | 853,081 |
| From guarantee | 781,477 | 706,084 |
| From credit cards | 598,357 | 566,676 |
| From trust affiliated business | 319,308 | 283,208 |
| From remittance | 309,681 | 321,706 |
| From cross-bank transactions | 289,952 | 274,227 |
| From import/export service | 111,598 | 115,319 |
| From agency commission | 101,001 | 97,505 |
| Others | 440,356 | 408,218 |
| | 7,537,902 | 7,082,509 |
| Service charge | | |
| From cross-bank transactions | (338,809) | (331,523) |
| From credit cards | (274,083) | (219,723) |
| From credit cards acquiring | (126,499) | (118,814) |
| From custody | (92,194) | (77,802) |
| Others | (159,735) | (146,028) |
| | (991,320) | (893,890) |
| | $ 6,546,582 | $ 6,188,619 |

## 31. GAINS (LOSSES) ON FINANCIAL ASSETS AND LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS

| | For the Year Ended December 31, 2019 | | | | |
|---|---|---|---|---|---|
| | Interest Revenue (Expense) | Gain (Loss) on Disposal | Loss on Valuation | Dividend Income | Total |
| Financial assets mandatorily classified as at fair value through profit or loss | $ 151,999 | $ 13,539,545 | $ (4,654) | $ 43,402 | $ 13,730,292 |
| Held-for-trading financial liabilities | - | (8,655,715) | (2,495,961) | - | (11,151,676) |
| Financial liabilities designated as at fair value through profit or loss | (602,324) | - | (851,778) | - | (1,454,102) |
| | $ (450,325) | $ 4,883,830 | $ (3,352,393) | $ 43,402 | $ 1,124,514 |

| | For the Year Ended December 31, 2018 | | | | |
|---|---|---|---|---|---|
| | Interest Revenue (Expense) | Gain (Loss) on Disposal | Gain (Loss) on Valuation | Dividend Income | Total |
| Financial assets mandatorily classified as at fair value through profit or loss | $ 51,340 | $ 15,725,005 | $ (702,452) | $ 15,814 | $ 15,089,707 |
| Held-for-trading financial liabilities | - | (12,893,839) | 1,293,747 | - | (11,600,092) |
| Financial liabilities designated as at fair value through profit or loss | (566,552) | - | 613,084 | - | 46,532 |
| | $ (515,212) | $ 2,831,166 | $ 1,204,379 | $ 15,814 | $ 3,536,147 |

## 32. EMPLOYEE BENEFITS, DEPRECIATION AND AMORTIZATION EXPENSES

a. Employee benefits expenses

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Salaries | $ 8,117,658 | $ 7,920,094 |
| Incentives | 3,024,596 | 2,690,918 |
| Excessive interest from preferential interest deposits | 1,196,972 | 1,286,602 |
| Post-employment benefits, termination benefits and compensation | 982,851 | 1,171,188 |
| Overtime | 415,311 | 421,805 |
| Others | 1,842,996 | 1,704,158 |
| | $ 15,580,384 | $ 15,194,765 |

Under the Articles, the Bank will distribute employees' compensation at percentages from 1% to 8% of its annual profit (pretax income which exclude compensation of employees). However, the actual appropriation of the bonus should be made only from the annual net income less any accumulated deficit. For the years ended December 31, 2019 and 2018, the compensation of employees was $1,056,109 thousand and $924,404 thousand, respectively, based on the Company Act and the amended Articles.

Material differences between such estimated amounts and the amounts resolved by the board of directors on or before the annual consolidated financial statements are authorized for issue are adjusted in the year the compensation were recognized. If there is a change in the proposed amounts after the annual consolidated financial statements are authorized for issue, the differences are recorded as a change in accounting estimate.

The appropriations of employees' compensation for 2019 and 2018 resolved by the board of directors on March 23, 2020 and March 25, 2019, respectively, were as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Employees' compensation - cash | $ 1,056,109 | $ 924,404 |

There was no difference between the amounts of the employees' compensation resolved by the board of directors and the amounts recognized in the consolidated financial statements.

Information on the employees' compensation resolved by the Bank's board of directors is available at the Market Observation Post System website of the Taiwan Stock Exchange (https://emops.twse.com.tw).

b. Depreciation and amortization expenses

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Depreciation expenses | $ 1,601,202 | $ 1,089,226 |
| Amortization expenses | 157,526 | 144,660 |
| | $ 1,758,728 | $ 1,233,886 |

## 33. INCOME TAX

a. Income tax recognized in profit or loss

Main components of income tax expense were as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Current tax | | |
| Current year | $ 3,653,082 | $ 2,241,517 |
| Prior year's adjustments | 306 | (63,724) |
| | 3,653,388 | 2,177,793 |
| Deferred tax | | |
| Current year | (741,703) | 151,612 |
| Prior year's adjustments | - | (116,834) |
| Effect of change in tax rate | - | (13,976) |
| Income tax expense recognized in profit or loss | $ 2,911,685 | $ 2,198,595 |

A reconciliation of accounting profit and current income tax expenses were as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Income before income tax | $ 18,916,592 | $ 16,967,128 |
| Income tax expense at the statutory rate (20%) | $ 3,783,318 | $ 3,393,426 |
| Nondeductible expenses in determining taxable income | 2,318 | 2,565 |
| Tax-exempt income | (1,119,628) | (1,011,057) |
| Unrecognized deductible temporary differences | 568 | (52,298) |
| Effect of different tax rate of overseas branches operating in other jurisdictions | 244,803 | 60,493 |
| Effect of change in tax rate | - | (116,834) |
| Adjustments for prior year's tax | 306 | (77,700) |
| Income tax expense recognized in profit or loss | $ 2,911,685 | $ 2,198,595 |

The Income Tax Act in the ROC was amended in 2018 and the corporate income tax rate was adjusted from 17% to 20% effective in 2018. In addition, the rate of the corporate surtax applicable to 2018 unappropriated earnings has been reduced from 10% to 5%.

b. Income tax expense (benefit) recognized in other comprehensive income

| | For the Year Ended December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Deferred tax | | |
| Recognized in other comprehensive income - items that may be reclassified subsequently to profit or loss | | |
| Exchange differences on the translation of financial statements of foreign operations | $ (231,660) | $ 216,789 |
| Unrealized valuation gain (loss) on financial assets at fair value through other comprehensive income | 64,261 | (9,012) |
| Effect of change in tax rate | - | (38,386) |
| Total income tax recognized in other comprehensive income | $ (167,399) | $ 169,391 |

c. Current tax assets and liabilities

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Current tax assets | | |
| Tax receivable - consolidated tax return | $ 1,080,183 | $ 1,297,856 |
| Tax refund receivable | 33,339 | 34,700 |
| Others | 69,265 | 176,570 |
| | $ 1,182,787 | $ 1,509,126 |
| Current tax liabilities | | |
| Tax payable - consolidated tax return | $ 1,639,593 | $ 547,923 |
| Tax payable | 472,103 | 436,764 |
| Others | 19,863 | 135,917 |
| | $ 2,131,559 | $ 1,120,604 |

d. Deferred tax assets and liabilities

Movements in deferred tax assets and liabilities were as follows:

For the year ended December 31, 2019

| | Opening Balance | Recognized in Profit or Loss | Recognized in Other Compre-hensive Income | Closing Balance |
|---|---|---|---|---|
| Deferred tax assets | | | | |
| Temporary differences | | | | |
| Financial instruments at fair value through profit or loss | $ - | $ 505,205 | $ - | $ 505,205 |
| Financial assets at fair value through other comprehensive income | 11,256 | - | (11,256) | - |
| Properties and equipment | 9,826 | (644) | - | 9,182 |
| Payables for annual leave | 98,711 | 1,991 | - | 100,702 |
| Employee's preferential interest deposits obligation | 808,398 | (14,076) | - | 794,322 |
| Other liabilities | 5,883 | (100) | - | 5,783 |
| Exchanges difference on foreign operations | 39,151 | - | 231,660 | 270,811 |
| Unrealized interests expense | 415,068 | 120,464 | - | 535,532 |
| | $ 1,388,293 | $ 612,840 | $ 220,404 | $ 2,221,537 |
| Deferred tax liability | | | | |
| Temporary differences | | | | |
| Financial instruments at fair value through profit or loss | $ 188,317 | $ (188,317) | $ - | $ - |
| Financial assets at fair value through other comprehensive income | - | - | 53,005 | 53,005 |
| Investments accounted for using equity method | 36,603 | 16,695 | - | 53,298 |
| Intangible assets | 428,614 | - | - | 428,614 |
| Defined benefit obligation | 36,348 | 38,486 | - | 74,834 |
| The reserve for land revaluation increment tax | 2,596,230 | - | - | 2,596,230 |
| Others | 6,742 | 4,273 | - | 11,015 |
| | $ 3,292,854 | $ (128,863) | $ 53,005 | $ 3,216,996 |

For the year ended December 31, 2018

| | Opening Balance | Recognized in Profit or Loss | Recognized in Other Compre-hensive Income | Others | Closing Balance |
|---|---|---|---|---|---|
| Deferred tax assets | | | | | |
| Temporary differences | | | | | |
| Financial instruments at fair value through profit or loss | $ 40,905 | $ (40,905) | $ - | $ - | $ - |
| Available-for-sale financial assets | 2,249 | - | - | (2,249) | - |
| Financial assets at fair value through other comprehensive income | - | - | 9,007 | 2,249 | 11,256 |
| Properties and equipment | 8,899 | 927 | - | - | 9,826 |
| Payables for annual leave | 69,527 | 29,184 | - | - | 98,711 |
| Defined benefit obligation | 29 | (29) | - | - | - |

(Continued)

| | Opening Balance | Recognized in Profit or Loss | Recognized in Other Compre-hensive Income | Others | Closing Balance |
|---|---|---|---|---|---|
| Employee's preferential interest deposits obligation | $ 681,415 | $ 126,983 | $ - | $ - | $ 808,398 |
| Other liabilities | 4,955 | 928 | - | - | 5,883 |
| Exchanges difference on foreign operations | 217,549 | - | (178,398) | - | 39,151 |
| Unrealized interests expense | 256,494 | 158,574 | - | - | 415,068 |
| | $ 1,282,022 | $ 275,662 | $ (169,391) | $ - | $ 1,388,293 |
| Deferred tax liability | | | | | |
| Temporary differences | | | | | |
| Financial instruments at fair value through profit or loss | $ - | $ 188,317 | $ - | $ - | $ 188,317 |
| Investments accounted for using equity method | 21,651 | 14,952 | - | - | 36,603 |
| Intangible assets | 364,322 | 64,292 | - | - | 428,614 |
| Defined benefit obligation | - | 36,348 | - | - | 36,348 |
| The reserve for land revaluation increment tax | 2,596,230 | - | - | - | 2,596,230 |
| Others | 14,187 | (7,445) | - | - | 6,742 |
| | $ 2,996,390 | $ 296,464 | $ - | $ - | $ 3,292,854 |

(Concluded)

e. Unused deductible temporary differences for which no deferred tax assets have been recognized in the consolidated balance sheets

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Deductible temporary differences | $ 1,831,868 | $ 1,430,397 |

f. The income tax returns of the Bank through 2014 had been examined by the tax authorities.

## 34. EARNINGS PER SHARE

The numerators and denominators used in calculating earnings per share were as follows:

| | Net Income (Numerator) | Shares (Denominator in Thousands) | Earnings Per Share (NT$) |
|---|---|---|---|
| For the year ended December 31, 2019 | | | |
| Basic earnings per share | $ 15,995,656 | 9,676,530 | $ 1.65 |
| For the year ended December 31, 2018 | | | |
| Basic earnings per share | $ 14,762,366 | 9,676,530 | $ 1.53 |

The weighted-average number of shares outstanding for EPS calculation has been retroactively adjusted to reflect the effects of the stock dividends distributed in the year following earning appropriation.

| | 2018 | |
|---|---|---|
| | Before Adjusted Retrospectively | After Adjusted Retrospectively |
| Basic earnings per share (NT$) | $ 1.63 | $ 1.53 |

## 35. EQUITY

a. Capital stock

Common stocks

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Number of shares authorized (in thousands) | 10,000,000 | 10,000,000 |
| Authorized capital | $ 100,000,000 | $ 100,000,000 |
| Number of shares issued and fully paid (in thousands) | 9,676,530 | 9,031,030 |
| Common stocks issued | $ 96,765,300 | $ 90,310,300 |

Fully paid common stocks, which have a par value of $10, carry one vote per share and carry a right to dividends.

On May 28, 2018, the Bank's board of directors resolved to increase its capital by issuing 222,900 thousand shares which included the 2017 earnings amounting to $2,229,000 thousand. The issuance was approved by the FSC and MOEA.

On May 24, 2019, the Bank's board of directors resolved to increase its capital by issuing 645,500 thousand shares which included the 2018 earnings amounting to $6,455,000 thousand. The issuance was approved by the FSC and MOEA.

b. Capital surplus

Under related regulations, capital surplus may be used to offset a deficit. Capital surplus arising from the issuance of shares in excess of par value (including additional paid-in capital from the issuance of common shares and capital surplus from mergers and treasury stock transactions) and donations may be distributed as cash dividends or transferred to common stock on the basis of the percentage of shares held by the stockholders. Any capital surplus transferred to common stock should be within a certain percentage prescribed by law.

Under related regulations, the capital surplus from equity investments under the equity method cannot be distributed for any purpose.

c. Special reserve

Under the FSC guidelines, the Bank reclassified to the special reserve $165,255 thousand, the sum of trading loss reserve and reserve for loss on branch of purchase commitments, which were in place until December 31, 2010. The reclassified special reserve is unavailable to be used unless: (1) offset a deficit or (2) when the special reserve reaches 50% of the Bank's paid-in capital, 50% of the excess may be used to issue new capital or (3) the FSC has approved that excess may be reversed to unappropriated earnings when special reserve has exceeded the Bank's paid-in capital.

As of December 31, 2019, the special reserve from equity investments under the equity method was $14,944 thousand.

For the first-time adoption of IFRSs, the Bank should appropriate to a special reserve an amount that was the same as those of unrealized revaluation increment and cumulative translation differences (gains) transferred to retained earnings as a result of the Bank's use of exemptions under IFRS 1. However, on the date of transitions to IFRSs, if the increase in retained earnings that resulted from all IFRSs adjustments is not enough for this appropriation, only the increase in retained earnings that resulted from all IFRSs adjustments will be appropriated to special reserve. The special reserve appropriated as above may be reversed in proportion to the usage, disposal or reclassification of the related assets and thereafter distributed. The special reserve appropriated for the first-time adoption of IFRSs may be used to offset deficits in subsequent years. No appropriation of earnings shall be made until any shortage of the aforementioned special reserve is appropriated in subsequent years if the Bank has earnings and the original need to appropriate a special reserve is not eliminated.

The increase in retained earnings that resulted from all IFRSs adjustments was not enough for this appropriation; therefore, the Bank appropriated to the special reserve an amount of $1,132,019 thousand on January 1, 2013, the increase in retained earnings that resulted from all IFRSs adjustments on transitions to IFRSs.

Information regarding the above special reserve appropriated or reversed on elimination of the original need to appropriate a special reserve was as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Balance on January 1 | $ 1,037,384 | $ 1,037,384 |
| Reversed on elimination of the original need to appropriate a special reserve: | | |
| Disposal of properties and equipment | - | - |
| Balance on December 31 | $ 1,037,384 | $ 1,037,384 |

Under Order No. 10510001510 issued by FSC, the appropriation of special reserve should be 0.5% to 1% of net income (net of income tax) when the Bank appropriates the earnings of 2016 to 2018. Since 2017, the Bank is allowed to make special reserve at the amount of the cost of employee transfer and arrangement in connection with the development of financial technology. Information regarding the special reserve appropriated or reversed due to elimination of the original need to appropriate a special reserve was as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Balance on January 1 | $ 64,496 | $ 62,618 |
| Appropriation | 73,812 | 64,496 |
| Reversal: | | |
| Cost of employee transfer and arrangement | (64,496) | (62,618) |
| Balance on December 31 | $ 73,812 | $ 64,496 |

d. Appropriation of earnings

From the annual net income less any deficit, an amount equal to 30% thereof should be appropriated as legal reserve and a certain amount, depending on regulations and operating needs, as special reserve. The remaining net income and unappropriated earnings of prior years may be distributed as dividends to shareholders or retained according to the distribution plan to be proposed by the board of directors and submitted to the shareholders' meeting for approval. Unless otherwise restricted by related regulations, the cash dividends must be 10% or above of the total dividends and bonuses distributed. If the cash dividend per share is less than NT$0.1, the cash dividend will not be distributed unless the distribution is resolved in the stockholders' meetings.

If the legal reserve reaches the amount of paid-in capital or the Bank is sound in both its finance and business operations and have set aside a legal reserve in compliance with the Company Law, the legal reserve is not subject to the limitation of 30% set under the Banking Law and related regulations.

Under related regulations, a special reserve is appropriated from the balance of the retained earnings at an amount from the net income and unappropriated earnings that is equal to the debit balance of accounts in the stockholders' equity section. The special reserve should be appropriated from the prior years' unappropriated earnings to the extent of the debit balance accumulated from prior years, and such special reserve should not be appropriated. If there is difference between appropriation of special reserve and net amount of deduction in other stockholder's equity, the Bank should appropriate on additional amount of special reserve in the first-time adoption of IFRSs. Afterwards, if there is any reversal in of the deduction in other stockholder's equity, the Bank is allowed to appropriating retained earnings from the reversal amount.

Under the Company Law, the legal reserve should be appropriated until the reserve equals the Bank's paid-in capital. This reserve should only be used to offset a deficit. When the reserve exceeds 25% of the Bank's paid-in capital, the excess may be used to issue new shares or distributed as cash dividends.

The appropriations from the earnings of 2018 and 2017 were approved in the stockholders' meetings on May 24, 2019 and May 28, 2018, respectively. The appropriations and dividends per share were as follows:

| | Appropriation of Earnings | | Dividends Per Share (NT$) | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Legal reserve | $ 4,428,710 | $ 3,869,758 | | |
| Special reserve | 73,812 | 64,496 | | |
| Cash dividends | 2,953,000 | 6,450,000 | $ 0.326984 | $ 0.732278 |
| Stock dividends | 6,455,000 | 2,229,000 | 0.714758 | 0.253062 |

Information on the appropriation of earnings or deficit offsetting can be accessed through the website of the Taiwan Stock Exchange (https://emops.twse.com.tw).

e. Non-controlling interest

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Balance on January 1 | | $ 216,019 |
| Effect of retrospective application and retrospective restatement | | (9) |
| Balance of retrospective application and retrospective restatement at beginning | $ 220,464 | 216,010 |
| Attributable to non-controlling interest | | |
| Net income | 9,251 | 6,167 |
| Exchange differences in translation of financial statements of foreign operations | (9,904) | (1,713) |
| Balance on December 31 | $ 219,811 | $ 220,464 |

## 36. RELATED-PARTY TRANSACTIONS

Taiwan Cooperative Financial Holding Co., Ltd. is the ultimate parent of the Company, and the Ministry of Finance is the major government stockholder. Based on IAS 24 "Related Party Disclosures", the Company's transactions with government-related parties are exempt from disclosure requirements. All transactions, account balances, earnings, expenses and gains (losses) on transactions between the Company and subsidiaries have all been excluded from consolidation and are not disclosed in this note.

In addition to those mentioned in other notes, the related-party transactions are summarized as follows:

a. Related parties

| Related Party | Relationship with the Bank |
|---|---|
| Taiwan Cooperative Financial Holding Company, Ltd. (TCFHC) | Parent company |
| Co-operative Assets Management Co., Ltd. | Sister company |
| Taiwan Cooperative Bills Finance Co., Ltd. (TCBF) | Sister company |
| Taiwan Cooperative Securities Co., Ltd. (TCS) | Sister company |
| BNP Paribas Cardif TCB Life Insurance Co., Ltd. (BPCTLI) | Sister company |
| Taiwan Cooperative Securities Investment Trust Co., Ltd. | Sister company |
| Taiwan Cooperation Venture Capital Co., Ltd. (TCVC) | Sister company |
| United Real Estate Management Co., Ltd. | Associated enterprise |
| TCB Global Emerging Markets Equity Fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |
| TCB Fund of Emerging Markets Bond Fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |
| TCB Global High Yield Bond fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |
| TCB S&P U.S. Variable Rate Preferred Stock Index Fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |
| TCB 6 Year Emerging Market Bond Fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |
| TCB Mobility and Innovation Fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |

(Continued)

| Related Party | Relationship with the Bank |
|---|---|
| TCB 6 Year ESG Emerging Market Bond Fund | Fund managed by Taiwan Cooperative Securities Investment Trust Co., Ltd. |
| Tamshui First Credit Bank | The director of Tamshui First Credit Bank is also the Company's director. |
| Others | Main management of the parent company and other related parties. |

(Concluded)

b. Significant transactions between the Company and related parties:

1) Call loans to banks

| | Highest Balance | Ending Balance | Interest Revenue | Interest Rate (%) |
|---|---|---|---|---|
| For the year ended December 31, 2019 | | | | |
| Sister companies | $ 5,000,000 | $ 3,310,000 | $ 19,114 | 0.400-0.700 |
| Others | 4,231,000 | - | 27,061 | 0.400-2.850 |
| | $ 9,231,000 | $ 3,310,000 | $ 46,175 | |
| For the year ended December 31, 2018 | | | | |
| Sister companies | $ 4,500,000 | $ - | $ 9,830 | 0.350-0.550 |
| Others | 4,542,750 | - | 30,046 | 0.350-4.150 |
| | $ 9,042,750 | $ - | $ 39,876 | |

2) Call loans to securities firms (part of other financial assets, net)

| | Highest Balance | Ending Balance | Interest Revenue | Interest Rate (%) |
|---|---|---|---|---|
| For the year ended December 31, 2019 | | | | |
| Sister company | | | | |
| TCS | $ 316,200 | $ 179,940 | $ 7,987 | 1.710-3.200 |
| For the year ended December 31, 2018 | | | | |
| Sister company | | | | |
| TCS | $ 311,010 | $ 307,350 | $ 7,212 | 1.750-3.200 |

3) Due to banks

| | For the Year Ended December 31 | | | |
|---|---|---|---|---|
| | 2019 | | 2018 | |
| | Ending Balance | Interest Expense | Ending Balance | Interest Expense |
| Main management | $ 232,743 | $ 1,638 | $ 285,207 | $ 1,479 |
| Others | | | | |
| Tamshui First Credit Bank | 24,066,019 | 240,837 | 21,426,256 | 235,290 |
| Others | 40,198 | 23 | 17,413 | 9 |
| | $ 24,338,960 | $ 242,498 | $ 21,728,876 | $ 236,778 |

4) Call loans from banks

| | Highest Balance | Ending Balance | Interest Expense | Interest Rate (%) |
|---|---|---|---|---|
| For the year ended December 31, 2019 | | | | |
| Others | $ 1,000,000 | $ - | $ 105 | 0.270-0.280 |
| For the year ended December 31, 2018 | | | | |
| Others | $ 1,844,100 | $ - | $ 216 | 0.180-1.830 |

5) Loans

| | Highest Balance | Ending Balance | Interest Revenue | Interest Rate (%) |
|---|---|---|---|---|
| For the year ended December 31, 2019 | | | | |
| Sister company | $ 89,500 | $ - | $ 12 | 2.265 |
| Main management | 311,585 | 247,205 | 3,249 | 1.245-1.790 |
| Others | 540,831 | 137,770 | 3,189 | 1.137-2.465 |
| | $ 941,916 | $ 384,975 | $ 6,450 | |
| For the year ended December 31, 2018 | | | | |
| Sister company | $ 512,000 | $ - | $ 34 | 2.265 |
| Main management | 303,302 | 241,364 | 2,594 | 1.245-1.790 |
| Others | 141,496 | 129,400 | 1,104 | 1.137-2.465 |
| | $ 956,798 | $ 370,764 | $ 3,732 | |

Under the Banking Law, except for customer loans and government loans, credits extended by the Bank to any related party should be 100% secured, and the terms of credits extended to related parties should be similar to those for third parties.

6)Securities purchased under resell agreements

| | Ending Balance | Interest Revenue | Interest Rate (%) |
|---|---|---|---|
| For the year ended December 31, 2019 | | | |
| Sister companies | | | |
| TCBF | $ - | $ 3,182 | 0.440-0.695 |
| For the year ended December 31, 2018 | | | |
| Sister companies | | | |
| TCBF | $ 3,320,000 | $ 336 | 0.425-0.480 |

7) Deposits

| | Ending Balance | Interest Expense | Interest Rate (%) |
|---|---|---|---|
| For the year ended December 31, 2019 | | | |
| Parent company | $ 47,637 | $ 81 | 0-0.800 |
| Sister companies | 8,242,148 | 12,805 | 0-1.065 |
| Associates | 137,084 | 274 | 0-0.640 |
| Main management | 806,983 | 11,131 | 0-13.000 |
| Others | 12,483,506 | 67,814 | 0-13.000 |
| | $ 21,717,358 | $ 92,105 | |
| For the year ended December 31, 2018 | | | |
| Parent company | $ 25,293 | $ 58 | 0-0.800 |
| Sister companies | 4,727,583 | 8,790 | 0-1.065 |
| Associates | 64,677 | 365 | 0-0.775 |
| Main management | 718,088 | 3,695 | 0-13.000 |
| Others | 12,607,764 | 109,421 | 0-13.000 |
| | $ 18,143,405 | $ 122,329 | |

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| 8) Accrued income (part of receivables) | | |
| Sister companies | | |
| BPCTLI | $ 203,989 | $ 153,207 |
| Others | 2,430 | 1,430 |
| | $ 206,419 | $ 154,637 |
| 9) Accrued interest (part of receivables) | | |
| Sister companies | $ 522 | $ 1,041 |

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| 10) Receivable on securities (part of receivables) | | |
| Sister company | | |
| TCS | $ 138,642 | $ 147,499 |
| 11) Tax receivable - consolidated tax return (part of current tax assets) | | |
| Parent company | $ 1,080,183 | $ 1,297,856 |
| 12) Accrued interest (part of payables) | | |
| Sister companies | $ 43 | $ 15 |
| 13) Accrued expense (part of payables) | | |
| Sister companies | $ 1,332 | $ 193 |
| 14) Payable on securities (part of payables) | | |
| Sister company | | |
| TCS | $ 57,919 | $ 16,943 |
| 15) Tax payable - consolidated tax return (part of current tax liabilities) | | |
| Parent company | $ 1,639,593 | $ 547,923 |
| 16) Guarantee deposits received (part of other financial liabilities) | | |
| Parent company | $ 6,012 | $ 6,012 |
| Sister companies | 19,701 | 23,743 |
| | $ 25,713 | $ 29,755 |

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| 17) Service fee income (part of service fee income, net) | | |
| Sister companies | | |
| BPCTLI | $ 1,234,439 | $ 1,019,949 |
| Others | 27,196 | 26,146 |
| Associates | - | 106 |
| Main management | 158 | 352 |
| Others | 15,937 | 208 |
| | $ 1,277,730 | $ 1,046,761 |

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| 18) Service charge (part of service fee income, net) | | |
| Sister companies | $ 3,266 | $ 5,306 |
| Main management | 83 | 56 |
| Others | 4 | 4 |
| | $ 3,353 | $ 5,366 |
| 19) Investigation fee (part of general and administration) | | |
| Sister companies | $ 1,714 | $ 1,200 |
| 20) Other income (part of other noninterest gain, net) | | |
| Parent company | $ 1,539 | $ 1,540 |
| Sister companies | 40 | 680 |
| Others | 3,553 | 3,809 |
| | $ 5,132 | $ 6,029 |
| 21) Donation (part of other noninterest gain, net) | | |
| Main management | $ 2,000 | $ 2,000 |
| Others | 900 | 900 |
| | $ 2,900 | $ 2,900 |

Terms of other transactions with related parties were similar to those for third parties, except for the more favorable interest rate for managers' savings within a prescribed limit. The Bank has operating lease contracts with related parties, which cover certain office spaces within the Bank's building. The monthly rentals were based on rentals for buildings near the Bank.

22) Lease agreements - the Company is lessor

The Company lease out investment properties to its parent company and sister companies under operating leases with lease terms of 2 to 10 years. Rentals which are determined based on the prices of nearby properties are calculated on the basis of the leased areas and are payable monthly.

a) Future lease payment receivables was as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Parent company | $ 62,992 | $ 87,040 |
| Sister companies | | |
| TCS | 173,981 | 204,807 |
| BPCTLI | 26,536 | 40,715 |
| Others | 48,630 | 71,300 |
| | $ 312,139 | $ 403,862 |

b) Lease income (part of other non-interest gains, net):

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Parent company | $ 24,048 | $ 24,048 |
| Sister companies | | |
| TCS | 44,724 | 30,355 |
| Others | 37,221 | 32,306 |
| | $ 105,993 | $ 86,709 |

23) Purchases and sales of securities

| | For the Year Ended December 31, 2019 | | | |
|---|---|---|---|---|
| Related Party | Purchases | Sales | Sales Under Repurchase Agreements | Purchases Under Resell Agreements |
| Sister companies | $ - | $ - | $ - | $ 14,581,540 |

| | For the Year Ended December 31, 2018 | | | |
|---|---|---|---|---|
| Related Party | Purchases | Sales | Sales Under Repurchase Agreements | Purchases Under Resell Agreements |
| Sister companies | $ 150,009 | $ 199,617 | $ - | $ 3,519,521 |
| Others | 150,050 | 100,287 | - | - |
| | $ 300,059 | $ 299,904 | $ - | $ 3,519,521 |

24) Derivatives

| | For the Year Ended December 31, 2019 | | | | | |
|---|---|---|---|---|---|---|
| | Type of | Contract | Nominal | Valuation | Amounts on the Consolidated Balance Sheet | |
| Related Party | Derivatives | Period | Amounts | Gain (Loss) | Account | Amounts |
| Sister company - BPCTLI | Currency swap | 2019.08.19-2020.09.30 | US$ 118,951 | $ (117,207) | Financial liabilities at fair value through profit or loss | $ (117,207) |
| | Currency swap | 2019.10.30-2020.02.27 | EUR 4,844 | (1,328) | Financial liabilities at fair value through profit or loss | (1,328) |
| Other - TCB Fund of Emerging Markets Bond Fund | Currency swap | 2019.12.30-2020.03.30 | US$ 6,700 | (1,415) | Financial liabilities at fair value through profit or loss | (1,415) |
| Other - TCB Global High Yield Bond Fund | Currency swap | 2019.12.11-2020.02.12 | US$ 14,900 | (7,355) | Financial liabilities at fair value through profit or loss | (7,355) |
| Other - TCB S&P U.S. Variable Rate Preferred Stock Index Fund | Currency swap | 2019.12.26-2020.01.21 | US$ 6,000 | (1,292) | Financial liabilities at fair value through profit or loss | (1,292) |
| Other - TCB 6 Year Emerging Market Bond Fund | Currency swap | 2019.10.18-2020.04.20 | US$ 19,750 | (2,446) | Financial liabilities at fair value through profit or loss | (2,446) |
| Other - TCB Mobility and Innovation Fund | Currency swap | 2019.12.12-2020.02.12 | US$ 7,300 | (1,922) | Financial liabilities at fair value through profit or loss | (1,922) |
| Other - TCB 6 Year ESG Emerging Market Bond Fund | Currency swap | 2019.12.23-2020.02.24 | US$ 55,200 | (5,353) | Financial liabilities at fair value through profit or loss | (5,353) |

| Related Party | Type of Derivatives | Contract Period | Nominal Amounts | Valuation Loss | Amounts on the Consolidated Balance Sheet Account | Amounts |
|---|---|---|---|---|---|---|
| | | | For the Year Ended December 31, 2018 | | | |
| Sister company - BPCTLI | Currency swap | 2018.09.28-2019.03.04 | US$ 5,351 | $ 1,954 | Financial assets at fair value through profit or loss | $ 1,954 |
| | Currency swap | 2018.12.17-2019.03.29 | US$ 180,162 | (13,802) | Financial liabilities at fair value through profit or loss | (13,802) |
| Other - TCB Global Emerging Markets Equity Fund | Currency swap | 2018.12.03-2019.01.14 | US$ 8,300 | (127) | Financial liabilities at fair value through profit or loss | (127) |
| Other - TCB Global High Yield Bond Fund | Currency swap | 2018.12.06-2019.01.14 | US$ 7,250 | (1,010) | Financial liabilities at fair value through profit or loss | (1,010) |
| Other -TCB S&P U.S. Variable Rate Preferred Stock Index Fund | Currency swap | 2018.12.13-2019.01.17 | US$ 7,000 | (644) | Financial liabilities at fair value through profit or loss | (644) |
| Other -TCB 6 Year Emerging Market Bond Fund | Currency swap | 2018.12.05-2019.01.07 | US$ 20,000 | 1,048 | Financial assets at fair value through profit or loss | 1,048 |
| | Currency swap | 2018.12.13-2019.03.18 | US$ 850 | (72) | Financial liabilities at fair value through profit or loss | (72) |

The realized profit on the currency swaps transactions with related parties were as follows:

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Financial assets and liabilities at fair value through profit or loss | | |
| Sister company | | |
| BPCTLI | $ 127,431 | $ 48,330 |
| Others | - | 1,470 |
| Others | 29,435 | 66,272 |
| | $ 156,866 | $ 116,072 |

25) Loans

December 31, 2019

| Type | Account Volume or Name | Highest Balance in the Year Ended December 31, 2019 (Note 1) | Ending Balance | Loan Classification: Normal Loans | Loan Classification: Nonperforming Loans | Collaterals | Differences in Terms of Transaction Compared with Those for Unrelated Parties |
|---|---|---|---|---|---|---|---|
| Consumer loans | 79 | $ 181,852 | $ 131,546 | $ 131,546 | $ - | Note 2 | None |
| Self-used housing mortgage loans | 50 | 282,224 | 232,419 | 232,419 | - | Land and buildings | None |
| Other loans | Others | 388,340 | 21,010 | 21,010 | - | Note 3 | None |
| | Taiwan Cooperative Securities Co., Ltd. | 89,500 | - | - | - | Bonds | None |

December 31, 2018

| Type | Account Volume or Name | Highest Balance in the Year Ended December 31, 2018 (Note 1) | Ending Balance | Loan Classification: Normal Loans | Loan Classification: Nonperforming Loans | Collaterals | Differences in Terms of Transaction Compared with Those for Unrelated Parties |
|---|---|---|---|---|---|---|---|
| Consumer loans | 67 | $ 166,643 | $ 138,550 | $ 138,550 | $ - | Note 2 | None |
| Self-used housing mortgage loans | 47 | 278,155 | 232,214 | 232,214 | - | Land and buildings | None |
| Other | Taiwan Cooperative Securities Co., Ltd. | 512,000 | - | - | - | Bonds | None |

Note 1: The highest balance is the largest sum in the year of all daily accounts for each type.

Note 2: In addition to the line of consumer loans, real estate guarantees are provided.

Note 3: A portion of loans was guaranteed by certificates of deposit or demand deposits.

c. Salaries, bonuses and remuneration to main management

| | For the Year Ended December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Salaries and other short-term employment benefits | $ 158,676 | $ 135,542 |
| Post-employment benefits | 14,606 | 13,375 |
| Interest arising from the employees' preferential rate in excess of normal rates | 4,071 | 4,208 |
| | $ 177,353 | $ 153,125 |

## 37. PLEDGED ASSETS

a. In addition to those mentioned in other notes, the face values of the pledged bonds and certificates of deposit are summarized as follows:

| | December 31 | |
|---|---|---|
| | 2019 | 2018 |
| Collaterals for call loans of foreign currency | $ 40,000,000 | $ 40,000,000 |
| Collaterals for day-term overdraft | 30,000,000 | 30,000,000 |
| Collaterals for overdraft of domestic U.S. dollar settlement | 11,000,000 | 11,000,000 |
| Collaterals for overdraft of domestic RMB settlement | 2,362,250 | 1,430,080 |
| Guarantee deposits for provisional collateral seizure for loan defaults and others | 1,204,500 | 995,900 |
| Collaterals for overdraft of domestic JPY settlement | 500,000 | 500,000 |
| Overseas branches' capital adequate reserve | 389,819 | 376,667 |
| Guarantee deposits for the trust business compensation reserve | 260,000 | 240,000 |
| Collaterals for overseas branch U.S. dollar settlement | 61,650 | 130,931 |
| Guarantee deposits for bills finance business | 50,000 | 50,000 |
| Guarantee deposits for securities operation | 50,000 | 50,000 |
| Overseas branches' guarantee deposits for operation | 5,998 | 6,147 |
| | $ 85,884,217 | $ 84,779,725 |

To comply with the Central Bank of the Republic of China's (CBC) Interbank Funds Transfer and Settlement System for real-time gross settlement (RTGS), the Bank provided certificates of deposit as collateral for day-term overdraft (part of due from the Central Bank and call loans to other banks). The pledged amount may be adjusted anytime, and the unused overdraft amount at the end of a day can also be treated as the Bank's liquidity reserve.

b. To expand their capital sourcing and enhance their liquidity position, the Bank's Seattle Branch and Los Angeles Branch and New York Branch obtained access privileges at the Discount Window Account of the Federal Reserve Bank. For this access, the three branches pledged the following assets:

**(In Thousands of U.S. Dollars)**

| Date | Loan | Collateral Value |
|---|---|---|
| December 31, 2019 | $ 281,333 | $ 232,718 |
| December 31, 2018 | $ 234,446 | $ 165,192 |

## 38. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

In addition to those mentioned in other notes, the significant commitments were as follows:

a. As of December 31, 2019, the Bank's outstanding major construction and procurement contracts amounted to $210,971 thousand, of which $141,818 thousand was still unpaid.

b. According to the joint venture contract signed with BNP Paribas Assurance (BNPPA), the Bank signed the tri-party agreement with BNP Paribas Cardif TCB Life Insurance Co., Ltd. (BPCTLI) and Cooperative Insurance Brokers Co., Ltd. (CIB) on April 13, 2010, which identified BPCTLI as the sole supplier of life insurance products for the Bank and CIB, also applying the Bank's marketing channels to sell life insurance products. Since the Bank merged with the CIB on June 24, 2016, the Bank signed a two-party agreement with BPCTLI on March 30, 2018 to replace the original tri-party agreement, the rights and obligations of the CIB were assumed by the Bank.

## 39. FINANCIAL INSTRUMENTS

a. Fair values of financial instruments that are not measured at fair value.

| | December 31 | | | |
|---|---|---|---|---|
| | 2019 | | 2018 | |
| | Carrying Amount | Estimated Fair Value | Carrying Amount | Estimated Fair Value |
| Financial assets | | | | |
| Investments in debt instruments at amortized cost | $ 555,630,712 | $ 560,727,696 | $ 556,155,565 | $ 558,876,001 |
| Financial liabilities | | | | |
| Bank debentures | 65,000,000 | 66,544,129 | 55,000,000 | 56,204,741 |

Fair value hierarchy as at December 31, 2019

| | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Financial assets | | | | |
| Investments in debt instruments at amortized cost | $ 560,727,696 | $ 7,994,440 | $ 552,733,256 | $ - |
| Financial liabilities | | | | |
| Bank debentures | 66,544,129 | - | 66,544,129 | - |

Fair value hierarchy as at December 31, 2018

| | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Financial assets | | | | |
| Investments in debt instruments at amortized cost | $ 558,876,001 | $ 8,074,457 | $ 550,801,544 | $ - |
| Financial liabilities | | | | |
| Bank debentures | 56,204,741 | - | 56,204,741 | - |

In addition to those listed above, the management level consider other financial instruments which are not measured at fair value closed to their fair value.

b. The valuation techniques and assumptions the Bank uses for determining fair values are as follows:

The fair values of financial instruments traded on active markets are based on quoted market prices. However, in many instances where there are no quoted market prices for the Bank's various financial instruments, fair values are based on estimates using other financial data and appropriate valuation methodologies. The financial data obtained by the Bank for making estimations and assumptions for financial instrument valuation is consistent with those used by other market participants to price financial instruments. Fair values of forward contracts, currency swap contracts, foreign-currency margin contracts, cross-currency swap contracts and interest rate swap contracts are calculated using the discounted cash flow method, unless the fair values are provided by counterparties. Fair values of option contracts are based on estimates using the Black Scholes pricing model.

The Bank estimates the fair value of each forward contract on the basis of the swap points quoted by Reuters on each settlement date. Fair values of interest rate swap contracts and cross-currency swap contracts are calculated using the Bloomberg information system, unless the fair values are provided by counterparties. The calculation of the fair value of each option contract is based on the mid-price (the average of bid and ask prices) quoted by Reuters and applied consistently

For debt instruments with no active market, if there are theoretical prices from the Taipei Exchange an over-the-counter securities exchange) on the balance sheet date, they are used as the basis for evaluating the fair value of debt instruments with no active market. Otherwise, the latest trade prices and quoted prices by major markets are used. The fair values of bank debentures are recorded as follows: (a) debentures with no maturity dates - at book values; (b) debentures with floating interest rates - at theoretical prices quoted by the Taipei Exchange; and (c) debentures with fixed interest rates - at estimates reached using the discounted cash flow method. The discount rates used were between 0.5537% and 1.0441%, between 0.6707% and 1.3055% as of December 31, 2019 and 2018, respectively, and were comparable with interest rates for loans with similar terms and characteristics.

Evaluation technique and input of fair value measurement at Level 3

The Company adopts the market approach for domestic unlisted equity investment, and selects similar industries with the target company. The main business model is similar. The products and scales are close to the comparable listed companies. The fair value estimation is based on the information of the listed company, or the price-book ratio (P/B) of the industry to which the target is evaluated is estimated as the multiplier of the fair value estimate. The significant unobservable input used is discount for lack of marketability. A decrease in discount for lack of marketability used in isolation would result in increases in fair value.

The ranges for the discount for lack of marketability used in the assessment of fair value based on the market approach on December 31, 2019 and 2018 are as follows:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Discount for lack of marketability | 10%-30% | 10%-30% |

With other input values remaining and a change in discount for lack of marketability input value to reflect reasonable assumptions, the amount of fair value of investment in equity instruments will increase (decrease) as follows:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Discount for lack of marketability | | |
| Increase 10% | $ (754,975) | $ (590,841) |
| Decrease 10% | $ 754,975 | $ 590,841 |

c. The hierarchies of the Company's financial instruments measured at fair value on a recurring basis as of December 31, 2019 and 2018 were as follows:

1)

| **Financial Instrument Measured at Fair Value** | **December 31, 2019** | | | |
|---|---|---|---|---|
| | **Total** | **Level 1** | **Level 2** | **Level 3** |
| Non-derivative financial instruments | | | | |
| Assets | | | | |
| Financial assets at FVTPL | | | | |
| Held-for-trading financial assets | | | | |
| Equity instruments | $ 2,034,296 | $ 1,791,347 | $ - | $ 242,949 |
| Debt instruments | 1,950,488 | - | 1,950,488 | - |
| Others | 7,413,795 | 220,034 | 7,193,761 | - |
| Financial assets at fair value through other comprehensive income | | | | |
| Equity instruments | 17,158,197 | 11,873,370 | - | 5,284,827 |
| Debt instruments | 311,970,695 | 22,969,137 | 289,001,558 | - |
| Liabilities | | | | |
| Financial liabilities at FVTPL | (12,052,429) | - | (12,052,429) | - |
| Derivative financial instruments | | | | |
| Assets | | | | |
| Financial assets at FVTPL | 1,706,895 | 32,101 | 1,674,794 | - |
| Liabilities | | | | |
| Financial liabilities at FVTPL | (3,968,699) | - | (3,968,699) | - |

| Financial Instrument Measured at Fair Value | December 31, 2018 | | | |
|---|---|---|---|---|
| | Total | Level 1 | Level 2 | Level 3 |
| Non-derivative financial instruments | | | | |
| Assets | | | | |
| Financial assets at FVTPL | | | | |
| Held-for-trading financial assets | | | | |
| Equity instruments | $ 807,279 | $ 564,754 | $ - | $ 242,525 |
| Debt instruments | 2,561,635 | 1,805,936 | 755,699 | - |
| Others | 4,238,682 | - | 4,238,682 | - |
| Financial assets at fair value through other comprehensive income | | | | |
| Equity instruments | 10,614,704 | 6,354,937 | - | 4,259,767 |
| Debt instruments | 246,048,663 | 5,523,893 | 240,524,770 | - |
| Liabilities | | | | |
| Financial liabilities at FVTPL | (11,483,955) | - | (11,483,955) | - |
| Derivative financial instruments | | | | |
| Assets | | | | |
| Financial assets at FVTPL | 1,883,120 | 59,339 | 1,823,781 | - |
| Liabilities | | | | |
| Financial liabilities at FVTPL | (1,469,266) | - | (1,469,266) | - |

2) Reconciliation for financial assets based on the fair value measurement of Level 3

| Financial Assets | Financial assets at FVTPL | Investment in Equity Instruments at FVTOCI | Total |
|---|---|---|---|
| Balance at January 1, 2019 | $ 242,525 | $ 4,259,767 | $ 4,502,292 |
| Recognized in profit or loss (included in gains on financial assets and liabilities at FVTPL) | 424 | - | 424 |
| Recognized in OCI (included in unrealized valuation gain or loss on investment in equity instruments at FVTOCI) | - | 1,025,060 | 1,025,060 |
| Balance at December 31, 2019 | $ 242,949 | $ 5,284,827 | $ 5,527,776 |
| Balance at January 1, 2018 | $ - | $ 5,457,888 | $ 5,457,888 |
| Recognized in profit or loss (included in gains on financial assets and liabilities at FVTPL) | (7,475) | - | (7,475) |
| Recognized in OCI (included in unrealized valuation gain or loss on investment in equity instruments at FVTOCI) | - | (784,675) | (784,675) |
| Purchases | 250,000 | 36,554 | 286,554 |
| Disposal | - | (450,000) | (450,000) |
| Balance at December 31, 2018 | $ 242,525 | $ 4,259,767 | $ 4,502,292 |

The change in unrealized gains or loss for the year ended December 31, 2019 and 2018 included in profit or loss for assets held at December 31, 2019 and 2018 was $424 thousand gains and $7,475 thousand losses, respectively.

d. Information on financial liabilities designated as at fair value through profit or loss is as follows:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Difference between carrying amount and contractual amount at maturity | | |
| Fair value | $ 12,052,429 | $ 11,483,955 |
| Amount payable at maturity | 11,996,000 | 12,294,000 |
| | $ 56,429 | $ (810,045) |

| | **Change in Fair Values Resulting from Credit Risk Variations** |
|---|---|
| Accumulated amount of change | |
| As of December 31, 2019 | $ 970 |
| As of December 31, 2018 | $ 15,666 |

The change in fair value attributable to change in credit risk was calculated as the difference between the total change in fair value of bank debentures and the change in fair value due to change in market risk factors alone. The change in fair value due to market risk factors was calculated using benchmark interest yield curves as at the end of the holding period. The fair value of bank debentures was estimated by discounting future cash flows using quoted benchmark interest yield curves as at the end of the reporting period and by obtaining lender quotes for borrowing of similar maturities to estimate the credit risk margin.

e. Information on financial risk management

1) Risk management

The objective of risk management is to develop a sound risk management mechanism, and on the basis of the risk tolerance level and the expected return level, pursue the maximum value of stockholders' investments. The main risks faced by the Bank include the business credit risk in- and off- balance-sheet, market risks (including interest, exchange, equity security, and commodity risks) and liquidity risk.

The Bank has risk management policies and risk monitoring procedures, which have been reviewed and approved by the Board and are used to effectively identify, measure, monitor and control credit, market, and operating and liquidity risks.

The Board, the highest decision-making unit for the risk management, takes charge of approving the risk management policy and system and building the risk management culture. It also takes ultimate responsibility for overall risk management.

Under the risk management decision approved by the Board, the risk management committee takes charge of and reviews all the Bank's risk management implementation, capital adequacy assessment, and risk exposure management. It also communicates and the inter-departmental risk management issues and coordinates issue handling and continually monitor the execution of risk management procedures. The risk management department is responsible for planning and designing the risk management system, deliberating capital allocation, setting up the instruments for risk measurement and capital provision, and monitoring risk control. This department also regularly prepares reports for submission to senior management, the risk management committee and the Board.

Under the business management regulation and risk policy, the business supervising unit manages and oversees each business unit toward proper risk management and carries out risk review and control. In addition, the Audit Department evaluates each audit units' risks to determine the audit focus, scope, measurement, procedures and frequency, and establishes the relevance between the assessment result and the audit frequency, which enhance the effectiveness of audit and assist the Bank to improve internal control and business development.

2) Credit risk

a) Credit risk management policy

Credit risk refers to a borrower, a financial instrument issuer or a transaction counterparty undergoing financial difficulty or other adverse situations (such as a dispute between the borrower and its business partner), which could result in loss due to breach of contract. Credit risk can come from on- and off-balance-sheet items. On-balance sheet items are mainly lending, due from bank and call loans to other banks, security investment and derivatives. Off-balance sheet items are mainly guarantees, acceptance, letters of credit and loan commitments.

The risk management policy, which is founded on the basic principles of safety, liquidity, profitability, welfare and growth, is implemented by the credit risk management division toward the cultivation of a risk management culture. All on- and off- balance sheet transactions are should be analyzed in detail to identify existing and potential credit risk. Based on TCB's business characteristics and the principle of risk diversification, risk status is analyzed and evaluated, centralized limits are set, and a risk monitoring and alert mechanism has been developed and operated. For a more effective credit risk evaluation, an internal rating system has been created to enhance the ability to quantify risk.

TCB's main business items that are measured and managed for credit risks are as follows:

i. Loans business (including loan commitment and guarantees)

Credit assets are classified into five categories. In addition to normal credit assets that are classified as sound assets, the unsound assets are classified, on the basis of the valuation of collaterals and the length of time the payments become overdue, as special mention, substandard, with collectability high doubtful and uncollectable. The Company also set up policies for the management of doubtful credits and the collection of overdue debts to deal with collection problems.

The Company apply to its credit business the so-called "5Ps of credit analysis" as the basis for lending approval and evaluation of its counterparties. These 5Ps are: People (know customers' background and their credit status well); purpose (what will the fund be used for); payment (the borrower's ability to repay an obligation when it falls due); protection (the Company's recourse on repayment defaults); and perspective (how the credit is seen in light of rewards and risks). After a loan is granted, the transaction is reviewed and monitored to ensure the Company's creditor's rights.

To quantify credit risk, the Company apply statistical methods using with customers' qualitative data and lending history to develop a rating module for corporate finance and consumer finance. This module is used to create an internal credit rating system for risk evaluation, in which 9 is the base grade of the credit quality of corporate customers, and 9 or 10 on the business segment consumer customers.

The 5P credit analysis and the module rating specifically apply to corporate customers. Micro credits and residential mortgages are assessed by using the credit rating model, and consumer loans are assessed individually for default risks.

ii. Due from and call loans to other banks

The Company evaluates the credit status of counterparties before closing deals. The Company grant different limits to the counterparties on the basis of their respective credit ratings as suggested by domestic and foreign credit rating agencies.

iii. Investments in debt instruments and derivatives

The Company identifies and manages credit risks from debt instruments through the use of external credit ratings of the debt instruments along with the evaluation of credit qualities of bonds, regional conditions and counterparty risks.

The Company conducts derivative transactions with other banks and sets the credit limits (including lending limits) at their credit rating and the ranking given by the Banker magazine. The credits extended to general customers are monitored in accordance with the related contract terms and conditions and the credit limits for derivatives established through normal credit granting processes.

b) Measurement of expected credit losses

i. The determination of significantly increased credit risk after initial recognition

In order to determine whether the credit risks has increased significantly after initial recognition, the Company assessed changes in default risks of financial assets over the duration at the balance sheet date. To evaluate changes in default risks, the Company considered reasonable and verifiable information (including forward-looking information). The major considerations include:

<u>Loans business</u>

i) Quantitative benchmark

Overdue loans: Loans and other credits (including accrued interest) are overdue for at least 30 days but less than 90 days.

ii) Qualitative benchmark

- Borrower or its representative suffered from dishonored check due to insufficient funds.
- Borrower or its representative suffered from credit card suspension.
- Owners of credit card has been denied by Taiwan Clearing House (THC).
- Objective evidence shows that the borrower's ability to fulfill obligation has been affected.

Bonds and bills business

i) Quantitative benchmark

Credit rating of bond issuers are not classified as investment grade and downgraded by over two grades, or classified as CCC.

Credit risks are deemed low, if the credit rating of the issuer was classified as investment grade at the issue date and did not increase significantly after initial recognition.

ii) Qualitative benchmark

Credit rating of bond issuers are not classified as investment grade and downgraded by no more than two grades, but credit risk increase significantly.

ii. Definition of default and credit loss on financial assets

The Company defines financial asset default in the same manner as financial asset impairment. If one or more of the following conditions occur, the Company can conclude that the financial asset has defaulted and the credit is impaired:

Loans business

i) Loans and other credits (including accrued interest) are overdue for at least 90 days.

ii) Borrower filed for bankruptcy or reorganization.

iii) Borrower defaulted on other financial instruments.

iv) The lender of the borrower, for economic or contractual reasons relating to the borrower's financial difficulties, has granted the borrower concession that the lender would not otherwise consider.

v) Borrower has been denied by TCH.

Bonds and bills business

i) Interest or principal of bonds without payment are overdue for at least 90 days.

ii) Borrower has indication of impairment such as overdue receivables, doubtful debts, financial crisis, contract condition change due to financial crisis and bankruptcy or reorganization.

The above definition of default is applicable to financial assets that are held by the Company, and is in line with the definition of internal-management intention. Therefore, it is applied to related impairment evaluation models.

If the conditions that define default and credit loss of financial assets have been corrected and the financial assets have returned to the original state of compliance, the financial assets are no longer recognized as impaired.

iii. Reversal policy

When the Company are unable to recover financial assets to expectations, they are entirely or partly written off against the allowance amount. Indicators of uncollectible financial assets are as follows:

i) The debtor's inability to recover all or part of the debts due to dissolution, escape, settlement, bankruptcy or other reasons.

ii) After collaterals assumed and assets of principal and subordinate debtors have been priced low or after deductions for first-order mortgage have been made, the remaining value of the assets is not enough to pay any obligation; also, if execution cost nears or exceeds the debtor's liability, no gain will be realized.

iii) The Bank is not responsible for the collaterals assumed and assets of principal and subordinate debtors experiencing low priced auctions with no bidders.

iv) Overdue loans or collections were made after two years from the settlement date.

v) Overdue credit card loans and overdue receivables were aged over nine months after the settlement date.

Financial assets that have been written off by the Company may continue activities in progress, while complying with procedures according to relevant policies.

iv. Measurement of expected credit losses

Loans business

In order to assess the expected credit loss, the Company will categorize credit assets according to credit risk and industry assessments of borrower, as well as credit risk of the types of collateral.

A loss allowance for the 12-month expected credit losses is required for a financial asset if its credit risk has not increased significantly since initial recognition. A loss allowance for full lifetime expected losses is required for a financial asset if its credit risk has increased significantly since initial recognition.

The Company measures expected credit loss by calculating the product of loss given default and exposure at default, while taking into account the probability of default of a 12-month period and duration, as well as the effect of changes in currency values.

Probability of default refers to a possibility that a borrower would default to the contract (please refer to the introduction to "The definition of default and credit loss on financial assets"). Loss given default refers to the ratio of default loss caused by borrower. Probability of default and loss given default for loan business of the Company are calculated by the adjustment of historical default rate, which is based on historical internal information (e.g. credit loss experience), current observable information and prospective macroeconomics statistics (e.g. monitoring indicator from National Development Association and unemployment rate from Directorate General of Budget, Accounting and Statistics, Executive Yuan).

The Company estimates the exposure at default according to the aggregate book value. In addition, the estimations of expected credit loss for the 12-month loan period and duration of loan commitment made by the Company are based on the credit conversion factor (CCF), using the portion of the loan commitment that is expected to be used within 12 months of reporting date and expected duration to calculate expected credit loss and determine the exposure at default.

There is no significant change in the estimation method and assumptions used to calculate expected credit loss as of December 31, 2019.

Bonds and bills business

A loss allowance for the 12-month expected credit losses is required for a financial asset if its credit risk has not increased significantly since initial recognition. A loss allowance for full lifetime expected losses is required for a financial asset if its credit risk has increased significantly since initial recognition.

The Company measures expected credit loss by calculating the product of loss given default and exposure at default, while taking into account the probability of default of a 12-month period and duration, as well as the effect of changes in currency values.

There is no significant change in the estimation method and assumptions used to calculate expected credit loss as of December 31, 2019.

v. Forward-looking information considerations

Loans business

The Company has taken into account previous forward-looking information when assessing asset default probability. The Company analyze past archives to identify relevant economic factors affecting personal and company asset default probabilities.

According to the Company's previous forward-looking information, estimations are calculated at the end of the year per year on average. The influence of relevant economic factors and expected credit loss identified by the Company on December 31, 2018 and 2017 is as follows:

| | **Probability of Default** |
|---|---|
| Relevant economic factors | Monitoring indicator/unemployment rate |

Bonds and bills business

The assessment of the increase/decrease in the credit risk is based on the Company's amortization costs and other comprehensive income measured by fair value, referring to changes in external credit ratings according to the international credit ratings service (Moody's) as a quantitative indicator. Also, the expected credit loss uses external credit ratings and Moody's periodic calculations of default probability and loss given default as references. As international credit ratings services have taken into account forward-looking information in assessing credit ratings, it is also appropriate for the Company to consider forward-looking information when assessing relevant expected credit loss.

c) Credit risk avoidance or mitigation policy

i. Strengthen collaterals and other credits

The Company has a series of measures for credit granting to reduce credit risks. One of the measures is to require collaterals from the borrowers. To secure a debt, the Bank manages and assess the collaterals following the procedures that determine the scope of collateralization and valuation of collaterals and the process of disposition. In credit contracts, the Company stipulates the security mechanism for debts; the conditions and terms for collaterals; and the terms and conditions of offsetting to state clearly that the Company reserves the right to reduce the granted quota, to shorten the repayment period, to demand immediate settlement or to offset the debts of the borrowers with their deposits in the Company in order to reduce the credit risks.

There was no major change in the collateral policy of the Company on the balance sheet date, and there was no significant change in the overall collateral quality.

The Company closely monitors the value of collaterals of financial instruments and consider impairment on credit-impaired financial assets. Credit-impaired financial assets and collateral to mitigate potential loss were as follows:

December 31, 2019

| | Gross Carrying Amount | Allowance for Possible Losses | Total Exposure Amount (Amortized Cost) | Fair Value of Collateral |
|---|---|---|---|---|
| Impaired financial assets | | | | |
| Discount and loans | $ 24,847,797 | $ 2,557,302 | $ 22,290,495 | $ 65,307,192 |

December 31, 2018

| | Gross Carrying Amount | Allowance for Possible Losses | Total Exposure Amount (Amortized Cost) | Fair Value of Collateral |
|---|---|---|---|---|
| Impaired financial assets | | | | |
| Discount and loans | $ 19,588,630 | $ 1,827,359 | $ 17,761,271 | $ 56,820,950 |

The total amount of financial assets that have been written off but have recourse action by the Bank in December 31, 2019 and 2018 was $7,608,546 thousand and $6,892,567 thousand, respectively.

ii. Credit limit and the control of concentration of credit risk

To avoid the concentration of credit risks, the Company sets up centralized credit limits for business segments, countries, collaterals, groups, and construction financing. Monthly, or more frequently, as needed, the Company reviews credit limits, monitor the actual risk-exposure condition and whether the usage rate of limits meets relevant regulations and reports the review results to superior management, risk management committee and the Board periodically. If there is a possibility of breach of the credit limits, the related department or division will apply appropriate procedures to ensure that the credit limits are followed.

Concentration of credit risk exists when counterparties to financial transactions are individuals or groups engaged in similar activities or activities in the same region, which would cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions. The profile by group or industry, regions and collaterals of obligations that were 10% or more of total outstanding loans is as follows:

| | December 31 | | | |
|---|---|---|---|---|
| **Credit Risk Profile by Group or Industry** | **2019** | | **2018** | |
| | **Amount** | **%** | **Amount** | **%** |
| Natural person | $ 873,758,898 | 40 | $ 843,564,027 | 41 |
| Manufacturing | 395,568,638 | 18 | 387,603,437 | 19 |

iii. Master netting arrangement

The Company settles most of its transactions at gross amounts. For further reduction of credit risks, settlement netting is used for some counterparties or in some circumstances where the transactions are terminated because of a counterparty's default.

d) Maximum exposures to credit risks

The maximum exposures to credit risks of assets on the consolidated balance sheets without consideration of guarantees or other credit enforcement instruments approximate the assets' carrying amounts.

The maximum exposures of financial instrument to credit risks which was not applicable to impairment is as follow:

| | December 31 | |
|---|---|---|
| | **2019** | **2018** |
| Financial assets at fair value through profit or loss - debt instrument | $ 1,950,488 | $ 2,561,635 |

The maximum exposures of off-balance sheet items to credit risks without consideration of guarantees or other credit enforcement instrument are stated as follows:

| | December 31, 2019 | | | | |
|---|---|---|---|---|---|
| | 12-month ECL | Lifetime ECL | Lifetime ECL (Credit-impaired Financial Assets) | Difference of Impairment Loss under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
| Maximum exposures to credit risk | $ 237,493,576 | $ 47,264 | $ 313,950 | $ - | $ 237,854,790 |
| Allowance for possible losses | (708,936) | (332) | (75,588) | - | (784,856) |
| Difference of impairment loss under "Regulations Governing the Procedure for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | - | - | - | (503,693) | (503,693) |
| | $ 236,784,640 | $ 46,932 | $ 238,362 | $ (503,693) | $ 236,566,241 |

| | December 31, 2018 | | | | |
|---|---|---|---|---|---|
| | 12-month ECL | Lifetime ECL | Lifetime ECL (Credit-impaired Financial Assets) | Difference of Impairment Loss under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
| Maximum exposures to credit risk | $ 221,894,310 | $ 202,073 | $ 131,786 | $ - | $ 222,228,169 |
| Allowance for possible losses | (564,424) | (387) | (18,827) | - | (583,638) |
| Difference of impairment loss under "Regulations Governing the Procedure for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | - | - | - | (577,117) | (577,117) |
| | $ 221,329,886 | $ 201,686 | $ 112,959 | $ (577,117) | $ 221,067,414 |

The Company's management believes its ability to minimize credit risk exposures on off-balance sheet items is mainly due to its rigorous evaluation of credit extended and the periodic reviews of these credits.

Some financial assets held by the Company, such as cash and cash equivalents, due from the Central Bank and call loans to other banks, call loans to security firms, financial assets at fair value through profit or loss, securities purchased under resell agreements and refundable deposits, are exposed to low credit risks because the counterparties have high credit ratings.

In addition to the above assets, credit quality analysis of other financial assets are as follows:

a) Credit quality analysis of discounts, loans and receivables

| | December 31, 2019 | | | | |
|---|---|---|---|---|---|
| | Stage 1 12-month ECL | Stage 2 Lifetime ECL | Stage 3 Lifetime ECL | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
| Discounts, loans | $ 2,180,378,522 | $ 2,524,438 | $ 37,638,133 | $ - | $ 2,220,541,093 |
| Allowance for possible losses | (4,383,474) | (15,152) | (5,790,070) | - | (10,188,696) |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" | - | - | - | (17,187,696) | (17,187,696) |
| | $ 2,175,995,048 | $ 2,509,286 | $ 31,848,063 | $ (17,187,696) | $ 2,193,164,701 |

| | December 31, 2018 | | | | |
|---|---|---|---|---|---|
| | Stage 1 12-month ECL | Stage 2 Lifetime ECL | Stage 3 Lifetime ECL | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
| Discounts, loans | $ 2,051,190,069 | $ 2,960,372 | $ 32,411,101 | $ - | $ 2,086,561,542 |
| Allowance for possible losses | (3,785,613) | (9,005) | (4,570,540) | - | (8,365,158) |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans" | - | - | - | (18,033,152) | (18,033,152) |
| | $ 2,047,404,456 | $ 2,951,367 | $ 27,840,561 | $ (18,033,152) | $ 2,060,163,232 |

| | December 31, 2019 | | | | | |
|---|---|---|---|---|---|---|
| | Stage 1 12-month ECL | Stage 2 Lifetime ECL | Stage 3 Lifetime ECL | Credit Impairment by Using Simplified Method | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
| Receivables | $ 15,910,096 | $ 48,850 | $ 185,004 | $ 3,496,136 | $ - | $ 19,640,086 |
| Allowance for possible losses | (47,815) | (13,869) | (77,288) | (519,740) | - | (658,712) |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | - | - | - | - | (149,395) | (149,395) |
| | $ 15,862,281 | $ 34,981 | $ 107,716 | $ 2,976,396 | $ (149,395) | $ 18,831,979 |

| | December 31, 2018 | | | | | |
|---|---|---|---|---|---|---|
| | Stage 1 12-month ECL | Stage 2 Lifetime ECL | Stage 3 Lifetime ECL | Credit Impairment by Using Simplified Method | Impairment Recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | Total |
| Receivables | $ 15,705,978 | $ 44,951 | $ 154,180 | $ 3,270,952 | $ - | $ 19,176,061 |
| Allowance for possible losses | (46,043) | (11,458) | (36,154) | (514,986) | - | (608,641) |
| Impairment recognized under "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/ Non-accrual Loans" | - | - | - | - | (105,414) | (105,414) |
| | $ 15,659,935 | $ 33,493 | $ 118,026 | $ 2,755,966 | $ (105,414) | $ 18,462,006 |

b) Credit quality analysis of securities

| | December 31, 2019 | | | |
|---|---|---|---|---|
| | Stage 1 12-month ECL | Stage 2 Lifetime ECL | Stage 3 Lifetime ECL | Total |
| Investments in debt instruments at FVTOCI | | | | |
| Gross carrying amount | $ 307,551,361 | $ - | $ - | $ 307,551,361 |
| Allowance for possible losses | (83,771) | - | - | (83,771) |
| Amortized cost | 307,467,590 | - | - | 307,467,590 |
| Fair value adjustments | 4,503,105 | - | - | 4,503,105 |
| | $ 311,970,695 | $ - | $ - | $ 311,970,695 |
| Investments in debt instruments at amortized cost | $ 555,678,609 | $ - | $ - | $ 555,678,609 |
| Allowance for possible losses | (47,897) | - | - | (47,897) |
| | $ 555,630,712 | $ - | $ - | $ 555,630,712 |

| | December 31, 2018 | | | |
|---|---|---|---|---|
| | Stage 1 12-month ECL | Stage 2 Lifetime ECL | Stage 3 Lifetime ECL | Total |
| Investments in debt instruments at FVTOCI | | | | |
| Gross carrying amount | $ 244,566,373 | $ - | $ - | $ 244,566,373 |
| Allowance for possible losses | (71,742) | - | - | (71,742) |
| Amortized cost | 244,494,631 | - | - | 244,494,631 |
| Fair value adjustments | 1,554,032 | - | - | 1,554,032 |
| | $ 246,048,663 | $ - | $ - | $ 246,048,663 |
| Investments in debt instruments at amortized cost | $ 556,203,943 | $ - | $ - | $ 556,203,943 |
| Allowance for possible losses | (48,378) | - | - | (48,378) |
| | $ 556,155,565 | $ - | $ - | $ 555,155,565 |

c) The changes in allowance for possible losses of investments in debt instruments at FVTOCI are summarized below:

| | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2019 | $ 71,742 | $ - | $ - | $ 71,742 |
| New financial assets purchased | 30,399 | - | - | 30,399 |
| Derecognition of financial assets in the current reporting period | (12,485) | - | - | (12,485) |
| Change in model or risk parameters | (7,841) | | | (7,841) |
| Changes in exchange rates and other changes | 1,956 | - | - | 1,956 |
| Balance at December 31, 2019 | $ 83,771 | $ - | $ - | $ 83,771 |

| | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2018 | $ 78,071 | $ - | $ - | $ 78,071 |
| New financial assets purchased | 22,545 | - | - | 22,545 |
| Derecognition of financial assets in the current reporting period | (17,651) | - | - | (17,651) |
| Change in model or risk parameters | (11,892) | | | (11,892) |
| Changes in exchange rates and other changes | 669 | - | - | 669 |
| Balance at December 31, 2018 | $ 71,742 | $ - | $ - | $ 71,742 |

d) The changes in allowance for possible losses of investments in debt instruments at amortized cost are summarized below:

| | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2019 | $ 48,378 | $ - | $ - | $ 48,378 |
| New financial assets purchased | 10,503 | - | - | 10,503 |
| Derecognition of financial assets in the current reporting period | (2,252) | - | - | (2,252) |
| Change in model or risk parameters | (8,571) | | | (8,571) |
| Changes in exchange rates and other changes | (161) | - | - | (161) |
| Balance at December 31, 2019 | $ 47,897 | $ - | $ - | $ 47,897 |

| | 12-month ECL | Lifetime ECL (Collective Assessment) | Lifetime ECL (Non-purchased or Non-originated Credit-impaired Financial Assets) | Total |
|---|---|---|---|---|
| Balance at January 1, 2018 | $ 41,461 | $ - | $ - | $ 41,461 |
| New financial assets purchased | 13,184 | - | - | 13,184 |
| Derecognition of financial assets in the current reporting period | (1,331) | - | - | (1,331) |
| Change in model or risk parameters | (3,472) | | | (3,472) |
| Changes in exchange rates and other changes | (1,464) | - | - | (1,464) |
| Balance at December 31, 2018 | $ 48,378 | $ - | $ - | $ 48,378 |

3) Market risks

Market risk refers to the risk of losses in positions arising from adverse movements of market prices. It refers to interest rates, exchange rates, equity security prices, commodity prices, etc.

The main market risks that the Bank faces are equity security, interest rates, and exchange rate risks. The market risk position of equity security mainly includes domestic listed and OTC stocks, domestic stock index options and stock market index futures; the position of interest rate mainly includes short-term bills, bonds and interest rate derivative instruments; and the instruments exposed to exchange rate risk mainly include spot contracts and forward contracts and derivatives denominated in foreign currency.

Under the market risk management policies approved by the board of directors, the new Basel Capital Accord and regulations implemented by relevant authorities and in consideration of the Bank's own market risk management system and its overall risk management goals and product features, the Bank has set all types of investment authorization limits and stop-loss rules, regularly reviews the customers' credit status and compiles management information reports to control all types of market risks effectively.

The Bank's market risk management procedures include risk identification, evaluation, and measurement as well as risk monitoring, and reporting. Every units' risk management personnel analyze data on market risk position and evaluate measurement methods, including the statistical basic measurement method, sensitivity analysis, and situational analysis. Monitoring content includes trading processes, collective and individual, of all transaction units and all financial instruments, such as change of position, change of profit and loss, trading pattern, and if trading objects are transacted within the authorized scope and limits.

The Banks's business units and risk management unit have established market risk factors for identifying risk exposure positions and use these factors to measure market risks. The market risk factors refer to the components of financial instruments' position, such as profit and loss and sensitivity to risk, which might be affected by interest rates, exchange rates and equity security market prices.

The Bank's risk management unit reports to management periodically the execution status of measures on market risk management, investment positions, and profit and loss control so that management can fully understand the status of market risk management. The Bank also has cleared reporting procedures and rules for all types of transaction limits and the stop-loss order. If any transaction amount reaches the limit, the stop-loss order is executed immediately; if the stop-loss order is not executed, the transaction unit is required to explain the reasons for non-execution and prepare a response plan for management's approval.

The Bank applies market risk sensitivity as a risk control instrument. Market risk sensitivity position refers to the change in the value of a position due to a change in a certain market risk factor. Market risk factors include interest rates, exchange rates, and equity security prices. The Bank's position sensitivity exposure trading book contains all types of positions exposed to market risk and the range of change to which sensitivity analysis applied under various pressure scenarios for all types of risk factors.

Assuming all other factors are held constant, the effects of risks within defined change scenarios are shown below:

| Main Risk | Change Scenario | December 31, 2019 | December 31, 2018 |
|---|---|---|---|
| Interest rate risk | Interest rate curve increased 100 basis points | $ (115,606) | $ (72,019) |
| | Interest rate curve fell 100 basis points | 124,047 | 78,211 |
| Exchange rate risk | USD/NT$, EUR/NT$ increased 3% | (206,532) | (319,033) |
| | USD/NT$, EUR/NT$ fell 3% | 206,532 | 319,033 |
| | Others (RMB, AUD etc.)/NT$ increased 5% | 90,152 | 16,140 |
| | Others (RMB, AUD etc.)/NT$ fell 5% | (90,152) | (16,140) |
| Equity security price risk | Equity security price increased by 15% | 414,782 | 66,851 |
| | Equity security price fell by 15% | (414,782) | (66,751) |

Average amount and average interest rate of interest-earning assets and interest-bearing liabilities are as follows:

Average balance is calculated by the daily average balances of interest-earning assets and interest-bearing liabilities.

| | December 31 | | | |
|---|---|---|---|---|
| | 2019 | | 2018 | |
| | Average Balance | Average Rate (%) | Average Balance | Average Rate (%) |
| Interest-earning assets | | | | |
| Due from banks and other financial assets - due from banks | $ 33,228,721 | 2.52 | $ 37,825,166 | 2.60 |
| Due from the Central Bank | 172,633,074 | 0.36 | 167,184,471 | 0.36 |
| Call loans to banks and other financial assets - call loans to security firms | 60,101,441 | 1.88 | 65,671,062 | 2.02 |
| Financial assets mandatorily classified as at fair value through profit or loss | 23,410,758 | 0.65 | 7,260,659 | 0.71 |
| Financial assets at fair value through other comprehensive income | 271,636,940 | 1.87 | 235,733,976 | 1.97 |
| Investments in debt instruments at amortized cost | 555,646,351 | 0.87 | 520,374,185 | 0.85 |
| Securities purchased under resell agreements | 882,602 | 0.59 | 86,695 | 0.47 |
| Discounts and loans | 2,141,341,765 | 2.12 | 2,073,393,711 | 2.06 |
| Interest-bearing liabilities | | | | |
| Due to the Central Bank and other banks | 239,979,719 | 1.30 | 237,763,051 | 1.09 |
| Financial liabilities designated as at fair value through profit or loss | 12,343,611 | 4.88 | 12,068,071 | 4.69 |
| Securities sold under repurchase agreements | 8,050,509 | 0.39 | 10,130,301 | 0.27 |
| Demand deposits | 530,238,278 | 0.19 | 509,712,425 | 0.16 |
| Savings - demand deposits | 883,277,268 | 0.27 | 832,136,846 | 0.28 |
| Time deposits | 596,532,364 | 1.57 | 536,322,601 | 1.39 |
| Time savings deposits | 627,533,489 | 1.05 | 636,379,825 | 1.05 |
| Treasury deposits | 101,408,583 | 0.64 | 91,156,594 | 0.64 |
| Negotiable certificates of deposits | 48,437,496 | 0.72 | 36,917,476 | 0.62 |
| Structured products | 2,141,601 | 1.77 | 1,745,888 | 2.25 |
| Bank debentures | 57,676,712 | 1.52 | 57,090,685 | 1.40 |
| Lease liabilities | 1,543,281 | 2.78 | - | - |

The exchange rate risk is as follows:

December 31, 2019

**(In Thousands)**

| | Foreign Currencies | Exchange Rate | Carrying Amount |
|---|---|---|---|
| Financial assets | | | |
| USD | $ 12,902,790 | 29.9900 | $ 386,954,674 |
| RMB | 14,753,075 | 4.2950 | 63,364,456 |
| AUD | 1,612,742 | 21.0150 | 33,891,780 |
| EUR | 397,713 | 33.6400 | 13,379,049 |
| HKD | 2,492,068 | 3.8510 | 9,596,956 |
| JPY | 27,449,454 | 0.2761 | 7,578,794 |
| ZAR | 3,041,509 | 2.1200 | 6,448,000 |
| GBP | 86,192 | 39.3800 | 3,394,259 |
| KHR | 443,050,700 | 0.0074 | 3,268,385 |
| NZD | 21,938 | 20.2000 | 443,153 |
| CAD | 19,021 | 22.9800 | 437,105 |
| CHF | 5,531 | 30.9750 | 171,335 |
| SEK | 9,713 | 3.2200 | 31,275 |
| SGD | 1,069 | 22.2600 | 23,805 |
| THB | 13,441 | 1.0081 | 13,550 |
| PHP | 3,008 | 0.5916 | 1,780 |
| Financial liabilities | | | |
| USD | 14,271,944 | 29.9900 | 428,015,613 |
| RMB | 12,729,607 | 4.2950 | 54,673,664 |
| AUD | 1,362,811 | 21.0150 | 28,639,467 |
| JPY | 44,759,017 | 0.2761 | 12,357,965 |
| EUR | 260,978 | 33.6400 | 8,779,295 |
| ZAR | 4,051,609 | 2.1200 | 8,589,410 |
| HKD | 1,832,481 | 3.8510 | 7,056,885 |
| NZD | 124,919 | 20.2000 | 2,523,363 |
| KHR | 327,120,295 | 0.0074 | 2,413,166 |
| GBP | 59,138 | 39.3800 | 2,328,838 |
| CAD | 55,744 | 22.9800 | 1,280,990 |
| SGD | 16,594 | 22.2600 | 369,393 |
| CHF | 5,138 | 30.9750 | 159,159 |
| SEK | 37,830 | 3.2200 | 121,813 |
| THB | 9,916 | 1.0081 | 9,997 |
| PHP | 7,805 | 0.5916 | 4,618 |
| MYR | - | 7.3280 | 2 |

December 31, 2018

**(In Thousands)**

| | Foreign Currencies | Exchange Rate | Carrying Amount |
|---|---|---|---|
| Financial assets | | | |
| USD | $ 10,946,982 | 30.7350 | $ 336,455,478 |
| RMB | 13,363,480 | 4.4690 | 59,721,393 |
| AUD | 1,185,705 | 21.6550 | 25,676,436 |
| EUR | 344,076 | 35.1800 | 12,104,593 |
| JPY | 31,781,201 | 0.2774 | 8,816,105 |
| HKD | 1,899,701 | 3.9230 | 7,452,528 |
| ZAR | 1,782,296 | 2.1200 | 3,778,468 |
| GBP | 67,028 | 38.9000 | 2,607,381 |
| KHR | 199,256,927 | 0.0076 | 1,514,353 |
| NZD | 26,147 | 20.6300 | 539,418 |
| SEK | 45,460 | 3.4200 | 155,474 |
| CAD | 2,249 | 22.5800 | 50,791 |
| SGD | 1,801 | 22.4400 | 40,406 |
| CHF | 1,254 | 31.1650 | 39,070 |
| THB | 5,987 | 0.9525 | 5,702 |
| PHP | 2,846 | 0.5849 | 1,665 |
| Financial liabilities | | | |
| USD | 11,192,821 | 30.7350 | 344,011,342 |
| RMB | 14,057,062 | 4.4690 | 62,821,011 |
| AUD | 981,007 | 21.6550 | 21,243,706 |
| JPY | 50,111,918 | 0.2774 | 13,901,046 |
| ZAR | 3,549,060 | 2.1200 | 7,524,006 |
| EUR | 200,780 | 35.1800 | 7,063,428 |
| HKD | 1,209,520 | 3.9230 | 4,744,948 |
| NZD | 122,131 | 20.6300 | 2,519,567 |
| GBP | 44,302 | 38.9000 | 1,723,331 |
| CAD | 63,674 | 22.5800 | 1,437,760 |
| CHF | 14,478 | 31.1650 | 451,213 |
| SEK | 92,327 | 3.4200 | 315,759 |
| SGD | 8,508 | 22.4400 | 190,918 |
| THB | 11,604 | 0.9525 | 11,052 |
| KHR | 714,996 | 0.0076 | 5,434 |
| PHP | 1,993 | 0.5849 | 1,166 |
| MYR | - | 7.3930 | 2 |

4) Liquidity risk

Liquidity risk is inherent in all bank operations and might be affected by specific or general industry and environmental events. These events include credit-related events, mergers or acquisitions, systemic changes and natural disasters. The Bank defines liquidity risk as the inability to realize assets or to obtain financing for meeting obligations when they fall due, resulting in loss.

The liquidity risk management strategy is based on the overall risk management objectives and involves liquidity risk identification, measurement, monitoring and control to maintain the Bank's appropriate liquidity and ensure adequate funding for meeting liability obligations or for capital growth.

The liquidity risk management procedures involve identification, measurement, monitoring and reporting of risk. Each business unit should identify the existing liquidity risk in business activities and financial products.

For adequate liquidity for all types of deposits, TCB follows the relevant regulations issued by the Central Bank to estimate the liquidity reserves and calculates and controls daily the liquidity reserve ratios.

For the Bank's operating liquidity, the fund disbursement unit performs daily cash flow management and monitoring of the payments schedule on the basis of detailed reports by different departments and relevant rules.

The risk management department regularly generates risk reports, which include the liquidity reserve ratios and the maturity analysis of instruments and transactions denominated in major foreign currencies, and submits them to the Asset and Liability Management Committee and the Board as reference for decision making.

The Bank stipulates liquidity risk limits, which are regularly monitored and reviewed by the risk management department. If a liquidity risk limit is exceeded or other exception situations occur, the business supervising unit immediately develops appropriate contingency measures and submits them to the Asset and Liability Management Committee for approval and implementation.

The Bank's contingency measures for business emergency or sudden liquidity crisis are aimed at quick crisis resolution and resumption of normal operations.

The Bank's liquidity reserve ratios were 28.00% and 27.17% in December 2019 and 2018, respectively.

The Bank disclosed the analysis of cash outflows on non-derivative financial liabilities by their residual maturities as of the balance sheet dates. The amounts of cash outflows are based on contractual cash flows, so some amounts may not correspond to those shown in the consolidated balance sheets.

| December 31, 2019 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Due to the Central Bank and other banks | $ 151,837,041 | $ 72,369,653 | $ 7,544,907 | $ 874,640 | $ - | $ 232,626,241 |
| Financial liabilities at fair value through profit or loss | - | - | - | - | 11,996,000 | 11,996,000 |
| Securities sold under repurchase agreements | 3,093,552 | 3,495,094 | 1,241,171 | 147,092 | - | 7,976,909 |
| Payables | 24,627,811 | 2,325,459 | 6,142,682 | 1,669,256 | 2,649,139 | 37,414,347 |
| Deposits and remittances | 285,030,624 | 437,851,560 | 400,006,559 | 628,054,943 | 1,147,601,128 | 2,898,544,814 |
| Bank debentures | - | 7,500,000 | - | 900,000 | 56,600,000 | 65,000,000 |
| Lease liabilities | 63,912 | 161,685 | 131,309 | 241,645 | 1,277,361 | 1,875,912 |
| Other items of cash outflow on maturity | 3,291,351 | 335 | 414 | 817,139 | 28,260 | 4,137,499 |

| December 31, 2018 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Due to the Central Bank and other banks | $ 145,728,697 | $ 56,171,885 | $ 11,769,771 | $ - | $ - | $ 213,670,353 |
| Financial liabilities at fair value through profit or loss | - | - | - | - | 12,294,000 | 12,294,000 |
| Securities sold under repurchase agreements | 5,173,426 | 2,719,554 | 1,584,396 | 124,765 | - | 9,602,141 |
| Payables | 31,427,161 | 2,473,878 | 5,388,363 | 2,437,105 | 1,709,136 | 43,435,643 |
| Deposits and remittances | 258,518,459 | 420,909,708 | 371,997,188 | 602,229,795 | 1,075,096,880 | 2,728,752,030 |
| Bank debentures | - | - | - | 1,000,000 | 54,000,000 | 55,000,000 |
| Other items of cash outflow on maturity | 2,264,251 | 19,562 | 1,670 | 861,149 | 20,342 | 3,166,974 |

In the above table, the maturity analysis of deposits and remittances by residual-maturity period was based on the Bank's historical experience. Assuming that all demand deposits as of December 31, 2019 and 2018 must be repaid soon, the capital expenditure will be increased by $1,501,221,386 thousand and $1,409,026,262 thousand, respectively, within 30 days these balance sheet dates.

The Bank assesses the maturity dates of contracts to understand the basic elements of all derivative financial instruments shown in the balance sheets. The amounts used in the maturity analyses of derivative financial liabilities are based on contractual cash flows, so some of these amounts may not correspond to the amounts shown in the balance sheets. The maturity analysis of derivative financial liabilities is as follows:

a) Derivative financial liabilities to be settled at net amounts

| December 31, 2019 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Derivative financial liabilities at fair value through profit or loss | | | | | | |
| Currency | $ 652 | $ 257 | $ 1,372 | $ 126 | $ - | $ 2,407 |
| Interest | (918) | (286) | (693) | (2,063) | (8,385) | (12,345) |

| December 31, 2018 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Derivative financial liabilities at fair value through profit or loss | | | | | | |
| Interest | $ (317) | $ (209) | $ (1,062) | $ (2,324) | $ (2,759) | $ (6,671) |

b) Derivative financial liabilities to be settled at gross amounts

| December 31, 2019 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Derivative financial liabilities at fair value through profit or loss | | | | | | |
| Currency derivatives | | | | | | |
| Cash outflow | $ 56,546,734 | $ 85,479,384 | $ 48,034,112 | $ 20,257,084 | $ 2,766 | $ 210,320,080 |
| Cash inflow | 57,580,384 | 87,179,724 | 48,798,928 | 20,610,274 | 2,766 | 214,172,076 |
| Total cash outflow | 56,546,734 | 85,479,384 | 48,034,112 | 20,257,084 | 2,766 | 210,320,080 |
| Total cash inflow | 57,580,384 | 87,179,724 | 48,798,928 | 20,610,274 | 2,766 | 214,172,076 |
| Net cash flow | 1,033,650 | 1,700,340 | 764,816 | 353,190 | - | 3,851,996 |

| December 31, 2018 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Derivative financial liabilities at fair value through profit or loss | | | | | | |
| Currency derivatives | | | | | | |
| Cash outflow | $ 73,424,124 | $ 57,472,834 | $ 48,578,031 | $ 13,840,882 | $ 907,428 | $ 194,223,299 |
| Cash inflow | 73,721,292 | 57,705,688 | 48,779,153 | 13,901,740 | 960,294 | 195,068,167 |
| Interest derivatives | | | | | | |
| Cash outflow | - | - | 726,620 | 244,294 | 20,988,364 | 21,959,278 |
| Cash inflow | - | - | 749,467 | 438,134 | 27,631,514 | 28,819,115 |
| Total cash outflow | 73,424,124 | 57,472,834 | 49,304,651 | 14,085,176 | 21,895,792 | 216,182,577 |
| Total cash inflow | 73,721,292 | 57,705,688 | 49,528,620 | 14,339,874 | 28,591,808 | 223,887,282 |
| Net cash flow | 297,168 | 232,854 | 223,969 | 254,698 | 6,696,016 | 7,704,705 |

The Bank conducted maturity analysis of off-balance sheet items based on the residual maturities as of the balance sheet dates. For the financial guarantee contracts issued, the maximum amounts of the guarantees are included in the earliest periods that the guarantee obligation might have been required to be fulfilled. The amounts used in the maturity analysis of off-balance sheet items are based on contractual cash flows, so some of these amounts may not correspond to those shown in the balance sheets.

| December 31, 2019 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Irrevocable loan commitments issued | $ 1,301,497 | $ 2,813,539 | $ 4,859,722 | $ 11,768,715 | $ 45,500,087 | $ 66,243,560 |
| Irrevocable credit card commitments | 575,983 | 119,930 | 633,351 | 793,970 | 49,817,155 | 51,940,389 |
| Letters of credit issued yet unused | 3,831,647 | 11,174,034 | 2,361,938 | 1,834,072 | 236,358 | 19,438,049 |
| Other guarantees | 3,594,030 | 7,152,648 | 5,338,986 | 11,824,810 | 72,322,318 | 100,232,792 |

| December 31, 2018 | 0-30 Days | 31-90 Days | 91-180 Days | 181 Days-1 Year | Over 1 Year | Total |
|---|---|---|---|---|---|---|
| Irrevocable loan commitments issued | $ 1,561,477 | $ 3,712,593 | $ 7,688,341 | $ 12,998,339 | $ 41,563,349 | $ 67,524,099 |
| Irrevocable credit card commitments | 592,453 | 78,113 | 878,661 | 2,455,939 | 44,517,768 | 48,522,934 |
| Letters of credit issued yet unused | 4,534,271 | 11,233,039 | 2,345,089 | 495,742 | 946,302 | 19,554,443 |
| Other guarantees | 6,245,643 | 3,563,123 | 5,816,588 | 6,304,614 | 64,696,725 | 86,626,693 |

f. Transfers of financial assets

Under the Bank operations, most of derecognized financial assets are securities sold under repurchase agreements, and the contractual cash flows have been transferred to others. The Bank has the responsibility to repurchase transferred financial assets at fixed prices, and cannot use, sell and pledge transferred financial assets. However, the Bank is still in the risk exposure of interest rate and credit, so the transferred financial assets cannot be removed entirely. The information on derecognized financial assets and liabilities is as follows:

| December 31, 2019 | | | | | |
|---|---|---|---|---|---|
| **Financial Assets** | **Carrying Amount of Transferred Financial Assets** | **Carrying Amount of Related Financial Liabilities** | **Fair Value of Transferred Financial Assets** | **Fair Value of Related Financial Liabilities** | **Net Position of Fair Value** |
| Financial assets at FVTPL - securities sold under repurchase agreements | $ 1,510,692 | $ 1,510,824 | $ 1,510,692 | $ 1,510,824 | $ (132) |
| Financial assets at FVTOCI - securities sold under repurchase agreements | 6,175,295 | 6,466,085 | 6,175,295 | 6,466,085 | (290,790) |

| December 31, 2018 | | | | | |
|---|---|---|---|---|---|
| **Financial Assets** | **Carrying Amount of Transferred Financial Assets** | **Carrying Amount of Related Financial Liabilities** | **Fair Value of Transferred Financial Assets** | **Fair Value of Related Financial Liabilities** | **Net Position of Fair Value** |
| Financial assets at FVTPL - securities sold under repurchase agreements | $ 1,538,793 | $ 1,538,773 | $ 1,538,793 | $ 1,538,773 | $ 20 |
| Financial assets at FVTOCI - securities sold under repurchase agreements | 7,681,381 | 8,063,368 | 7,681,381 | 8,063,368 | (381,987) |

g. Offsetting financial assets and financial liabilities

The Bank is eligible to present in the balance sheet on a net basis certain derivative assets and derivative liabilities pertaining to transactions with counterparties under enforceable master netting arrangements or similar agreements and there is an intention either to make settlements on a net basis or to realize the asset and settle the liability simultaneously. A master netting agreement provides for a single net settlement of all financial instruments covered by the agreement if the counterparty defaults on any contract. Parties may also settle transactions at gross amounts if a single settlement results in cash flows being equivalent to a single net amount.

The tables below present the quantitative information on financial assets and financial liabilities that have been offset in the balance sheets or that are covered by enforceable master netting arrangements or similar agreements.

December 31, 2019

| Financial Liabilities | Gross Amounts of Recognized Financial Liabilities | Gross Amounts of Recognized Financial Assets Offset in the Balance Sheet | Net Amounts of Financial Liabilities Presented in the Balance Sheet | Related Amounts Not Offset in the Balance Sheet | | Net Amount |
|---|---|---|---|---|---|---|
| | | | | Financial Instruments | Cash Collateral Pledged | |
| Repurchase agreements | $ 7,976,909 | $ - | $ 7,976,909 | $ (7,685,987) | $ - | $ 290,922 |

December 31, 2018

| Financial Assets | Gross Amounts of Recognized Financial Assets | Gross Amounts of Recognized Financial Liabilities Offset in the Balance Sheet | Net Amounts of Financial Assets Presented in the Balance Sheet | Related Amounts Not Offset in the Balance Sheet | | Net Amount |
|---|---|---|---|---|---|---|
| | | | | Financial Instruments | Cash Collateral Received | |
| Resell agreements | $ 3,521,000 | $ - | $ 3,521,000 | $ (3,521,000) | $ - | $ - |

| Financial Liabilities | Gross Amounts of Recognized Financial Liabilities | Gross Amounts of Recognized Financial Assets Offset in the Balance Sheet | Net Amounts of Financial Liabilities Presented in the Balance Sheet | Related Amounts Not Offset in the Balance Sheet | | Net Amount |
|---|---|---|---|---|---|---|
| | | | | Financial Instruments | Cash Collateral Pledged | |
| Repurchase agreements | $ 9,602,141 | $ - | $ 9,602,141 | $ (9,220,174) | $ - | $ 381,967 |

## 40. CAPITAL MANAGEMENT

In according to the authority's regulation for principles of capital adequacy management, the Bank lists all the risks into the capital adequacy evaluation scope. In accordance with the operation plans and budget targets, which approved by the board of directors, also considering the Bank's development strategy, capital adequacy, liabilities ratios, and dividend policy, the Bank proposes capital adequacy evaluation plan, which include stress testing, estimation for each season's capital adequacy ratio, etc. to ensure the capital adequacy ratio can be reached and capital structure is sound.

To monitor capital adequacy, the risk management department regularly reports capital adequacy ratios every month and also quarterly reviews the execution status of and actual operation data variation on the Bank's capital adequacy evaluation plan. When the actual capital adequacy ratio might go lower than target, the Bank immediately reviews the causes, prepares a report and proposes a response strategy to maintain the appropriate capital adequacy levels.

The Banking Law and related regulations require that the Bank maintain the minimum requirement for unconsolidated and consolidated capital adequacy ratios (CAR), including the common equity Tier 1 ratio, Tier 1 capital ratio, and total capital adequacy ratio.

Information on the Bank's CAR is as follows:

**(In Thousands of New Taiwan Dollars, %)**

| Items \ Year | | | December 31, 2019 | |
|---|---|---|---|---|
| | | | Standalone | Consolidated |
| Eligible capital | Common equity | | $ 207,137,752 | $ 207,708,378 |
| | Other Tier 1 capital | | 12,649,848 | 13,145,766 |
| | Tier 2 capital | | 47,606,520 | 48,633,541 |
| | Eligible capital | | 267,394,120 | 269,487,685 |
| Risk-weighted assets | Credit risk | Standardized approach | 1,867,445,189 | 1,870,260,070 |
| | | Internal ratings based approach | - | - |
| | | Securitization | 4,596,941 | 4,596,941 |
| | Operational risk | Basic indicator approach | - | - |
| | | Standardized approach/alternative standardized approach | 76,432,794 | 76,647,358 |
| | | Advanced measurement approach | - | - |
| | Market risk | Standardized approach | 20,982,800 | 20,997,238 |
| | | Internal model approach | - | - |
| | Risk-weighted assets | | 1,969,457,724 | 1,972,501,607 |
| Capital adequacy ratio | | | 13.58 | 13.66 |
| Ratio of the common equity to risk-weighted assets | | | 10.52 | 10.53 |
| Ratio of Tier 1 capital to risk-weighted assets | | | 11.16 | 11.20 |
| Ratio of leverage | | | 5.95 | 5.97 |

**(In Thousands of New Taiwan Dollars, %)**

| Items \ Year | | | December 31, 2018 | |
|---|---|---|---|---|
| | | | Standalone | Consolidated |
| Eligible capital | Common equity | | $ 194,470,387 | $ 195,037,708 |
| | Other Tier 1 capital | | 3,140,831 | 3,638,224 |
| | Tier 2 capital | | 52,362,415 | 53,392,127 |
| | Eligible capital | | 249,973,633 | 252,068,059 |
| Risk-weighted assets | Credit risk | Standardized approach | 1,744,538,363 | 1,747,332,385 |
| | | Internal ratings based approach | - | - |
| | | Securitization | 5,234,468 | 5,234,468 |
| | Operational risk | Basic indicator approach | - | - |
| | | Standardized approach/alternative standardized approach | 72,451,460 | 72,588,477 |
| | | Advanced measurement approach | - | - |
| | Market risk | Standardized approach | 17,827,638 | 17,834,038 |
| | | Internal model approach | - | - |
| | Risk-weighted assets | | 1,840,051,929 | 1,842,989,368 |
| Capital adequacy ratio | | | 13.59 | 13.68 |
| Ratio of the common equity to risk-weighted assets | | | 10.57 | 10.58 |
| Ratio of Tier 1 capital to risk-weighted assets | | | 10.74 | 10.78 |
| Ratio of leverage | | | 5.71 | 5.73 |

Note 1: Eligible capital and risk-weighted assets are calculated under the "Regulations Governing the Capital Adequacy Ratio of Banks" and the "Explanation of Methods for Calculating the Eligible Capital and Risk-Weighted Assets of Banks."

Note 2: Formulas used were as follows:

1) Eligible capital = The common equity + Other Tier 1 capital + Tier 2 capital.

2) Risk-weighted assets = Risk-weighted asset for credit risk + Capital requirements for operational risk and market risk x 12.5.

3) Capital adequacy ratio = Eligible capital ÷ Risk-weighted assets.

4) Ratio of the common equity to risk-weighted assets = The common equity ÷ Risk-weighted assets.

5) Ratio of Tier 1 capital to risk-weighted assets = (The common equity + Other Tier 1 capital) ÷ Risk-weighted assets.

6) Ratio of leverage = Tier 1 capital ÷ Exposure measurement.

## 41. ASSET QUALITY, CONCENTRATION OF CREDIT EXTENSIONS, INTEREST RATE SENSITIVITY, PROFITABILITY AND MATURITY ANALYSIS OF ASSETS AND LIABILITIES

a. Asset quality: Table 2 (attached).

b. Concentration of credit extensions

**(In Thousands of New Taiwan Dollars, %)**

| Rank (Note 1) | December 31, 2019 | | | December 31, 2018 | | |
|---|---|---|---|---|---|---|
| | Industry of Group Enterprise (Note 2) | Total Amount of Credit Endorsement or Other Transactions (Note 3) | Percentage of Bank's Equity | Industry of Group Enterprise (Note 2) | Total Amount of Credit Endorsement or Other Transactions (Note 3) | Percentage of Bank's Equity |
| 1 | Group A<br>Railway transportation | $ 40,485,293 | 17.83 | Group A<br>Railway transportation | $ 40,485,293 | 19.30 |
| 2 | Group B<br>Real estate development | 15,490,169 | 6.82 | Group C<br>Harbor services | 16,327,744 | 7.78 |
| 3 | Group C<br>Harbor services | 14,706,544 | 6.48 | Group I<br>Petroleum and coal products manufacturing | 14,983,456 | 7.14 |
| 4 | Group D<br>Computers and computing peripheral equipment manufacturing | 12,971,615 | 5.71 | Group D<br>Computers and computing peripheral equipment manufacturing | 12,069,134 | 5.75 |
| 5 | Group E<br>Iron and steel smelting | 10,462,949 | 4.61 | Group G<br>Cotton and textile | 11,403,628 | 5.44 |
| 6 | Group F<br>Shipping agency | 10,211,396 | 4.50 | Group B<br>Real estate development | 11,107,510 | 5.30 |
| 7 | Group G<br>Cotton and textile | 10,114,951 | 4.46 | Group F<br>Shipping agency | 9,956,059 | 4.75 |
| 8 | Group H<br>Real estate development | 10,067,584 | 4.43 | Group K<br>Computers manufacturing | 9,538,253 | 4.55 |
| 9 | Group I<br>Petroleum and coal products manufacturing | 9,663,511 | 4.26 | Group E<br>Iron and steel smelting | 8,891,512 | 4.24 |
| 10 | Group J<br>Financial leasing | 7,848,501 | 3.46 | Group H<br>Real estate development | 8,208,265 | 3.91 |

Note 1: The list shows rankings by total amount of credit, endorsement or other transactions but excludes government-owned or state-run enterprises. If the borrower is a member of a group enterprise, the total amount of credit, endorsement or other transactions of the entire group enterprise must be listed and disclosed by code and line of industry. The industry of the group enterprise should be presented as the industry of the member firm with the highest risk exposure. The lines of industry should be described in accordance with the Standard Industrial Classification System of the Republic of China published by the Directorate-General of Budget, Accounting and Statistics under the Executive Yuan.

Note 2: Group enterprise refers to a group of corporate entities as defined by Article 6 of "Supplementary Provisions to the Taiwan Stock Exchange Corporation Rules for Review of Securities Listings."

Note 3: Total amount of credit, endorsement or other transactions is the sum of various loans (including import and export negotiations, discounts, overdrafts, unsecured and secured short-term loans, margin loans receivable, unsecured and secured medium-term loans, unsecured and secured long-term loans and overdue loans), exchange bills negotiated, accounts receivable factored without recourse, acceptances and guarantees.

c. Interest rate sensitivity information

**Interest Rate Sensitivity**
**December 31, 2019**

**(In Thousands of New Taiwan Dollars, %)**

| Items | 1 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year | Total |
|---|---|---|---|---|---|
| Interest rate-sensitive assets | $ 2,319,216,214 | $ 120,148,166 | $ 18,594,035 | $ 347,294,457 | $ 2,805,252,872 |
| Interest rate-sensitive liabilities | 963,313,881 | 1,410,859,166 | 107,342,702 | 57,129,715 | 2,538,645,464 |
| Interest rate sensitivity gap | 1,355,902,333 | (1,290,711,000) | (88,748,667) | 290,164,742 | 266,607,408 |
| Net worth | | | | | 202,794,508 |
| Ratio of interest rate-sensitive assets to liabilities | | | | | 110.50 |
| Ratio of interest rate sensitivity gap to net worth | | | | | 131.47 |

**Interest Rate Sensitivity**
**December 31, 2018**

**(In Thousands of New Taiwan Dollars, %)**

| Items | 1 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year | Total |
|---|---|---|---|---|---|
| Interest rate-sensitive assets | $ 2,234,040,644 | $ 99,477,577 | $ 17,281,989 | $ 282,450,708 | $ 2,633,250,918 |
| Interest rate-sensitive liabilities | 927,589,418 | 1,338,861,650 | 108,225,728 | 49,652,666 | 2,424,329,462 |
| Interest rate sensitivity gap | 1,306,451,226 | (1,239,384,073) | (90,943,739) | 232,798,042 | 208,921,456 |
| Net worth | | | | | 188,701,358 |
| Ratio of interest rate-sensitive assets to liabilities | | | | | 108.62 |
| Ratio of interest rate sensitivity gap to net worth | | | | | 110.72 |

Note 1: The above amounts included only New Taiwan dollar amounts held by the head office and branches of the Bank (i.e., excluding foreign currency).

Note 2: Interest rate-sensitive assets and liabilities refer to interest-earning assets and interest-bearing liabilities with revenues or costs that are affected by interest rate changes.

Note 3: Interest rate sensitivity gap = Interest rate-sensitive assets - Interest rate-sensitive liabilities.

Note 4: Ratio of interest rate-sensitive assets to liabilities = Interest rate-sensitive assets/Interest rate-sensitive liabilities (in New Taiwan dollars).

**Interest Rate Sensitivity**
**December 31, 2019**

**(In Thousands of U.S. Dollars, %)**

| Items | 1 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year | Total |
|---|---|---|---|---|---|
| Interest rate-sensitive assets | $ 14,052,462 | $ 741,777 | $ 171,555 | $ 1,704,354 | $ 16,670,148 |
| Interest rate-sensitive liabilities | 15,943,251 | 1,963,448 | 1,062,056 | - | 18,968,755 |
| Interest rate sensitivity gap | (1,890,789) | (1,221,671) | (890,501) | 1,704,354 | (2,298,607) |
| Net worth | | | | | 808,112 |
| Ratio of interest rate-sensitive assets to liabilities | | | | | 87.88 |
| Ratio of interest rate sensitivity gap to net worth | | | | | (284.44) |

**Interest Rate Sensitivity**
**December 31, 2018**

**(In Thousands of U.S. Dollars, %)**

| Items | 1 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year | Total |
|---|---|---|---|---|---|
| Interest rate-sensitive assets | $ 12,740,523 | $ 455,543 | $ 189,696 | $ 1,530,735 | $ 14,916,497 |
| Interest rate-sensitive liabilities | 14,198,638 | 1,019,242 | 766,580 | - | 15,984,460 |
| Interest rate sensitivity gap | (1,458,115) | (563,699) | (576,884) | 1,530,735 | (1,067,963) |
| Net worth | | | | | 684,330 |
| Ratio of interest rate-sensitive assets to liabilities | | | | | 93.32 |
| Ratio of interest rate sensitivity gap to net worth | | | | | (156.06) |

Note 1: The above amounts included only U.S. dollar amounts held by the head office, domestic branches, OBU and overseas branches of the Bank and excluded contingent assets and contingent liabilities.

Note 2: Interest rate-sensitive assets and liabilities refer to interest-earning assets and interest-bearing liabilities with revenues or costs that are affected by interest rate changes.

Note 3: Interest rate sensitivity gap = Interest rate-sensitive assets - Interest rate-sensitive liabilities.

Note 4: Ratio of interest rate-sensitive assets to liabilities = Interest rate-sensitive assets/Interest rate-sensitive liabilities (in U.S. dollars).

d. Profitability

**Unit: %**

| Items | | December 31, 2019 | December 31, 2018 |
|---|---|---|---|
| Return on total assets | Before income tax | 0.56 | 0.52 |
| | After income tax | 0.47 | 0.46 |
| Return on equity | Before income tax | 8.65 | 8.27 |
| | After income tax | 7.32 | 7.20 |
| Net income ratio | | 34.32 | 33.26 |

Note 1: Return on total assets = Income before (after) income tax/Average total assets.

Note 2: Return on equity = Income before (after) income tax/Average equity.

Note 3: Net income ratio = Income after income tax/Total net revenues.

Note 4: The above profitability ratios are calculated that based on the amount of consolidated financial report.

e. Maturity analysis of assets and liabilities

**Maturity Analysis of Assets and Liabilities**
**December 31, 2019**

**(In Thousands of New Taiwan Dollars)**

| | Total | Remaining Period to Maturity | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 to 10 Days | 11 to 30 Days | 31 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year |
| Main capital inflow on maturity | $ 3,158,863,899 | $ 423,278,474 | $ 301,756,205 | $ 149,315,327 | $ 276,810,446 | $ 308,243,608 | $ 1,699,459,839 |
| Main capital outflow on maturity | 3,696,343,478 | 203,697,242 | 174,803,056 | 517,144,926 | 418,392,403 | 674,087,757 | 1,708,218,094 |
| Gap | (537,479,579) | 219,581,232 | 126,953,149 | (367,829,599) | (141,581,957) | (365,844,149) | (8,758,255) |

**Maturity Analysis of Assets and Liabilities**
**December 31, 2018**

**(In Thousands of New Taiwan Dollars)**

| | Total | Remaining Period to Maturity | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 to 10 Days | 11 to 30 Days | 31 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year |
| Main capital inflow on maturity | $ 3,082,215,120 | $ 436,034,109 | $ 367,537,346 | $ 173,545,077 | $ 262,960,766 | $ 285,566,636 | $ 1,556,571,186 |
| Main capital outflow on maturity | 3,556,701,553 | 234,259,197 | 172,973,297 | 470,507,744 | 417,718,511 | 653,383,898 | 1,607,858,906 |
| Gap | (474,486,433) | 201,774,912 | 194,564,049 | (296,962,667) | (154,757,745) | (367,817,262) | (51,287,720) |

Note: The above amounts included only New Taiwan dollar amounts held by the Bank.

**Maturity Analysis of Assets and Liabilities**
**December 31, 2019**

**(In Thousands of U.S. Dollars)**

| | Total | Remaining Period to Maturity | | | | |
|---|---|---|---|---|---|---|
| | | 0 to 30 Days | 31 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year |
| Main capital inflow on maturity | $ 24,923,601 | $ 8,223,719 | $ 4,671,016 | $ 2,488,935 | $ 1,507,227 | $ 8,032,704 |
| Main capital outflow on maturity | 29,293,208 | 12,960,116 | 5,168,261 | 3,618,565 | 4,010,662 | 3,535,604 |
| Gap | (4,369,607) | (4,736,397) | (497,245) | (1,129,630) | (2,503,435) | 4,497,100 |

**Maturity Analysis of Assets and Liabilities**
**December 31, 2018**

**(In Thousands of U.S. Dollars)**

| | Total | Remaining Period to Maturity | | | | |
|---|---|---|---|---|---|---|
| | | 0 to 30 Days | 31 to 90 Days | 91 to 180 Days | 181 Days to One Year | Over One Year |
| Main capital inflow on maturity | $ 24,362,709 | $ 7,741,135 | $ 5,073,454 | $ 2,570,755 | $ 1,700,446 | $ 7,276,919 |
| Main capital outflow on maturity | 28,430,760 | 11,966,865 | 7,133,317 | 2,734,534 | 3,387,928 | 3,208,116 |
| Gap | (4,068,051) | (4,225,730) | (2,059,863) | (163,779) | (1,687,482) | 4,068,803 |

Note: The above amounts included only U.S. dollar amounts held by the Bank.

## 42. TAIWAN COOPERATIVE BANK, LTD.'S TRUST BUSINESS UNDER THE TRUST LAW

a. Trust-related items are those shown in the following balance sheets, statements of income and trust property list

These items were managed by the Bank's Trust Department. However, these items were not included in the financial statements.

**Balance Sheets of Trust Accounts**
**December 31, 2019 and 2018**

| Trust Assets | 2019 | 2018 | Trust Liabilities | 2019 | 2018 |
|---|---|---|---|---|---|
| Cash in banks | $ 7,021,670 | $ 5,038,852 | Payables | | |
| | | | Accrued expense | $ 643 | $ 2,661 |
| Short-term investments | | | Others | 9 | 2,294 |
| Mutual funds | 169,141,039 | 168,601,296 | Mutual funds payable | - | 200 |
| Stocks | 1,325,432 | 1,045,199 | | 652 | 5,155 |
| Bonds | 5,066,402 | 3,976,219 | | | |
| Structured products | 107,364 | 165,591 | Accounts payable on | | |
| | 175,640,237 | 173,788,305 | securities under custody | 171,703,651 | 115,683,741 |
| Securities lending | 104,114 | 278,417 | Trust capital | | |
| | | | Cash | 180,266,162 | 176,013,465 |
| Receivables | 4,709 | 5,669 | Real estate | 83,731,346 | 73,184,329 |
| | | | Superficies | 56,660 | - |
| Real estate | | | Leasehold | 60,940 | 60,940 |
| Land | 64,162,781 | 56,391,821 | Securities | 1,288,418 | 1,324,259 |
| Buildings | 1,600 | 8,523 | Others | 84,242 | 119,350 |
| Construction in process | 18,596,003 | 15,137,667 | | 265,487,768 | 250,702,343 |
| | 82,760,384 | 71,538,011 | | | |
| Intangible assets | | | Reserves and retained | | |
| Leasehold | 60,940 | 60,940 | earnings | | |
| Superficies | 56,660 | - | Net income | 173,816 | 11,725 |
| | 117,600 | 60,940 | Appropriation | (298,330) | (248,802) |
| Securities under custody | 171,703,651 | 115,683,741 | Retained earnings | 284,808 | 239,773 |
| | | | | 160,294 | 2,696 |
| Total | $ 437,352,365 | $ 366,393,935 | Total | $ 437,352,365 | $ 366,393,935 |

## Trust Property List
## December 31, 2019 and 2018

| Investment Items | 2019 | 2018 |
|---|---|---|
| Cash in banks | $ 7,021,670 | $ 5,038,852 |
| Short-term investments | | |
| Mutual funds | 169,141,039 | 168,601,296 |
| Stocks | 1,325,432 | 1,045,199 |
| Bonds | 5,066,402 | 3,976,219 |
| Structured products | 107,364 | 165,591 |
| Securities lending | 104,114 | 278,417 |
| Receivables | | |
| Accrued interest | 1,851 | 3,857 |
| Mutual funds | 2,276 | - |
| Cash dividends | 83 | - |
| Securities sold | - | 200 |
| Others | 499 | 1,612 |
| Real estate | | |
| Land | 64,162,781 | 56,391,821 |
| Buildings | 1,600 | 8,523 |
| Construction in process | 18,596,003 | 15,137,667 |
| Intangible assets | | |
| Leasehold | 60,940 | 60,940 |
| Superficies | 56,660 | - |
| Securities under custody | 171,703,651 | 115,683,741 |
| Total | $ 437,352,365 | $ 366,393,935 |

**Statements of Income on Trust Accounts**
**For the Years Ended December 31, 2019 and 2018**

| | 2019 | 2018 |
|---|---|---|
| Revenues | | |
| Interest revenue | $ 7,045 | $ 5,287 |
| Lending stock | 3,929 | 5,316 |
| Cash dividends | 59,144 | 61,018 |
| Realized gain on investment - stocks | 1,461 | 7,462 |
| Unrealized gain on investment - stocks | 216,022 | 145,510 |
| Unrealized gain on investment - lending stock | 22,257 | - |
| Realized gain on investment - mutual funds | 4,634 | 51 |
| Unrealized gain on investment - mutual funds | 15,436 | - |
| Beneficial certificates appropriation | 2,922 | - |
| Others | 10 | 326 |
| Total revenues | 332,860 | 224,970 |
| Expenses | | |
| Management fees | 4,990 | 3,923 |
| Taxes | 25 | 17 |
| Service charge | 279 | 269 |
| Postage | 25 | 26 |
| Unrealized loss on investment - stocks | 138,411 | 207,674 |
| Unrealized loss on investment - lending stock | 10,149 | - |
| Realized loss on investment - mutual funds | 118 | 308 |
| Unrealized loss on investment - mutual funds | 4,905 | - |
| Others | 142 | 1,028 |
| Total expenses | 159,044 | 213,245 |
| Income before income tax | 173,816 | 11,725 |
| Income tax expense | - | - |
| Net income | $ 173,816 | $ 11,725 |

b. Nature of trust business operations under the Trust Law: Note 1.

## 43. ALLOCATION OF REVENUE, COST AND EXPENSE THAT RESULTED FROM THE SHARING OF RESOURCES BETWEEN TAIWAN COOPERATIVE FINANCIAL HOLDING COMPANY, LTD. AND SUBSIDIARIES

Under cooperation arrangements, the Bank and Taiwan Cooperative Securities (TCS) promoted securities brokerage business together; thus, related revenues received by the Bank were calculated as follows: (a) revenue based on 20% of the net revenue derived from security transactions for three years (for five years before January 1, 2018). (b) related revenues from utilizing some operating sites and equipment by the TCS; and (c) receiving cross-selling service fees of $2,000 thousand annually.

To promote the credit card business and corporate banking business together, the Bank and TCS signed cooperation arrangements, and marketing expenses paid by the Bank were based on the arrangements.

As of December 31, 2019 and 2018, the accrued receivables were $3,455 thousand and $3,168 thousand (part of receivables), respectively. The revenues from cross-selling transactions were $12,451 thousand and $11,428 thousand (part of other noninterest gains, net) in 2019 and 2018, respectively.

To promote the insurance business together, the Bank and BNP Paribas Cardif TCB Life Insurance Co., Ltd. signed cooperation arrangements. The service fees earned by the Bank were based on the agreed percentage of the premiums from the insurance companies' products sold by the Bank.

As of December 31, 2019 and 2018, the accrued receivables were $2,358 thousand and $2,541 thousand, respectively (part of receivables). The revenues from cross-selling transactions were $31,771 thousand and $38,106 thousand (part of service fee income, net) in 2019 and 2018, respectively.

## 44. CASH FLOW INFORMATION

a. Non-cash financing activities

Undistributed cash dividends approved by the stockholders in the stockholders' meetings were both $170,524 thousand as of December 31, 2019 and 2018.

b. Changes in liabilities arising from financing activities

For the year ended December 31, 2019

| | Opening Balance | Cash Inflows (Outflows) | Non-cash Changes | | | Closing Balance |
|---|---|---|---|---|---|---|
| | | | New Leases | Fair Value Adjustments (Including Changes in the Fair Value Attributable to Changes in the Credit Risk) | Others | |
| Financial liabilities designated as at fair value through profit or loss - bank debentures | $ 11,483,955 | $ - | $ - | $ 14,696 | $ 553,778 | $ 12,052,429 |
| Bank debentures | 55,000,000 | 10,000,000 | - | - | - | 65,000,000 |
| Guarantee deposits received | 1,216,195 | 362,034 | - | - | - | 1,578,229 |
| Lease liabilities | 1,499,535 | (571,419) | 695,389 | - | 4,311 | 1,627,816 |
| | $ 69,199,685 | $ 9,790,615 | $ 695,389 | $ 14,696 | $ 558,089 | $ 80,258,474 |

For the year ended December 31, 2018

| | Opening Balance | Cash Inflows (Outflows) | Non-cash Changes | | Closing Balance |
|---|---|---|---|---|---|
| | | | Fair Value Adjustments (Including Changes in the Fair Value Attributable to Changes in the Credit Risk) | Others | |
| Financial liabilities designated as at fair value through profit or loss - bank debentures | $ 11,688,291 | $ - | $ (13,252) | $ (191,084) | $ 11,483,955 |
| Bank debentures | 64,610,000 | (9,610,000) | - | - | 55,000,000 |
| Guarantee deposits received | 1,557,688 | (341,493) | - | - | 1,216,195 |
| | $ 77,855,979 | $ (9,951,493) | $ (13,252) | $ (191,084) | $ 67,700,150 |

## 45. ADDITIONAL DISCLOSURES

a. Related information of significant transactions and b. investees:

1) Financing provided: The Bank - not applicable; investee company - not applicable.

2) Endorsement/guarantee provided: The Bank - not applicable; investee company - not applicable.

3) Marketable securities held: The Bank - not applicable; investee company - not applicable.

4) Marketable securities acquired or disposed of at costs or prices of at least NT$300 million or 10% of the paid-in capital (the Bank disclosed its investments acquired or disposed of): None.

5) Acquisition of individual real estate at costs of at least NT$300 million or 10% of the paid-in capital: None.

6) Disposal of individual real estates at costs of at least NT$300 million or 10% of the paid-in capital: None.

7) Allowance of service fees to related parties amounting to at least NT$5 million: None.

8) Receivables from related parties amounting to at least NT$300 million or 10% of the paid-in capital: Table 3 (attached).

9) Sale of nonperforming loans: Table 4 (attached).

10) Financial asset securitization: None.

11) Other significant transactions which may affect the decisions of users of financial reports: None.

12) Percentage share in investees and related information: Table 5 (attached).

13) Derivative transactions: The Bank - Notes 8, 36 and 39 to the financial statements; investee company: None.

c. Investment in Mainland China:

Based on "Regulations Governing Approvals of Banks to Engage in Financial Activities between the Taiwan Area and the Mainland Area," the Bank set up the Suzhou Branch, Tianjin Branch, Fuzhou Branch and Changsha Branch in Mainland China. This investment had been approved by the Financial Supervisory Commission. The 4 branches' information - major operating items, capital stock, the way of investment, investment inflows and outflows, the holding percentage, the investment income or loss, the book value at year-end, the remitted investment profits and the limit on the amount of investment in Mainland China - can be seen in Table 6 (attached).

d. Business relationships and significant transactions among the parent company and subsidiaries: Table 7 (attached).

## 46. OPERATING SEGMENTS

The information reported to the Company's chief operating decision makers for the assessment of segment performance focuses mainly on business and profit or loss. The Company's reportable segments are as follows:

a. Deposit and loan section, including savings, loans and remittances;

b. Credit section, including legal person and personal credit businesses;

c. Funding section, including funding management with domestic and foreign currencies, securities, investments and other financial management;

d. Trust and Insurance section, including development, promotion and management of trust and insurance transactions;

e. Other noncore businesses.

The accounting policies of the reportable segments are the same as the Company's accounting policies described in Note 4. Segment profit is measured at income before income tax, and this measure is reported to the chief operating decision makers for the purposes of resource allocation and assessment of segment performance. The terms of transactions between segments are similar to those for third parties.

The revenue, expenses and related information of the Company's reportable segments for the year ended December 31, 2019 and 2018 are as follows:

| | For the Year Ended December 31, 2019 | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Deposit and Loan Section** | **Credit Section** | **Funding Section** | **Trust and Insurance Section** | **Others** | **Eliminate** | **Total** |
| Net interest | $ 12,204,962 | $ 21,055,881 | $ (269,374) | $ - | $ 1,333,337 | $ - | $ 34,324,806 |
| Net revenues and gains other than interest | 247,484 | 2,070,561 | 5,382,957 | 3,613,605 | 1,080,221 | (83,478) | 12,311,350 |
| Net revenues | 12,452,446 | 23,126,442 | 5,113,583 | 3,613,605 | 2,413,558 | (83,478) | 46,636,156 |
| Bad-debt expenses commitment and provision for losses on commitment and guarantees | - | (4,087,995) | - | - | (43,099) | - | (4,131,094) |
| Operating expenses | (8,756,327) | (9,331,527) | (671,269) | (3,211,320) | (1,618,027) | - | (23,588,470) |
| Income before income tax | $ 3,696,119 | $ 9,706,920 | $ 4,442,314 | $ 402,285 | $ 752,432 | $ (83,478) | $ 18,916,592 |

| | For the Year Ended December 31, 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Deposit and Loan Section** | **Credit Section** | **Funding Section** | **Trust and Insurance Section** | **Others** | **Eliminate** | **Total** |
| Net interest | $ 11,769,216 | $ 20,111,487 | $ 728,886 | $ - | $ 1,348,294 | $ - | $ 33,957,883 |
| Net revenues and gains other than interest | 276,444 | 1,968,137 | 3,896,960 | 3,330,625 | 1,033,761 | (55,656) | 10,450,271 |
| Net revenues | 12,045,660 | 22,079,624 | 4,625,846 | 3,330,625 | 2,382,055 | (55,656) | 44,408,154 |
| Bad-debt expenses commitment and provision for losses on commitment and guarantees | - | (4,376,149) | - | - | (38,332) | - | (4,414,481) |
| Operating expenses | (8,628,844) | (9,104,559) | (684,559) | (3,108,072) | (1,500,511) | - | (23,026,545) |
| Income before income tax | $ 3,416,816 | $ 8,598,916 | $ 3,941,287 | $ 222,553 | $ 843,212 | $ (55,656) | $ 16,967,128 |

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**CONSOLIDATED ENTITIES**
**DECEMBER 31, 2019 AND 2018**

Subsidiaries included in the consolidated financial statements:

| Investor Company | Investee Company | Location | Main Business and Products | Percentage of Ownership | | Note |
|---|---|---|---|---|---|---|
| | | | | December 31, 2019 | December 31, 2018 | |
| Taiwan Cooperative Bank, Ltd. | United Taiwan Bank S.A. | Belgium | Banking | 90.02 | 90.02 | |

Subsidiaries not included in the consolidated financial statements:

| Investor Company | Investee Company | Location | Main Business and Products | Percentage of Ownership | | Note |
|---|---|---|---|---|---|---|
| | | | | December 31, 2019 | December 31, 2018 | |
| None | - | - | - | - | - | |

# TAIWAN COOPERATIVE BANK, LTD.

**ASSET QUALITY - NONPERFORMING LOANS AND RECEIVABLES**
**DECEMBER 31, 2019 AND 2018**
**(In Thousands of New Taiwan Dollars, %)**

| Period | | | December 31, 2019 | | | | | December 31, 2018 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Items | | | Nonperforming Loans (Note 1) | Loans | Ratio of Nonperforming Loans (Note 2) | Allowance for Credit Losses | Coverage Ratio (Note 3) | Nonperforming Loans (Note 1) | Loans | Ratio of Nonperforming Loans (Note 2) | Allowance for Credit Losses | Coverage Ratio (Note 3) |
| Corporate banking | Secured | | $ 3,048,070 | $ 722,831,247 | 0.42 | $ 8,588,521 | 281.77 | $ 2,722,745 | $ 683,915,923 | 0.40 | $ 8,618,399 | 316.53 |
| | Unsecured | | 498,900 | 640,600,556 | 0.08 | 7,142,283 | 1,431.61 | 626,102 | 573,650,166 | 0.11 | 6,032,215 | 963.46 |
| Consumer banking | Housing mortgage (Note 4) | | 1,098,488 | 535,702,909 | 0.21 | 8,140,185 | 741.04 | 1,380,856 | 522,178,512 | 0.26 | 7,927,892 | 574.13 |
| | Cash card | | - | - | - | - | - | - | - | - | - | - |
| | Small-scale credit loans (Note 5) | | 9,104 | 12,151,396 | 0.07 | 130,664 | 1,435.24 | 16,848 | 12,430,337 | 0.14 | 163,431 | 970.03 |
| | Other (Note 6) | Secured | 783,052 | 288,756,524 | 0.27 | 3,056,605 | 390.35 | 1,076,250 | 275,504,816 | 0.39 | 3,333,725 | 309.75 |
| | | Unsecured | 15,611 | 9,933,460 | 0.16 | 142,907 | 915.43 | 27,428 | 9,082,963 | 0.30 | 155,531 | 567.05 |
| Loan | | | 5,453,225 | 2,209,976,092 | 0.25 | 27,201,165 | 498.81 | 5,850,229 | 2,076,762,717 | 0.28 | 26,231,193 | 448.38 |
| | | | Nonperforming Receivables (Note 1) | Receivables | Ratio of Nonperforming Receivables (Note 2) | Allowance for Credit Losses | Coverage Ratio (Note 3) | Nonperforming Receivables (Note 1) | Receivables | Ratio of Nonperforming Receivables (Note 2) | Allowance for Credit Losses | Coverage Ratio (Note 3) |
| Credit cards | | | 8,132 | 4,406,057 | 0.18 | 59,661 | 733.66 | 6,983 | 3,662,097 | 0.19 | 59,173 | 847.39 |
| Accounts receivable factored without recourse (Note 7) | | | - | 246,992 | - | 9,175 | - | - | 456,346 | - | 10,988 | - |
| Amounts of executed contracts on negotiated debts not reported as nonperforming loans (Note 8) | | | 555 | | | | | 946 | | | | |
| Amounts of executed contracts on negotiated debts not reported as nonperforming receivables (Note 8) | | | 5,137 | | | | | 7,008 | | | | |
| Amounts of executed debt-restructuring projects not reported as nonperforming loans (Note 9) | | | 8,450 | | | | | 12,478 | | | | |
| Amounts of executed debt-restructuring projects not reported as nonperforming receivables (Note 9) | | | 45,263 | | | | | 46,043 | | | | |

Note 1: Nonperforming loans are reported to the authorities and disclosed to the public, as required by the "Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Nonperforming/Non-accrued Loans." Nonperforming credit card receivables are reported to the authorities and disclosed to the public, as required by the Banking Bureau's letter dated July 6, 2005 (Ref. No. 0944000378).

Note 2: Ratio of nonperforming loans: Nonperforming loans ÷ Outstanding loan balance.
Ratio of nonperforming receivables: Nonperforming receivables ÷ Outstanding receivable balance.

Note 3: Coverage ratio of loans: Allowance for credit losses for loans ÷ Nonperforming loans.
Coverage ratio of receivables: Allowance for credit losses for receivables ÷ Nonperforming receivables.

Note 4: The mortgage loan is for house purchase or renovation and is fully secured by housing that is purchased (owned) by the borrower, the spouse or the minor children of the borrowers.

Note 5: Based on the Banking Bureau's letter dated December 19, 2005 (Ref. No. 09440010950), small-scale credit loans are unsecured, involve small amounts and exclude credit cards and cash cards.

Note 6: Other consumers banking loans refer to secured or unsecured loans that exclude housing mortgage, cash and credit card, and small-scale credit loans.

(Continued)

Note 7: As required by the Banking Bureau in its letter dated July 19, 2005 (Ref. No. 0945000494), accounts receivable factored without recourse are reported as nonperforming receivables within three months after the factors or insurance companies refuse to indemnify banks for any liabilities on these accounts.

Note 8: Amounts of executed contracts on negotiated debts that are not reported as nonperforming loans or receivables are disclosed to the public in accordance with the Banking Bureau's letter dated April 25, 2006 (Ref. No. 09510001270).

Note 9: Amounts of executed debt-restructuring projects not reported as nonperforming loans or receivables are disclosed to the public in accordance with the Banking Bureau's letter dated September 15, 2008 (Ref. No. 09700318940) and letter dated September 20, 2016 (Ref. No. 10500134790).

(Concluded)

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$300 MILLION OR 10% OF THE PAID-IN CAPITAL**
**DECEMBER 31, 2019**
**(In Thousands of New Taiwan Dollars)**

| Company Name | Related Party | Relationship | Ending Balance | Turnover Rate | Overdue | | Amounts Received in Subsequent Period | Allowance for Impairment Loss |
|---|---|---|---|---|---|---|---|---|
| | | | | | Amount | Actions Taken | | |
| Taiwan Cooperative Bank, Ltd. | Taiwan Cooperative Financial Holding Company, Ltd. | Parent company | $ 1,080,183 (Note) | - | $ - | - | $ - | $ - |

Note: Receivable - consolidated tax return.

**TABLE 4**

# TAIWAN COOPERATIVE BANK, LTD.

**SALE OF NONPERFORMING LOANS**
**FOR THE YEAR ENDED DECEMBER 31, 2019**
**(In Thousands of New Taiwan Dollars)**

1. Sale of nonperforming loans

| Trade Date | Counterparty | Form of Nonperforming Loan | Book Value (Note) | Selling Price | Gain (Loss) | Terms | Relationship Between the Counterparty and the Company |
|---|---|---|---|---|---|---|---|
| 2019.6.12 | Eudaimonia Limited | Midterm unsecured loan for enterprise (International syndicated loans) | $ - (Note 1) | $ 22,720 (US$ 733) | $ 22,720 (US$ 733) | None | None |
| 2019.11.7 | The HongKong and Shanghai Banking Corporation Limited (HSBC) | Midterm unsecured loan for enterprise (International syndicated loans) | - (Note 2) | 47,322 (US$ 1,528) | 47,322 (US$ 1,528) | None | None |
| 2019.12.5 | The HongKong and Shanghai Banking Corporation Limited (HSBC) | Midterm unsecured loan for enterprise (International syndicated loans) | - (Note 3) | 132,048 (US$ 4,272) | 132,048 (US$ 4,272) | None | None |

Note 1: Book value equals the amount of the original loan of US$7,445 thousand minus the allowance for bad debts of US$7,445 thousand.

Note 2: Book value equals the amount of the original loan of US$10,268 thousand minus the allowance for bad debts of US$10,268 thousand.

Note 3: Book value equals the amount of the original loan of US$20,461 thousand minus the allowance for bad debts of US$20,461 thousand.

2. The sale of a batch of nonperforming loans totaling over NT$1 billion (excluding those sold to related parties): None.

# TAIWAN COOPERATIVE BANK, LTD.

**PERCENTAGE SHARE IN INVESTEES AND RELATED INFORMATION**
**FOR THE YEAR ENDED DECEMBER 31, 2019**
**(In Thousands of New Taiwan Dollars)**

| Investee Company (Note 1) | Location | Main Businesses and Products | Percentage of Ownership | Carrying Value | Investment Gain (Loss) | Percentage Share of the Bank and Its Affiliates in Investees (Note 1) | | | | Note |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shares | Pro Forma Shares (Note 2) | Total | | |
| | | | | | | | | Shares | Percentage of Ownership | |
| Finance-related business | | | | | | | | | | |
| United Taiwan Bank S.A. | Belgium | Banking | 90.02 | $ 1,983,670 | $ 83,478 | 2,639,659 | - | 2,639,659 | 90.02 | (Note 4) |
| Taiwan Asset Management Co., Ltd. | Taipei City | Acquisition of delinquent loans | 17.03 | 1,927,800 | 117,000 | 180,000,000 | - | 180,000,000 | 17.03 | |
| Financial Information Service Co., Ltd. | Taipei City | Information service | 2.98 | 558,894 | 42,022 | 15,563,745 | - | 15,563,745 | 2.98 | |
| Taiwan Financial Asset Service Co., Ltd. | Taipei City | Property auction | 5.88 | 80,700 | 700 | 10,000,000 | - | 10,000,000 | 5.88 | |
| Taiwan Depository & Clearing Co., Ltd. | Taipei City | Custody of securities and short-term bills | 0.84 | 326,412 | 10,851 | 3,807,614 | - | 3,807,614 | 1.00 | |
| Taiwan Futures Exchange Co., Ltd. | Taipei City | Futures clearing | 1.75 | 628,911 | 21,340 | 6,418,777 | - | 6,418,777 | 1.81 | |
| Financial eSolution Co., Ltd. | Taipei City | Office machine wholesaling | 9.92 | 29,539 | 155 | 2,181,617 | - | 2,181,617 | 9.92 | |
| Taipei Forex Inc. | Taipei City | Foreign exchange brokering | 7.06 | 44,464 | 8,400 | 1,400,000 | - | 1,400,000 | 7.06 | |
| Sunny Asset Management Co., Ltd. | Taipei City | Acquisition of delinquent loans | 0.72 | 433 | 56 | 43,088 | - | 43,088 | 0.72 | |
| Taiwan Mobile Payment Company | Taipei City | IT software service | 4.00 | 19,056 | - | 2,400,000 | - | 2,400,000 | 4.00 | |
| Taiwania Capital Buffalo II Bioventures, LP | Taipei City | Venture capital | 8.47 (Note 3) | 242,949 | (7,051) | (Note 3) | - | (Note 3) | 8.47 (Note 3) | |
| Non-finance related business | | | | | | | | | | |
| United Real Estate Management Co., Ltd. | Taipei City | Real estate appraisal | 30.00 | 131,500 | 10,475 | 10,115,630 | - | 10,115,630 | 30.00 | |
| Taiwan Power Company | Taipei City | Power development and supply | 0.24 | 753,683 | - | 78,754,764 | - | 78,754,764 | 0.24 | |
| Taiwan Sugar Company | Tainan City | Sugar manufacturing | 0.08 | 315,584 | 7,621 | 4,233,752 | - | 4,233,752 | 0.08 | |
| Lien-An Service Co., Ltd. | Taipei City | Leasing | 5.00 | 2,378 | 125 | 125,000 | - | 125,000 | 5.00 | |
| Taipei Rapid Transit Co., Ltd. | Taipei City | Public transportation | 0.0014 | 131 | 6 | 14,286 | - | 14,286 | 0.0014 | |
| China Daily News | Tainan City | Newspaper publishing | 0.04 | 47 | - | 16,768 | - | 16,768 | 0.04 | |
| Taipei Financial Center Corp. | Taipei City | Residence and buildings lease construction and development | 1.63 | 575,520 | 30,430 | 24,000,000 | - | 24,000,000 | 1.63 | |
| Taiwan Urban Regeneration & Financial Services Co., Ltd. | Taipei City | | 5.00 | 21,275 | - | 7,500,000 | - | 7,500,000 | 15.00 | |
| Taiwan High Speed Rail Corporation | Taipei City | High speed railroad transportation business | 0.95 | 2,046,720 | 59,696 | 53,300,000 | - | 53,300,000 | 0.95 | |

Note 1: Shares or pro forma shares held by the Bank, directors, supervisors, president, vice president and affiliates in accordance with the Company Law have been included.

Note 2: a. Pro forma shares are shares that are assumed to be obtained through buying equity-based securities or entering into equity-linked derivative contracts for purposes defined in Article 74 of the Banking Law.
b. Equity-based securities, such as convertible bonds and warrants, are covered by Article 11 of the "Securities and Exchange Law Enforcement Rules."
c. Derivative contracts, such as those on stock options, are those conforming to the definition of derivatives in Statement of International Financial Reporting Standards No. 9 - "Financial Instruments."

Note 3: The ending percentage share of the Bank of Taiwania Capital Buffalo II Bioventures, LP (the Bank's amount of funds contributed to the total amount of funds of the partnership) is as disclosed.

Note 4: The ending percentage share of the Bank of United Taiwan Bank S.A. has been fully eliminated on consolidation.

# TAIWAN COOPERATIVE BANK, LTD.

**INVESTMENTS IN MAINLAND CHINA**
**FOR THE YEAR ENDED DECEMBER 31, 2019**
**(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)**

| Investee Company Name | Main Businesses and Products | Total Amount of Paid-in Capital | Investment Type | Accumulated Outflow of Investment from Taiwan as of January 1, 2019 | Investment Flows | | Accumulated Outflow of Investment from Taiwan as of December 31, 2019 | Investee Net Income (Loss) | % Ownership of Direct or Indirect Investment | Investment Gain (Loss) | Carrying Value as of December 31, 2019 | Accumulated Inward Remittance of Investment Earnings as of December 31, 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Outflow | Inflow | | | | | | |
| Suzhou Branch | Deposits, loans, import and export, exchange and foreign exchange business | $ 4,547,235 (US$ 154,395) (Note 1) | Direct | $ 4,547,235 (US$ 154,395) (Note 1) | $ - | $ - | $ 4,547,235 (US$ 154,395) (Note 1) | $ 282,463 | 100 | $ 282,463 | $ 5,801,679 | $ - |
| Tianjin Branch | Deposits, loans, import and export, exchange and foreign exchange business | 2,947,314 (US$ 97,387) (Note 1) | Direct | 2,947,314 (US$ 97,387) (Note 1) | - | - | 2,947,314 (US$ 97,387) (Note 1) | (157,473) | 100 | (157,473) | 2,838,954 | - |
| Fuzhou Branch | Deposits, loans, import and export, exchange and foreign exchange business | 2,950,882 (US$ 97,549) (Note 1) | Direct | 2,950,882 (US$ 97,549) (Note 1) | - | - | 2,950,882 (US$ 97,549) (Note 1) | 129,170 | 100 | 129,170 | 3,180,260 | - |
| Changsha Branch | Deposits, loans, import and export, exchange and foreign exchange business | 2,630,485 (US$ 87,232) (Note 1) | Direct | 2,630,485 (US$ 87,232) (Note 1) | - | - | 2,630,485 (US$ 87,232) (Note 1) | (288,189) | 100 | (288,189) | 2,371,521 | - |

| Accumulated Investment in Mainland China as of December 31, 2019 | Investment Amount Approved by the Investment Commission, MOEA | Maximum Investment Allowable |
|---|---|---|
| $ 13,075,916 (US$ 436,563) (Note 1) | $ 13,075,916 (US$ 436,563) (Note 1) | $ 136,349,759 (Note 2) |

Note 1: Translation into New Taiwan dollars at the exchange rates on the date of each outflow of investment.

Note 2: Based on the Investment Commission's "Regulation on the Examination of Investment or Technical Cooperation in Mainland China," investments are limited to the largest of 60% of the Bank's net asset value or 60% of the Bank's consolidated net asset value.

# TAIWAN COOPERATIVE BANK, LTD. AND SUBSIDIARY

**BUSINESS RELATIONSHIPS AND SIGNIFICANT TRANSACTIONS AMONG THE PARENT COMPANY AND SUBSIDIARIES**
**FOR THE YEAR ENDED DECEMBER 31, 2019**
**(In Thousands of New Taiwan Dollars)**

| No. (Note 1) | Transacting Company | Counter-party | Transaction Flow (Note 2) | Description of Transactions (Notes 3 and 5) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Financial Statement Account | Amounts | Trading Terms | Transaction Amount/Total Consolidated Net Revenue or Total Consolidated Assets (%) |
| 0 | Taiwan Cooperative Bank, Ltd. | United Taiwan Bank S.A. | a | Due from banks | $ 539,932 | Note 4 | 0.02 |
| 1 | United Taiwan Bank S.A. | Taiwan Cooperative Bank, Ltd. | b | Due to banks | 539,932 | Note 4 | 0.02 |
| 0 | Taiwan Cooperative Bank, Ltd. | United Taiwan Bank S.A. | a | Call loans to banks | 8,025,216 | Note 4 | 0.23 |
| 1 | United Taiwan Bank S.A. | Taiwan Cooperative Bank, Ltd. | b | Call loans from banks | 8,025,216 | Note 4 | 0.23 |

Note 1: These companies listed in Table 8 are identified as follows:

a. Parent company: 0.
b. Subsidiaries are numbered sequentially from 1.

Note 2: Transaction flows are as follows:

a. From parent company to subsidiary.
b. From subsidiary to parent company.
c. Between subsidiaries.

Note 3: For calculating the percentages, asset or liability account is divided by the consolidated total assets and revenue or expense account is divided by the total consolidated net revenue of the same year.

Note 4: The terms for the transactions between the transacting company and related parties are similar to those for unrelated parties.

Note 5: Referring to transactions exceeding NT$100 million.