# 3.2 Financial institutions

In 2022, the performance of Taiwan's financial institutions varied greatly. Domestic banks registered high profitability thanks to widening spreads as domestic interest rates rose, and they continued to enjoy satisfactory asset quality and adequate capital. The insurance industry, on the other hand, faced significant challenges in operations due to sharp drops in global stock and bond markets and the surge of pandemic-related insurance claims. However, the situation improved after regulatory authorities took proactive measures. Bills finance companies also experienced a decline in profitability mainly due to rising interest rates, but their capital remained adequate. On the whole, operations of domestic banks and bills finance companies remain steady, while the insurance industry needs to continue improving its operational conditions.

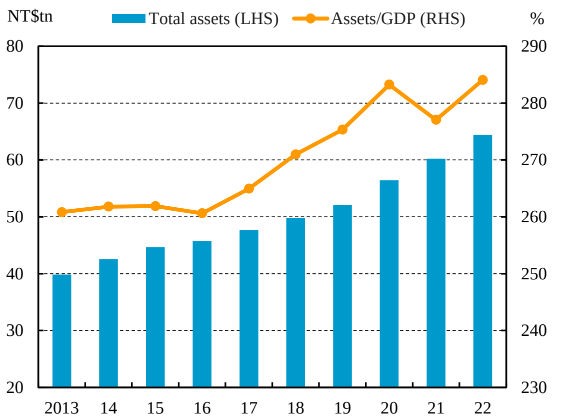
## 3.2.1 Domestic banks

In 2022, the total assets of domestic banks[36] continued to expand, while asset quality improved. The sectoral concentration in corporate loans and real estate-related loans declined marginally, and exposures to China continued to decline. The estimated value at risk (VaR) of market risk exposures increased, but its impacts on capital adequacy ratios were limited. Liquidity in the banking system was ample, and overall liquidity risk remained relatively low. The profitability of domestic banks significantly strengthened in 2022, reaching a near 20-year high. The average capital adequacy ratio declined marginally, but the capacity to bear losses remained satisfactory.

### *Total assets kept growing*

The total assets of domestic banks kept growing and reached NT$64.39 trillion at the end of 2022, with an annual growth rate of 6.91% compared to 6.78% a year earlier, while the ratio of total assets to annual GDP also rose to 284.06% (Chart 3.15). Broken down by sector, the annual asset growth rates of offshore banking units (OBUs) and overseas branches trended upwards sharply, whereas the rate of domestic

**Chart 3.15 Total assets of domestic banks**



Sources: CBC and DGBAS.

[36] Includes Agricultural Bank of Taiwan.

banking units (DBUs) continued to decline (Chart 3.16).

## Credit risk

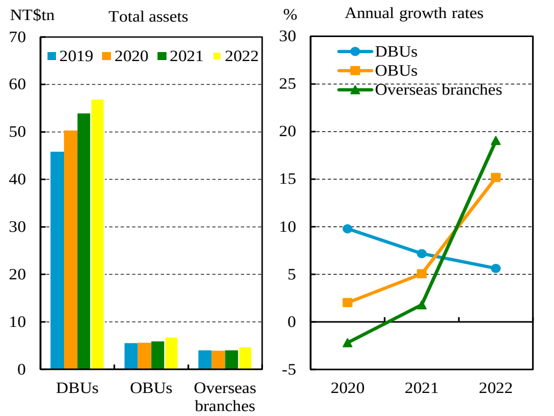
### Customer loans growth slowed

Customer loans were the major source of credit risks for domestic banks. The outstanding customer loans of DBUs stood at NT$32.48 trillion at the end of 2022, accounting for 50.60% of total assets with an annual growth rate of 8.44% (Chart 3.17). Among them, the annual growth rate of household borrowing declined to 6.42% owing to weakening demand for mortgage loans, while the growth rate of corporate loans rose to 11.92%, driven by rising funding demand after the pandemic eased. However, the annual growth rate of government loans dropped to -2.17% mainly because increasing government tax revenues lessened the demand for bank borrowing.

### The share of real estate-secured credit declined marginally

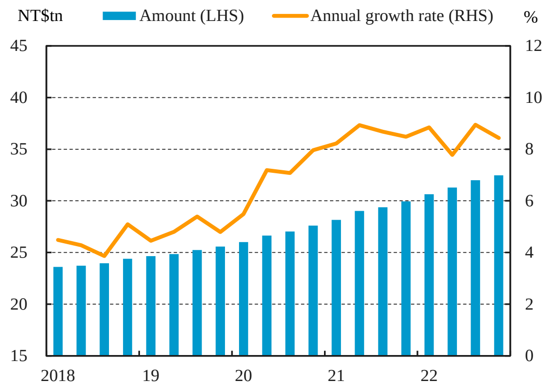
At the end of 2022, real estate-secured credit granted by domestic banks dropped slightly to NT$22.23 trillion, accounting for 57.67% of total credit [37] (Chart 3.18). As the government's measures to curb real estate speculation showed positive effects, the transactions in the housing market became more conservative. This, coupled with rising

**Chart 3.16 Total assets of domestic banks by sector**



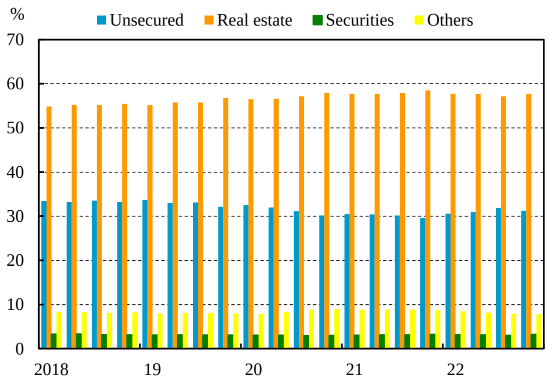

Note: Figures for total assets include interbranch transactions.
Source: CBC.

**Chart 3.17 Outstanding loans in domestic banks**




Note: Loans of OBUs and overseas branches are excluded.
Source: CBC.

**Chart 3.18 Credit by type of collateral in domestic banks**

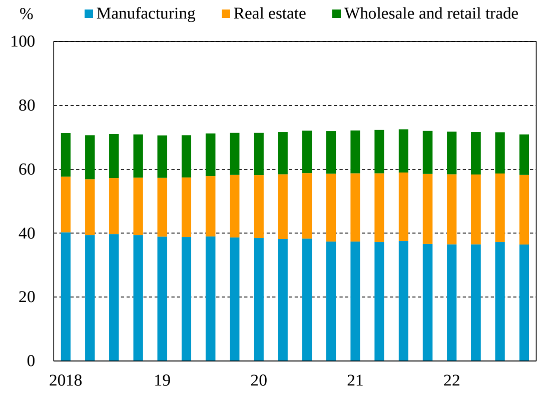



Source: CBC.

[37] The term "credit" herein includes loans, guarantee payments receivable, and acceptances receivable.

interest rates on bank loans, could pose greater challenges for some medium or small-sized construction companies with poor financial conditions. Against this backdrop, the impact of changes in the real estate market on banks' credit quality warrants close attention.

**Chart 3.19 Shares of corporate loans of the three largest industries**

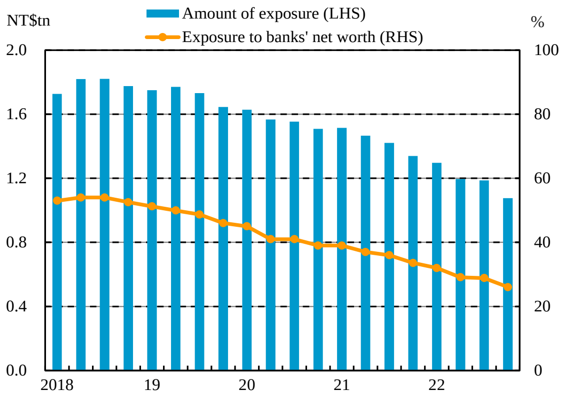



Notes: 1. Share of corporate loans = loans to each industry /corporate loans.
2. Exposures of OBUs and overseas branches were excluded.
Source: CBC.

### *Credit concentration in corporate loans slightly decreased*

Corporate loans granted by the DBUs of domestic banks stood at NT$14.38 trillion at the end of 2022. Among the borrowers, the largest three industries accounted for 70.90%, slightly lower than the 72.04% of the previous year (Chart 3.19), indicating that credit concentration in corporate loans reduced mildly. Among loans to the manufacturing sector,[38] which represented the highest segment, loans to the electronics industry constituted the largest share at 31.88%, slightly increasing from 31.42% the previous year.

**Chart 3.20 Exposures of domestic banks to China**




Source: FSC.

### *Exposures to China decreased persistently, but potential risks remained high*

At the end of 2022, the exposures of domestic banks to China stood at NT$1.08 trillion, representing a 19.69% decrease from the previous year, mainly attributed to a 37.13% reduction in investments. The above exposures as a percentage of net worth also reached a new low of 26% (Chart 3.20).

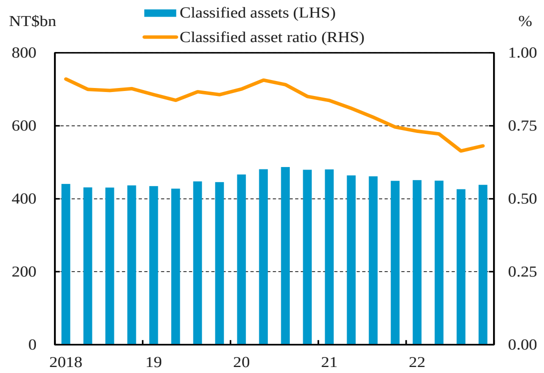
Although domestic banks' exposures to China remained relatively low, the potential economic and financial risks in China are still high due to ongoing financing pressures in the

[38] Loans to the manufacturing sector are divided into five categories by industry, including: (1) electronics, (2) mining of metals and non-metals, (3) petrochemicals, (4) traditional manufacturing, and (5) others.

real estate market and the high level of debt burden of local governments, coupled with the escalating US-China technology dispute. Therefore, they warrant continual close attention.

***Exposures to related banks in the recent banking turmoil in the US and Europe were limited***

**Chart 3.21 Classified assets of domestic banks**




Note: Classified asset ratio = classified assets/total assets.
Source: CBC.

Beginning in early March 2023, four small and medium-sized banks in the United States, namely Silicon Valley Bank (SVB), Silvergate Bank, Signature Bank and First Republic Bank, failed or were liquidated one after another. Then, in Europe, UBS acquired financially-distressed Credit Suisse. These events intensified fluctuations in financial markets. According to the statistics of the FSC, domestic banks had no exposure to the four failed US banks as of the end of February 2023, and only small exposure of NT$46.1 billion to Credit Suisse, accounting for 0.07% of total assets of domestic banks. Furthermore, no domestic banks held Credit Suisse's AT1 bonds. This showed that the impact of the turmoil on domestic banks was limited, but their possible spillover effects warrants continual close attention.

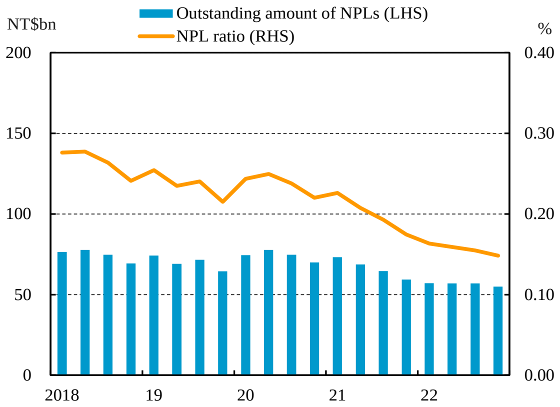
***Asset quality improved***

The outstanding classified assets[39] of domestic banks decreased by 2.39% from a year earlier to NT$438.4 billion at the end of 2022. The average classified asset ratio also slightly decreased by 0.07 pps from the end of the previous year and stood at 0.68% (Chart 3.21), showing that the asset quality of domestic banks improved. Although the expected losses of classified assets[40] increased by NT$5.0 billion from a year earlier to NT$50.2 billion, they only accounted for 9.11% of allowances for doubtful accounts and loss provisions, indicating sufficient provisions to cover expected losses without eroding equity.

[39] Assets of domestic banks are broken down into five categories: normal, special mention, substandard, doubtful, and loss. The term "classified assets" herein includes all assets classified under the latter four categories.
[40] Loss herein refers to losses from loans, acceptances, guarantees, credit cards, and factoring without recourse.

The outstanding NPLs of domestic banks registered NT$55.0 billion at the end of 2022, decreasing by 7.36% from the end of the previous year. The average NPL ratio also declined to a record low of 0.15% (Chart 3.22). In addition, at the end of 2022, the loan coverage ratio remained at 1.36%, whereas the NPL coverage ratio increased significantly to 916.53% (Chart 3.23) due to a greater decrease in NPLs. The overall ability of domestic banks to compensate potential loan losses remained satisfactory.

**Chart 3.22 NPLs of domestic banks**

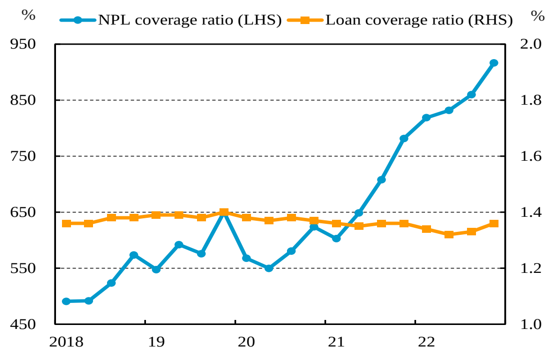



Note: Excludes interbank loans.
Source: CBC.

## Market risk

### *Estimated value-at-risk for market risk exposures increased*

**Chart 3.23 NPL coverage ratio and loan coverage ratio of domestic banks**




Notes: 1. NPL coverage ratio = total provisions/non-performing loans.
2. Loan coverage ratio = total provisions/total loans.
3. Excludes interbank loans.
Source: CBC.

Based on the Bank's VaR model,[41] the estimated total VaR for market risk exposures of domestic banks stood at NT$169.3 billion at the end of 2022, increasing by NT$16.2 billion or 10.58% compared to a year earlier. Among the market risk exposures, the interest rate VaR rose by 14.50% year on year in 2022. This mainly resulted from a surge in bond yield volatility because of the sharp tightening of monetary policies implemented by central banks in many countries to rein in inflation. The FX VaR also increased by 33.33% owing to elevated volatility in the NT dollar exchange rate against the US dollar. However, the equities VaR declined by 26.88% compared to the previous year, reflecting a substantial reduction of 47.28% in the net position of equity securities (Table 3.1).

[41] For more details about the Bank's VaR model, please see CBC (2016), Box 2, *Financial Stability Report*.

## Table 3.1 Market risks in domestic banks

Unit: NT$bn

| Type of risk | Item | End-Dec. 2021 | End-Dec. 2022 | Changes | |
|---|---|---|---|---|---|
| | | | | Amount | pps |
| Foreign exchange | Net position | 200.2 | 200.5 | 0.3 | 0.15 |
| | VaR | 3.3 | 4.4 | 1.1 | 33.33 |
| | VaR/net position (%) | 1.65 | 0.219 | | 0.54 |
| Interest rate | Net position | 2,001.3 | 1,760.9 | -240.4 | -12.01 |
| | VaR | 133.8 | 153.2 | 19.4 | 14.50 |
| | VaR/net position (%) | 6.69 | 8.70 | | 2.01 |
| Equities | Net position | 112.3 | 59.2 | -53.1 | -47.28 |
| | VaR | 16.0 | 11.7 | -4.3 | -26.88 |
| | VaR/net position (%) | 14.25 | 19.76 | | 5.51 |
| Total VaR | | 153.1 | 169.3 | 16.2 | 10.58 |

Source: CBC.

### *The impacts of market risk on capital adequacy ratios were limited*

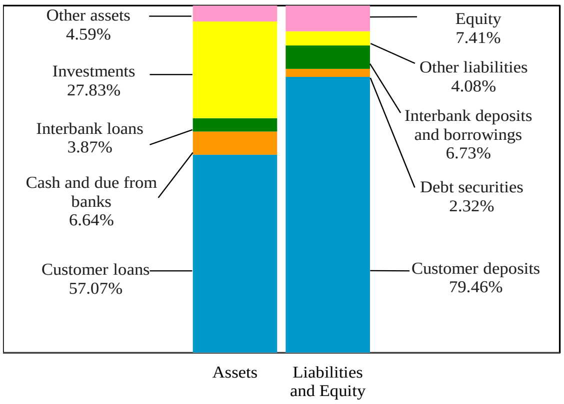
According to the estimation mentioned above, the total VaR would lead to a decrease of 0.49 pps[42] in the average capital adequacy ratio of domestic banks, causing the ratio to drop from the current 14.68% to 14.19%. Nevertheless, it would still be higher than the statutory minimum of 10.5%. Considering that market panic over the banking turmoil in the US and Europe lingered on and the uncertainty of subsequent developments is also high, market risk could further increase and therefore warrants close attention.

## Liquidity risk

### *Liquidity in the banking system remained ample*

The asset and liability structure of domestic banks remained roughly unchanged in 2022. For the sources of funds, customer deposits,

**Chart 3.24 Asset/liability structure of domestic banks**




Notes: 1. Figures are as of end-December 2022.
2. Equity includes loss provisions. Interbank deposits include deposits with the CBC.

Source: CBC.

[42] Domestic banks had already set aside capital for market risk in accordance with relevant regulations. To avoid double counting, the impacts of market risk on the capital adequacy ratio herein were estimated using capital shortfalls after considering the aforementioned market risk capital.

which tend to be relatively stable, still made up the largest share with 79.46% of the total, followed by equity at 7.41%. As for the uses of funds, customer loans accounted for the biggest share with 57.07%, followed by securities investments at 27.83% (Chart 3.24).

At the end of 2022, the average deposit-to-loan ratio of domestic banks slightly dropped to 141.14%, and the funding surplus (i.e., deposits exceeding loans) was NT$15.25 trillion (Chart 3.25). The overall liquidity of domestic banks remained abundant.

### *Overall liquidity risk remained relatively low*

The average NT dollar liquid reserve ratio of domestic banks was well above the statutory minimum of 10% in every month of 2022 and stood at 28.31% in December (Chart 3.26).

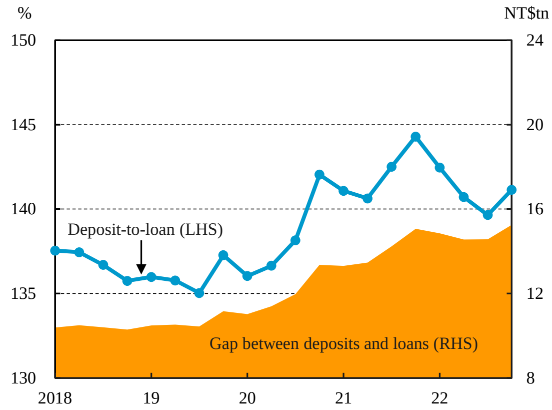
At the end of 2022, the average liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) of domestic banks marginally dropped to 134% and 138%, respectively (Chart 3.27). However, all banks met the statutory minimum LCR and NSFR requirements, indicating that the overall liquidity risk of domestic banks was relatively low.

## Profitability

### *Profits in 2022 reached the highest level in nearly 20 years*

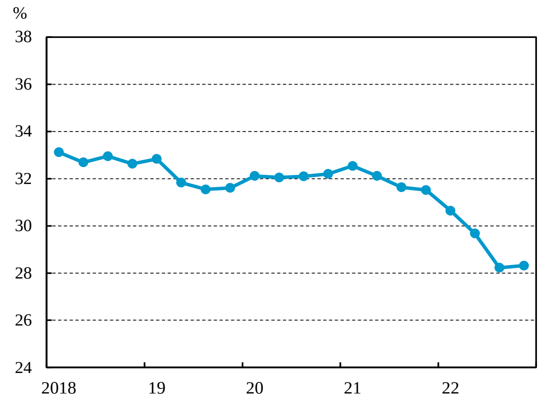
Benefiting from a substantial pickup in net interest income owing to expanding interest

**Chart 3.25 Deposit-to-loan ratio of domestic banks**



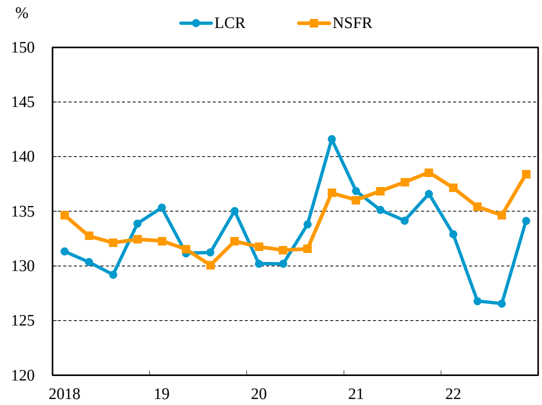

Note: Deposit-to-loan ratio = total deposits/total loans.
Source: CBC.

**Chart 3.26 Liquid reserve ratio of domestic banks**




Note: Figures are the average daily data in the last month of each quarter.
Source: CBC.

**Chart 3.27 LCR and NSFR of domestic banks**




Source: CBC.

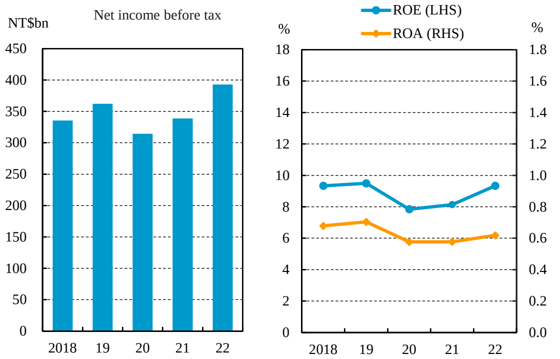
rate spreads between deposits and loans and increasing interest revenue from debt instruments, the net income before tax of domestic banks in 2022 increased by 15.97% over the previous year to NT$392.8 billion, a record high in nearly 20 years. The average ROE and ROA also went up to 9.33% and 0.62%, respectively, indicating improved profitability (Chart 3.28).

In 2022, three internet-only banks, which officially began operations in the last two years, posted operating losses, whereas all the other banks made profits. Most banks' ROEs and ROAs were higher than the previous year. Fourteen banks achieved a profitable ROE of 10% or more, compared to five banks in 2021. Meanwhile, three banks recorded ROAs above the international standard of 1%, more than two banks in 2022 (Chart 3.29).

### *Factors that might affect future profitability*

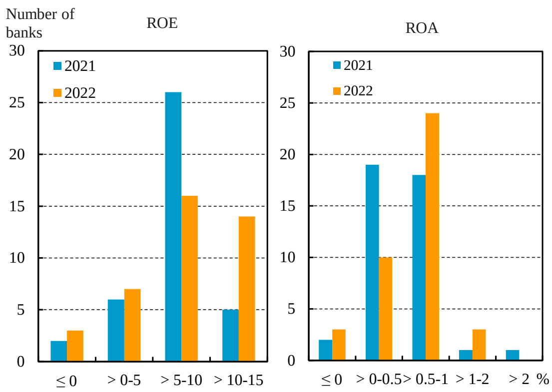
Affected by the Bank's policy rate hikes in 2022, the average interest rate spread between deposits and loans of domestic banks notably rose to 1.36% at the end of 2022 from 1.24% a year earlier (Chart 3.30), which helped to strengthen the profitability of domestic banks. However, there are still some uncertainties which warrant close attention: (A) Financial markets are increasingly sensitive to the expectations of the Fed's future rate-hike path, and there are still uncertainties regarding the subsequent developments of the recent turmoil in the US and European banking sectors, which could further increase volatility in global

**Chart 3.28 Net income before tax of domestic banks**



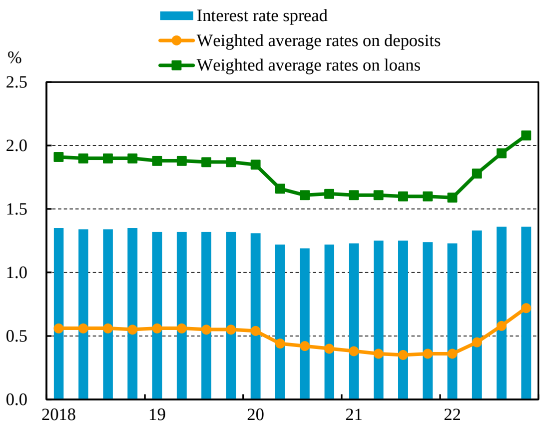

Notes: 1. ROE = net income before tax/average equity.
2. ROA = net income before tax/average assets.
Source: CBC.

**Chart 3.29 Domestic banks classified by ROE and ROA**




Source: CBC.

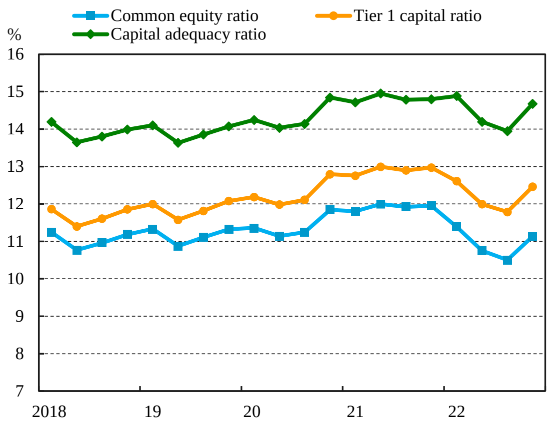
**Chart 3.30 Interest rate spread of domestic banks**




Notes: 1. Interest rate spread = weighted average interest rates on loans - weighted average interest rates on deposits.
2. The weighted average interest rates on deposits and loans exclude preferential deposits of retired government employees and central government loans.
Source: CBC.

financial markets, thus affecting banks' returns on investment. (B) A significant slowdown in the global economic and trade momentum, together with weak customer demand and manufacturers' continuous inventory adjustments, might suppress Taiwan's export momentum and impair corporate profit growth and debt-servicing capabilities, consequently affecting banks' profitability and credit quality.

**Chart 3.31 Capital ratios of domestic banks**




Notes: 1. Common equity ratio = common equity Tier 1 capital/risk-weighted assets.
2. Tier 1 capital ratio = Tier 1 capital/risk-weighted assets.
3. Capital adequacy ratio = eligible capital/risk-weighted assets.

Source: CBC.

## Capital adequacy

### *Capital ratios slightly descended*

In 2022, influenced by an increase in unrealized valuation losses on debt instrument investments and dividend distributions, the regulatory capital of domestic banks decreased. Meanwhile, an increase in loans led to the expansion in risk-weighted assets. As a result, the average common equity ratio, Tier 1 capital ratio, and capital adequacy ratio dropped to 11.13%, 12.46%, and 14.68%, respectively, at the end of 2022 (Chart 3.31). Among the components of regulatory capital, common equity Tier 1 (CET 1) capital accounted for 75.86%. The high share of CET1 capital, which features the best loss-bearing capacity, showed that the capital quality of domestic banks was satisfactory.

Moreover, the average leverage ratio of domestic banks stood at 6.28% at the end of 2022, marginally lower than 6.46% a year earlier but still above the 3% statutory standard, indicating that financial leverage remained sound.

### *All domestic banks had capital ratios and leverage ratios higher than the statutory minimum*

At the end of 2022, the capital ratios of six domestic systemically important banks (D-SIBs) and non-D-SIBs were all above statutory minimum standards or the relevant capital buffer requirements set by the FSC in 2022.[43] Leverage ratios of all domestic banks also exceeded the statutory minimum of 3%.

[43] The statutory standards for the common equity ratio, Tier 1 capital ratio, and capital adequacy ratio of non-D-SIBs are 7%, 8.5% and 10.5%, respectively. D-SIBs are required to set aside an additional 2% of buffer capital and 2% of internal management capital according to the requirement of the FSC. The additional capital must be achieved before the end of each of the four years equally starting from the next year after the designated date (the enforcement of the internal management capital requirement was postponed for one year and must be achieved before each year-end of the four years equally from 2022 onwards).

## Credit ratings

### *Average credit rating level remained steady*

Of the overall risk assessments of Taiwan's banking system made by credit rating agencies, Standard & Poor's kept Taiwan's Banking Industry Country Risk Assessment (BICRA) [44] unchanged at Group 4 with moderate risk. Compared to other Asian economies, the systemic risk level of Taiwan was the same as that of Malaysia, but much lower than those of the Philippines, China, Thailand and Indonesia. Moreover, the assessment of Taiwan's banking system by Fitch Ratings in its Banking System Indicator/ Macro-Prudential Indicator (BSI/MPI)[45] also remained unchanged at level bbb/2 (Table 3.2).

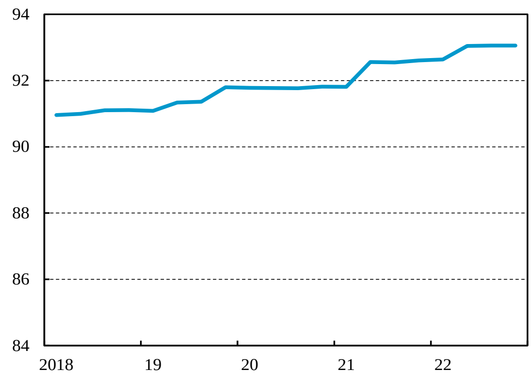
Moreover, the weighted average credit rating index [46] went up slightly compared to the previous year owing to the upgrading of four banks (Chart 3.32).

**Table 3.2 Systemic risk indicators for the banking system**

| Banking System | Standard & Poor's | | Fitch | |
|---|---|---|---|---|
| | BICRA | | BSI/MPI | |
| | 2022/2 | 2023/2 | 2021/8 | 2022/7 |
| Singapore | 2 | 2 | aa/2 | aa/2 |
| Hong Kong | 2 | 2 | a/2 | a/2 |
| Japan | 3 | 3 | a/2 | a/3 |
| South Korea | 3 | 3 | a/2 | a/2 |
| **Taiwan** | **4** | **4** | **bbb/2** | **bbb/2** |
| Malaysia | 4 | 4 | bbb/1 | bbb/1 |
| Philippines | 5 | 5 | bb/1 | bb/1 |
| China | 6 | 6 | bb/1 | bb/1 |
| Thailand | 6 | 7 | bbb/1 | bbb/1 |
| Indonesia | 6 | 6 | bb/1 | bb/1 |

Sources: Standard & Poor's and Fitch Ratings.

**Chart 3.32 Credit rating index of domestic banks**




Sources: Taiwan Ratings, Fitch Ratings and CBC.

### *Rating outlooks for every rated bank remained stable or positive*

As of the end of 2022, all but one domestic bank received ratings by credit rating agencies. Most of the rated domestic banks maintained credit ratings of twAA/twA (Taiwan Ratings) or AA(twn)/A(twn) (Fitch Ratings) and none had credit ratings lower than twBB/BB(twn) (Chart 3.33). Rating outlooks for all rated banks remained stable or positive.

[44] BICRA is scored on a scale from 1 to 10, ranging from the lowest-risk (group 1) to the highest-risk (group 10), which indicates the assessment results by Standard & Poor's of economic and industry risks of a country's banking system.

[45] Fitch Ratings assesses banking system vulnerability with two complementary measures, the BSI and the MPI. These two indicators are brought together in a Systemic Risk Matrix. The BSI represents banking system strength on a scale from aaa, aa, a, bbb, bb, b, ccc, cc, c and f. The MPI indicates the vulnerability of the macro environment on a scale from 1, 2, 2* and 3.

[46] The credit rating index is an asset-weighted average rating score of rated domestic banks, measuring the overall creditworthiness of those banks on a scale from 1 (weakest) to 100 (strongest). The rating score for banks is determined according to their long-term issuer ratings from Taiwan Ratings or national long-term ratings from Fitch Ratings. The higher the index is, the better the bank's overall solvency.

Taiwan Ratings projected that Taiwan's banking industry outlook remained stable in 2023, and indicated that domestic banks' adequate capital levels could help offset a possible increase in credit losses arising from the domestic economic slowdown.[47]

## 3.2.2 Insurance companies

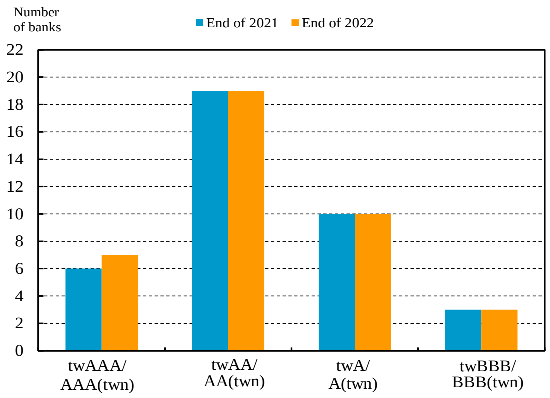
### Life insurance companies

In 2022, the total assets of life insurance companies grew at a slower pace and their profits slumped. The average equity to asset ratio rebounded after a sharp drop, and overall credit ratings remained stable. However, owing to the expansion of foreign investment positions, life insurance companies still faced higher FX risk, interest rate risk and equity risk.

#### *Assets grew at a slower pace*

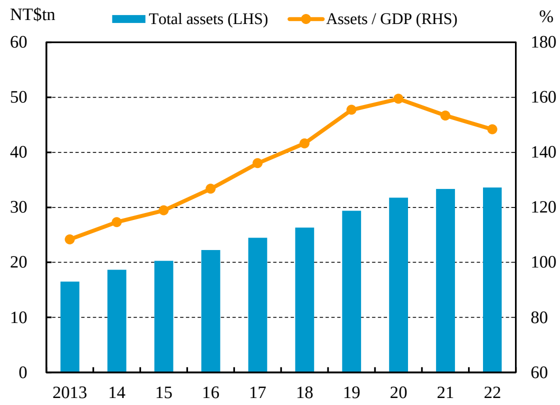
The total assets of life insurance companies reached NT$33.62 trillion at the end of 2022, equivalent to 148.34% of annual GDP (Chart 3.34). The annual growth rate of total assets slowed markedly to 0.84% from 5.00% a year earlier. The market structure of the life insurance industry remained roughly unchanged in 2022, with the top three companies in terms of assets making up a combined market share of 54.61%.

**Chart 3.33 Number of domestic banks classified by credit ratings**



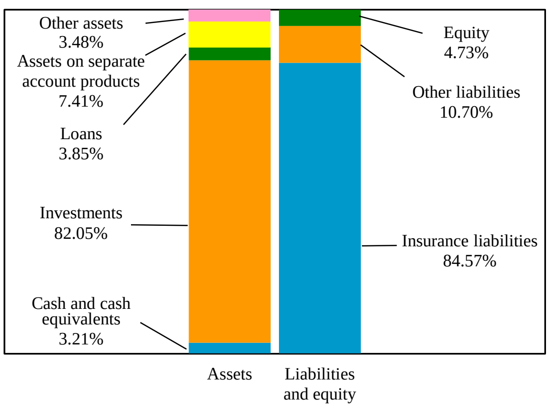

Sources: Taiwan Ratings and Fitch Ratings.

**Chart 3.34 Total assets of life insurance companies**




Sources: FSC and DGBAS.

**Chart 3.35 Asset/liability structure of life insurance companies**



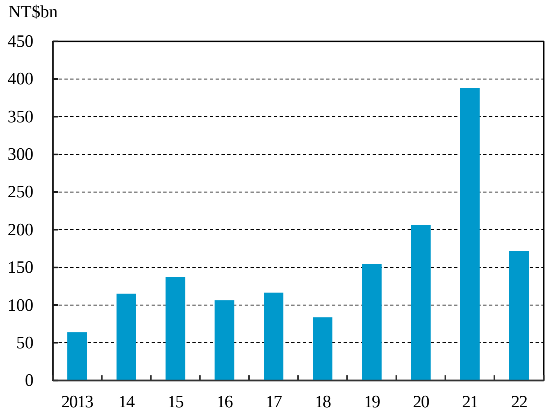

Note: Figures are as of the end of 2022.
Source: FSC.

[47] Press release by Taiwan Ratings on December 21, 2022.

***Investment positions continued to grow***

In terms of the usage of funds of life insurance companies as of the end of 2022, investments continued to take up the primary share of total assets, which rose to 82.05% owing to the expansion of foreign investments.[48] As for the sources of funds, insurance liabilities accounted for the largest share of 84.57%, while the share of equity decreased to 4.73% mainly owing to the expansion of unrealized valuation losses from financial assets and a sharp decline in profits (Chart 3.35).

**Chart 3.36 Net income before tax of life insurance companies**

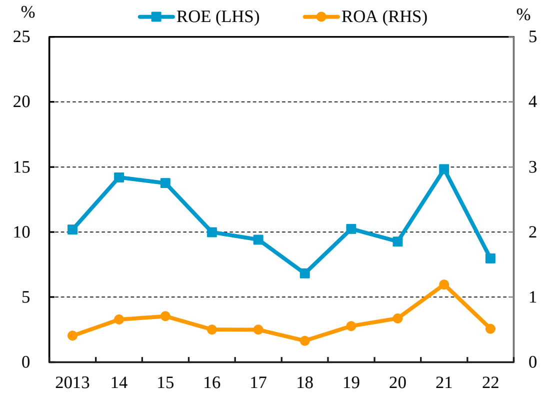



Source: FSC.

***Pretax income slumped***

Life insurance companies reported net income before tax of NT$171.9 billion in 2022, a substantial year-on-year decrease of 55.75% from NT$388.5 billion a year earlier (Chart 3.36). This mainly resulted from a huge reduction in investment revenue as the loss on valuation of financial assets expanded, which was influenced by the decline in international stock and bond markets. Accordingly, their average ROE and ROA dropped to 7.97% and 0.51%, respectively, from 14.83% and 1.19% a year earlier (Chart 3.37), indicating a deterioration in profitability.

**Chart 3.37 ROE & ROA of life insurance companies**




Notes: 1. ROE = net income before tax/average equity.
2. ROA = net income before tax/average assets.
Source: FSC.

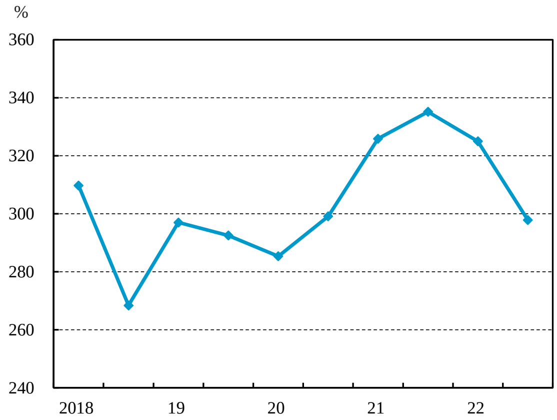
***Average RBC ratio and equity to asset ratio both decreased***

In 2022, the total capital of life insurance companies fell because of a slump in international stock and bond markets. As a result, the average RBC ratio decreased to 297.82% at the end of the year from 335.17% a year earlier (Chart 3.38). Among them, one life insurance company had an RBC ratio below the statutory minimum of 200%.

[48] Foreign investments and domestic portfolio investments (including investments in insurance-related enterprises) made up 63.01% and 16.32% of total assets, respectively.

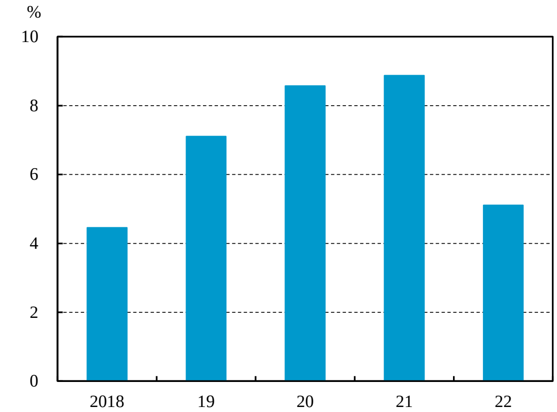
Furthermore, the average equity to asset ratio continued to drop in the first three quarters of 2022, affected by the Fed's rapid interest rate hikes and the adoption of different accounting treatments for evaluating insurers' assets and liabilities.[49] Afterwards, with some life insurance companies conducting cash capital increases or financial asset reclassification, the ratio climbed to 5.11% at the end of 2022, still far below the 8.87% registered a year earlier (Chart 3.39). The number of life insurance companies with equity to asset ratios below the statutory minimum of 3% was four at the end of 2022, but the number shrank to two as of the end of March 2023.

**Chart 3.38 RBC ratio of life insurance companies**




Notes: 1. RBC ratio = regulatory capital/risk-based capital.
2. Figures are exclusive of life insurance companies in receivership.
Source: FSC.

**Chart 3.39 Equity to asset ratios of life insurance companies**




Notes: 1. For equity, unaudited figures are used.
2. For assets, the assets of investment-linked insurance products in separate accounts are excluded.
Source: FSC.

### *Overall credit ratings remained stable*

Among the 14 life insurance companies rated by credit rating agencies in 2022, only one life insurance company was downgraded to twA from twA+ by Taiwan Ratings because of its weakened capital level, while ratings for the other companies remained unchanged. As of the end of the year, all rated life insurance companies maintained credit ratings above twA or its equivalent, with the ratings of the top three companies in terms of assets holding at twAA, which means a very strong capacity to meet their financial commitments. As for the prospects of these companies, most of them were rated with a positive or stable outlook, except for two companies being rated with a negative outlook.

Taiwan Ratings indicated[50] that the decline in the life insurance premium income is expected to slow down in 2023. However, the spiking volatility in financial markets and the expansion

[49] The financial assets of the insurance industry are measured at fair value in compliance with IFRS 9, while the insurance liabilities are discounted at the predetermined interest rate at the issuance of the policies and are not reassessed when interest rates change. Consequently, when market interest rates rise, the asset side reflects the unrealized valuation losses, but the liability side does not reflect the valuation gains therefrom, causing a reduction in equity.

[50] Taiwan Ratings (2022), "2023 Taiwan Credit Outlook," December.

of FX hedging costs will affect life insurers' profitability and capital adequacy throughout the year. The resultant challenges in their credit outlook warrant close attention.

### *Foreign investment positions faced higher market risk and systemic risk*

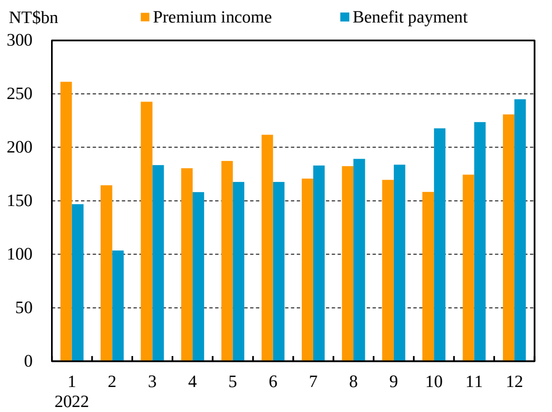
Foreign investment positions of life insurance companies grew continuously and reached NT$21.19 trillion at the end of 2022. Securities investments constituted the largest share, of which about 90% were invested in bills and bonds and 10% in equities. Although the Fed slowed down the pace of interest rate hikes recently, the volatility in stock markets increased owing to concerns about multiple downside risks which might adversely affect the global economic outlook. In addition, global bond yields remained high. As a result, life insurance companies still faced higher equity risk and interest rate risk.

Furthermore, more than 90% of foreign investment positions of life insurance companies were denominated in US dollars. In order to alleviate the impacts of exchange rate fluctuations, life insurance companies actively used derivative financial instruments for FX hedging, as well as building up FX valuation reserves in compliance with the relevant regulations. However, the FX risk inherent in large-value open FX positions of life insurance companies still warrants close attention. Given that the FX hedging costs for insurance companies surged in 2022, the FSC amended the regulations related to FX valuation reserves and established a new provision (write-off) mechanism for traditional hedging costs in March 2023. The amendments aimed to enable insurers to manage currency risk in a more flexible manner and stabilize hedging costs, thereby strengthening their solvency and financial soundness.

### *Liquidity risk raised as insurance benefit payment has exceeded premium income*

After the Fed accelerated interest rate hikes, the impact from the lower return on USD-denominated insurance policies compared to USD preferential deposit rates and poor investment performance caused the premium income of life insurance companies to significantly decrease by 21.43% in 2022 compared to a year earlier. Furthermore, bearish news such as the decline in total equity of life insurance companies struck

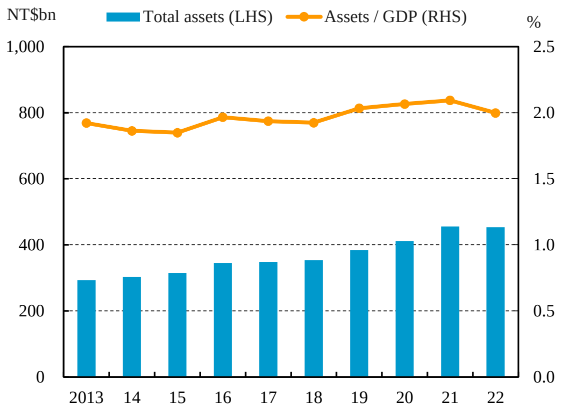
**Chart 3.40 Premium income and benefit payment of life insurance companies**




Note: Benefit payment includes maturity, survival repayment and termination.
Source: Taiwan Insurance Institute.

policyholders' confidence. As a result, the life insurance benefit payment has exceeded premium income since July 2022 (Chart 3.40). In addition, some life insurance companies reclassified their financial assets to "financial assets measured at amortized cost," which could limit their ability to realize the capital gains from bond investments and place pressure on their cash flows.[51]

**Chart 3.41 Total assets of non-life insurance companies**




Sources: FSC and DGBAS.

### *Exposure to the four failed American banks and Credit Suisse was limited and insurers did not hold AT1 bond positions*

According to the statistics of the FSC, the exposure of Taiwanese insurers (mainly life insurance companies) to SVB and First Republic Bank was NT$150 million and NT$42 million, respectively, as of the end of February 2023. Meanwhile, the insurance industry did not hold exposure to Signature Bank and Silvergate Bank. Moreover, the exposure to Credit Suisse was NT$109.3 billion, accounting for only 0.35% of the total usable assets, indicating the risks were under control, and no domestic insurers held Credit Suisse's AT1 bonds.

## Non-Life Insurance companies

In 2022, the total assets of non-life insurance companies contracted slightly. They reported a significant pretax loss and a decreasing average RBC ratio owing to a drastic surge in COVID-19 insurance claim settlements, but the pressure to settle claims is expected to ease in 2023.

### *Assets contracted slightly*

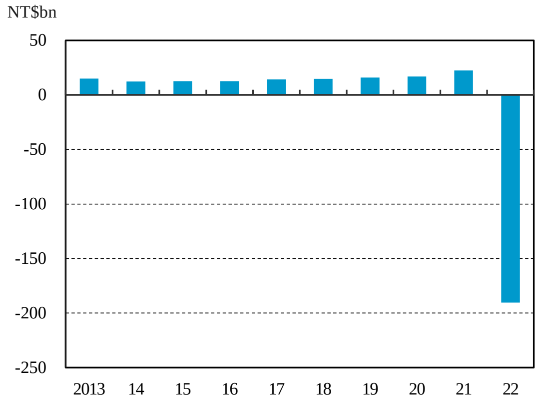
The total assets of non-life insurance companies reached NT$452.9 billion at the end of 2022, equivalent to 2.00% of annual GDP (Chart 3.41). The annual growth rate of total assets plummeted to -0.56% from 10.63% a year earlier, representing a contraction in the size of total assets. The top three companies in terms of assets made up a combined market share of 46.17%. The market structure of the non-life insurance industry remained roughly unchanged.

[51] Under the FSC's regulations, the insurance industry is not allowed to sell more than 5% of the original bonds measured at amortized cost each year. When the insurer exceeds the limitation, it will be prohibited from measuring new bonds at amortized cost starting from the next year to 2025 when IFRS 17 is adopted domestically.

***Significant pretax loss***

Non-life insurance companies reported net income before tax of minus NT$190.5 billion in 2022 owing to a drastic increase in COVID-19 insurance claim settlements (Chart 3.42). Their average ROE and ROA declined to -171.40% and -41.96% from 14.80% and 5.22% a year earlier, respectively. Among 19 non-life insurance companies, ten companies reported a net loss, compared to two companies a year earlier.

**Chart 3.42 Net income before tax of non-life insurance companies**

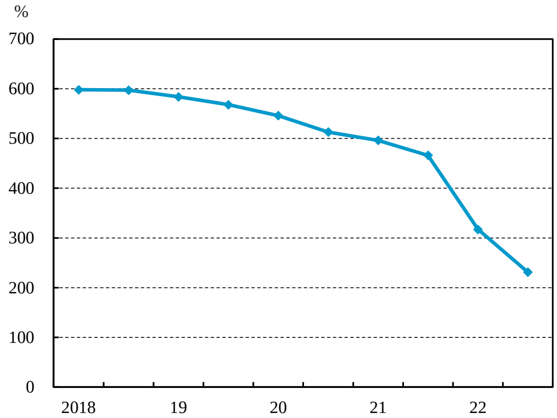



Source: FSC.

***Average RBC ratio and equity to asset ratio both decreased***

In 2022, total capital in non-life insurance companies fell because of the pretax loss. Correspondingly, the average RBC ratio trended downwards to 231.30%[52] at the end of the year from 466.12% a year earlier (Chart 3.43). Among them, five non-life insurance companies were below the statutory minimum of 200%. Furthermore, the average equity to asset ratio dropped to 15.14% from 35.20% at the end of the previous year, with four non-life insurance companies recording ratios below the statutory minimum of 3%.

**Chart 3.43 RBC ratio of non-life insurance companies**




Note: RBC ratio = regulatory capital/risk-based capital.
Source: FSC.

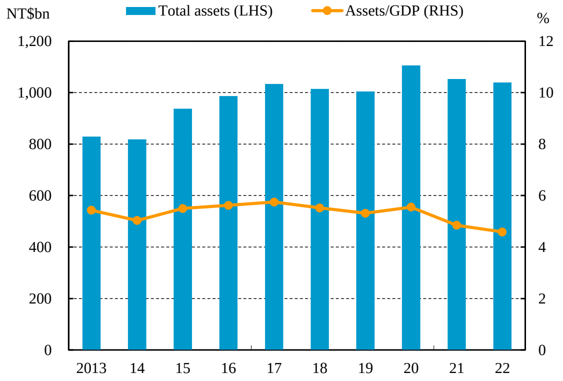
***COVID-19 insurance claim settlements surged in 2022, while the pressure is expected to ease in 2023***

Many non-life insurance companies issued COVID-19 insurance policies in early 2022. Afterwards, as the government relaxed some of the pandemic containment measures, the number of infections surged and, as a result, COVID-related claim settlements increased. Consequently, the total payout of quarantine and vaccine insurance reached NT$211.6 billion

[52] RBC data of the non-life insurance companies is reported on a semiannual basis.

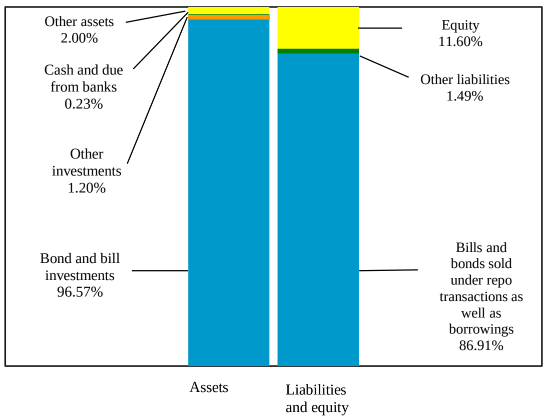
in 2022.[53] Considering that some non-life insurers could not afford large claim settlements, the FSC approved certain insurers to borrow funds to cover these large payments. Additionally, in order to stabilize the insurance market and maintain the operational capabilities of insurance enterprises, the FSC provided several financing-related measures to insurers in September 2022. In the beginning of 2023, as the pandemic eased and COVID-19 insurance policies gradually expired without renewal, the number and amount of related claims decreased gradually and are expected to ease insurers' pressure of claim settlements.

**Chart 3.44 Total assets of bills finance companies**




Sources: CBC and DGBAS.

**Chart 3.45 Asset/liability structure of bills finance companies**




Note: Figures are as of the end of 2022.
Sources: CBC and FSC.

### 3.2.3 Bills finance companies

In 2022, the total assets of bills finance companies decreased, along with a reduction in their guarantee business. However, the concentration of credit secured by real estate remained high, while credit asset quality remained sound. Although the capital adequacy ratio increased due to the reduction in risk-weighted assets, profitability declined significantly. Moreover, liquidity risk and interest rate risk remained high.

#### *Total assets decreased*

The total assets of bills finance companies stood at NT$1,039.6 billion at the end of 2022, a decrease of 1.29% compared to a year earlier, mainly owing to substantial valuation losses on bond investments. The ratio of their total assets to annual GDP dropped continually to 4.59% over the same period (Chart 3.44).

With respect to the asset and liability structure of bills finance companies, bill and bond

53 The claim settlements of quarantine and vaccine insurance were NT$169.3 and NT$42.3 billion, respectively.

investments constituted the largest share of 96.57% of total assets as of the end of 2022. On the liability side, bills and bonds sold under repo transactions as well as borrowings accounted for 86.91% of total assets, while the proportion of equity accounted for 11.60% (Chart 3.45). The asset and liability structure remained roughly unchanged compared to a year earlier.

## Credit risk

### *Guarantee liabilities decreased, but the concentration of credit secured by real estate remained high*

The amount of CP guaranteed by bills finance companies registered NT$548.8 billion at the end of 2022, decreasing by 13.12% year on year. This decline was primarily because the widening valuation losses on financial assets eroded capital. To maintain a satisfactory capital adequacy ratio, bills finance companies reduced their CP guarantee business. As a result, the average ratio of guarantee liabilities to equity decreased to a multiple of 4.24 times, and the ratio for each company remained below the regulatory ceiling of 5.5 times.

At the end of 2022, guarantees granted to the real estate and construction industries and credit secured by real estate rose to 31.45% and 42.05%, respectively, of the total credit of bills finance companies. Meanwhile, the proportion of real estate industry guarantees registered 27.60%, still below the regulatory ceiling of 30%, but the overall concentration of credit secured by real estate remained high. Considering the recent conservative prospects of the domestic real estate market, elevated pressure on the clearance of unsold new residential housing units, and the potential financial health deterioration of some small and medium-sized construction companies, bills finance companies should monitor closely the above-mentioned impacts on the asset quality of mortgage-related credit.

### *Guaranteed advances ratio rose but credit quality remained sound*

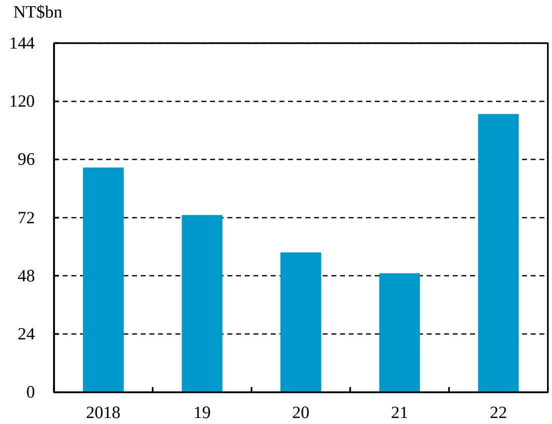
At the end of 2022, the guaranteed advances ratio of bills finance companies was 0.16%, higher than 0.01% a year earlier yet still reflecting sound credit quality. Although the credit loss reserves to guaranteed advances ratio[54] decreased to 8.40 times due to the increase in guaranteed advances, the provision was still sufficient to cover potential credit losses.

[54] Credit loss reserves to guaranteed advances ratio = (provisions + loss reserves to guarantees)/guaranteed advances.

***Investment in non-guaranteed CP issued by the leasing industry expanded continually and its potential credit risk warrants attention***

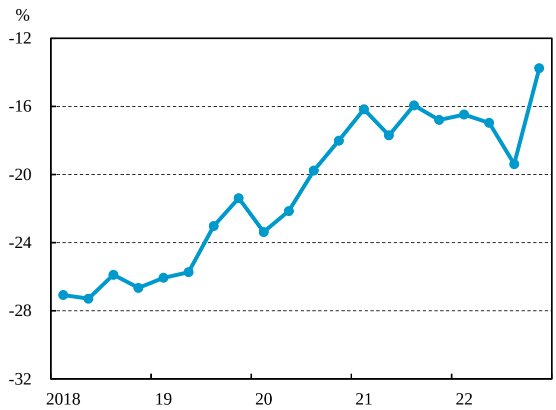
The non-guaranteed CP investment of bills finance companies stood at NT$114.5 billion at the end of 2022, representing a significant increase of 134.41% year on year (Chart 3.46). This increase was primarily because the anticipation of rising interest rates and tight market liquidity impacted the willingness of counterparties to purchase bills and, in turn, hampered the ability of the bills finance companies to offload their underwriting positions. Each company's ratio of non-guaranteed CP investment to equity remained below the self-disciplinary ceiling of 2 times. However, the investment in non-guaranteed CP issued by the leasing industry kept increasing, reaching NT$34.1 billion during the same period. The leasing industry may pose a higher potential credit risk owing to the fact that it tends to rely on short-term sources for funding long-term investments, hence warranting close attention to the impact on the asset quality of bills finance companies.

**Chart 3.46 Outstanding amount of non-guaranteed CP investments of bills finance companies**




Source: CBC.

**Chart 3.47 0-30 day maturity gap ratio of bills finance companies**




Note: 0-30 day maturity gap ratio = net NTD cash flow within 0-30 days/total assets denominated in NTD.
Source: CBC.

## *Liquidity risk remained high*

Bills finance companies still faced a significant maturity mismatch between assets and liabilities. At the end of 2022, more than 80% of their funding sources relied on short-term interbank borrowing and repurchase agreements with financial institutions. Furthermore, more than 90% of their assets were invested in bills and bonds as of the end of the year, 40.83% of which were long-term bonds, reflecting a significant maturity mismatch between assets and liabilities. Nevertheless, bills finance companies' ratio of 0-30 day maturity gap to total NTD-denominated assets shrunk further and registered -13.76% at the end of the year (Chart 3.47), reflecting a declining but still high liquidity risk.

The average ratio of major liabilities[55] to equity increased slightly to 7 times at the end of 2022 because the expansion in bill and bond repo transactions held by bills finance companies resulted in an increase in major liabilities and led to a higher degree of financial leverage. Moreover, the leverage ratios of all bills finance companies stayed below the regulatory ceilings of 10 or 12 times.

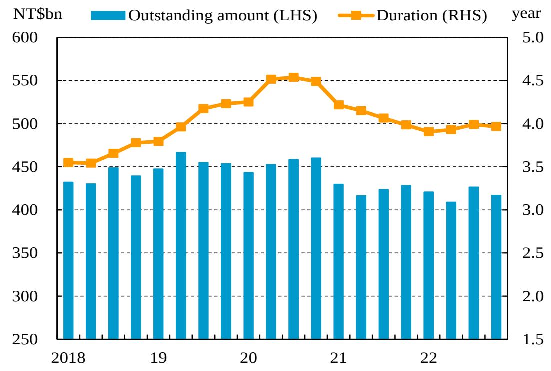
### Interest rate risk of bond investments remained high

In 2022, the outstanding amount of fixed-rate bond investments of bills finance companies decreased by 2.65% to NT$416.9 billion with the average duration shortening to 3.97 years (Chart 3.48). Taiwan government bond yields dropped gradually recently. However, considering the uncertain future trajectory of monetary policy, the global bond market might continue to face correction pressure. The interest rate risk of bills finance companies' bond investments remained high, warranting close attention.

### Pretax income decreased significantly and profitability declined

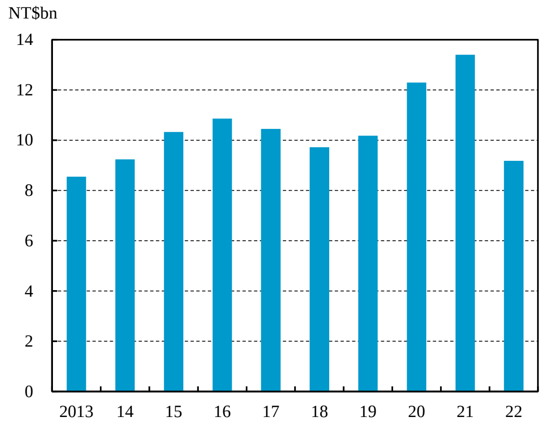
The net income before tax of bills finance companies decreased by 31.54% year on year

**Chart 3.48 Outstanding amount of fixed-rate bond investments and bond duration of bills finance companies**



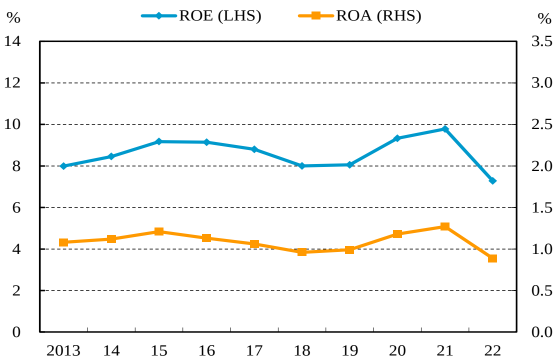

Source: FSC.

**Chart 3.49 Net income before tax of bills finance companies**




Source: CBC.

**Chart 3.50 ROE & ROA of bills finance companies**



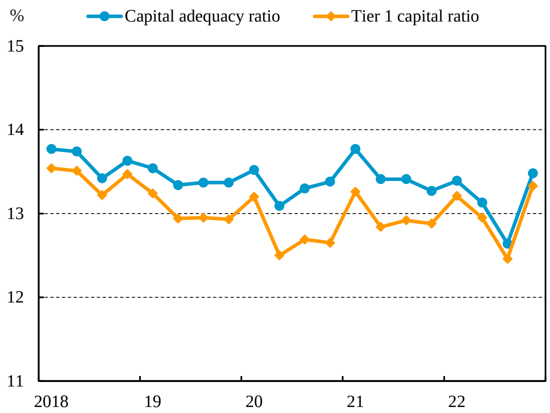

Notes: 1. ROE = net income before tax/average equity.
2. ROA = net income before tax/average assets.
Source: CBC.

[55] Major liabilities include call loans, repo transactions, as well as issuance of corporate bonds and CP.

to NT$9.2 billion in 2022 (Chart 3.49) owing to an increase in interest expenses and a reduction in gains on disposal of financial assets. The average ROE and ROA thus reduced to 7.28% and 0.89% (Chart 3.50), respectively, reflecting declining profitability.

### Average capital adequacy ratio rose

**Chart 3.51 Average capital adequacy ratios of bills finance companies**




Source: CBC.

At the end of 2022, the average Tier 1 capital ratio and the average capital adequacy ratio of bills finance companies rose to 13.33% and 13.48%, respectively (Chart 3.51). Moreover, the capital adequacy ratio remained well above the statutory minimum of 8% for each company.