III. Financial system assessment

3.1 Financial markets

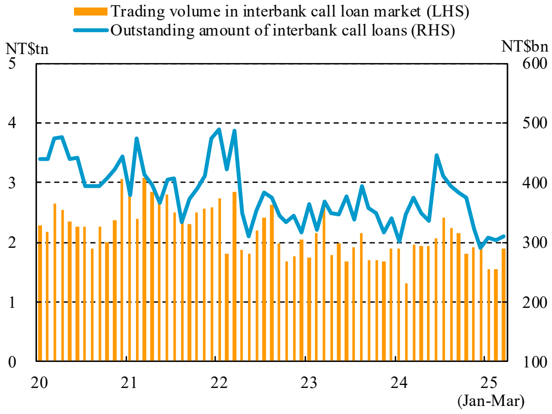
In 2024, both the outstanding amount and trading volume of interbank call loans rebounded, while the market conditions remained stable. Owing to a significant rise in the issuance of CP, the outstanding amount of bill issuance also increased. CP continued to constitute the largest share of the bill trading volume in the secondary market, with the market size steadily expanding, thereby facilitating short-term corporate financing. Meanwhile, the outstanding amount of bond issuance and trading volume in the secondary market continued expanding. Domestic stock indices repeatedly reached record highs and trading was notably active, while the NT dollar showed a moderate depreciation trend in 2024. From the beginning of 2025, driven by uncertainty surrounding US tariff policies and shifting market expectations, equity and FX markets have experienced heightened volatilities. Nevertheless, these markets have begun to stabilize, while the money and bond markets have remained stable.

3.1.1 Money and bond markets

Both the outstanding amount and the trading volume of interbank call loans shifted to an uptrend

In 2024, the average daily outstanding amount of interbank call loans was NT$360.8 billion, an increase of 2.49% year on year, primarily because of banks increasing short-term financing in response to liquidity management needs, which led to a rise in call loan lending.[30] Meanwhile, greater funding demand from bills finance companies also contributed to a

Chart 3.1 Interbank call loan market

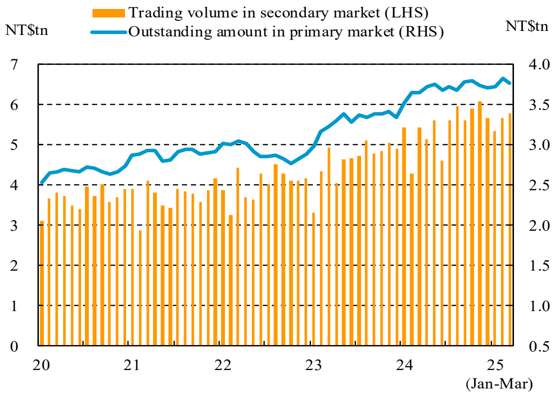


Note: Outstanding amount is the monthly average of daily data.
Source: CBC.

30 In 2024, the average daily outstanding amount of interbank lending from domestic banks increased by 7.72% year on year.

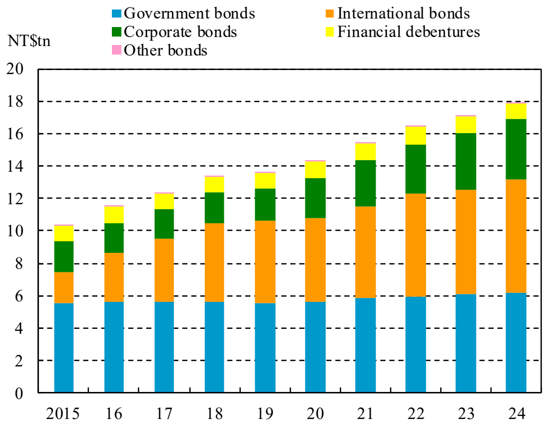
concurrent increase in call loan borrowing.[31] Owing to the heightened market demand for funds, financial institutions raised the amount of funds allocated for liquidity management. Consequently, the trading volume of interbank call loans rose by 2.11% year on year. In 2025 Q1, the average daily outstanding amount of interbank call loans dropped by 9.93% year on year, mainly because bill finance companies reduced their borrowing in the call loan market, while shifting to increased use of short-term repurchase and outright transactions. As a result, the trading volume of interbank call loans also decreased by 3.27% (Chart 3.1).

Chart 3.2 Primary and secondary bill markets



Source: CBC.

Chart 3.3 Bonds outstanding in the primary market



Note: Other bonds include beneficiary securities and foreign bonds.
Source: FSC.

Both the outstanding amount of bill issuance and the bill trading volume in the secondary market expanded year on year

The outstanding amount of bill issuance in the primary market reached NT$3.71 trillion by the end of 2024, showing an increase of NT$365.3 billion or 10.91% year on year. This was mainly driven by higher corporate funding needs, which led to a large increase of NT$271.7 billion in the outstanding amount of CP issuance. Moreover, bank-issued NCDs increased by NT$94.1 billion, while treasury bills remained largely unchanged. In 2025 Q1, the outstanding amount of bill issuance rose by 3.13% year on year as the issuance of CP increased (Chart 3.2).

In 2024, as the outstanding amount of bill issuance expanded, the trading volume in the secondary market rose by 17.94% year on year to NT$65.36 trillion. Among these instruments, CP continued to constitute the largest share of 94.48%, representing a slight decrease from a year earlier. Boosted by seasonal demand ahead of the Lunar New Year, the bill trading volume

[31] In 2024, the average daily outstanding amount of interbank borrowing from bills finance companies increased by 11.97% year on year.

in 2025 Q1 increased significantly by 10.76% compared with the same period of the previous year (Chart 3.2).

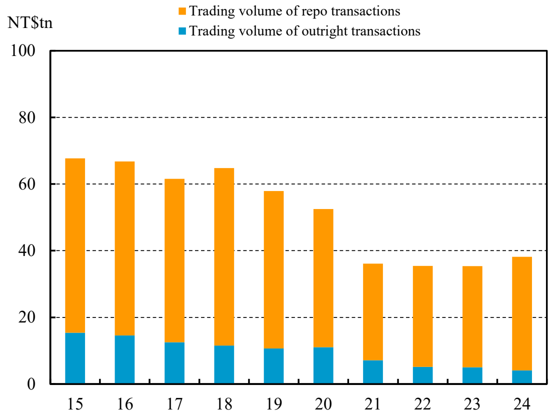
The outstanding amount of bond issuance and the trading volume continued to expand; however, the turnover rate of outright bond transactions remained at a low level

The outstanding amount of bond issuance hit a historical high of NT$17.93 trillion at the end of 2024, an increase of 4.75% over the end of the previous year. Corporate bond issuance contributed to a 7.74% rise, owing to strong funding demands from corporations. Meanwhile, as US interest rates declined, the outstanding amount of international bonds issued by foreign entities increased by 7.70% compared to the end of the previous year. However, the outstanding amount of government bonds [32] increased merely by 1.88% (Chart 3.3).

On the other hand, the trading volume in the secondary bond market reached NT$38.14 trillion in 2024, expanding by 7.71% year on year (Chart 3.4). By trading type, outright transaction volume dropped by 18.27% year on year, while repo transaction volume increased by 11.96% year on year. Nevertheless, the overall trading volume has remained at a lower level in recent years.

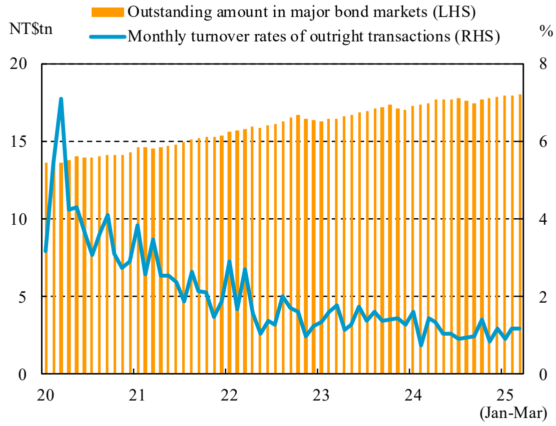
As a result, the average monthly outright turnover rate of major bonds continued on a downward trend, falling to 1.13% in December 2024, and further declining to a record low of

Chart 3.4 Outright and repo transactions in the bond market



Source: CBC.

Chart 3.5 Outstanding amount in major bond markets and monthly turnover rates of outright transactions



Notes: 1. Major bonds include government bonds, corporate bonds, financial bonds, and international bonds.
2. The monthly turnover rate for outright transactions = (total value of outright transactions in the month) / (average outstanding issuance), where the average outstanding issuance = (the outstanding issuance at the end of the current month + the outstanding issuance at the end of the previous month) / 2.

Source: FSC.

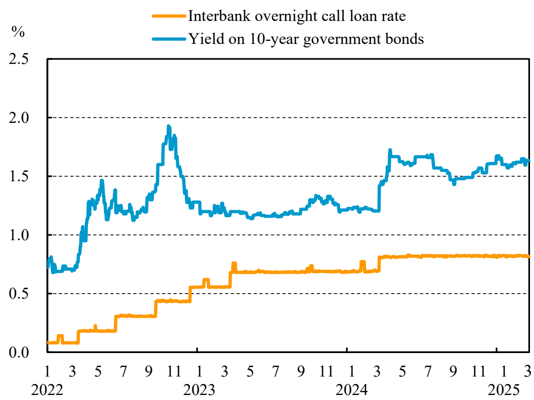
[32] Includes central and local government bonds.

0.90% in January 2025. However, it bounced back to 1.09% in March, though still at a relatively low level (Chart 3.5).

Long-term and short-term market rates increased

In terms of short-term market rates, to curb domestic inflation expectations, the Bank raised the policy interest rates in March 2024. As a result, the interbank overnight call loan rate began to trend upwards and later leveled off. In the second half of 2024, the Bank raised the reserve requirement ratios on NT dollar deposits twice, while foreign investors net sold TWSE stocks and remitted funds outwards. The interbank overnight call loan rate climbed slowly and then fluctuated in a narrow range around 0.820% (Chart 3.6), yet overall market liquidity remained ample.

Chart 3.6 Interbank overnight rate and 10-year government bond yield



Source: Bloomberg.

As for long-term market rates, influenced by the Bank's policy rate hike and the rebound in US government bond yields, domestic 10-year government bond yields rose and reached a two-year high of 1.725% on April 17. Afterwards, following the decline of US government bond yields, domestic 10-year government bond yields gradually trended downwards, hitting a low of 1.430% on September 20 before rebounding (Chart 3.6). In 2025 Q1, domestic 10-year government bond yields reached a high of 1.677% and then trended downwards.

Considering the rising uncertainties surrounding US tariff policies, inflation might be pushed higher and affect market confidence. In addition, factors such as global geopolitical risks and monetary policy divergences among major central banks could lead to heightened market risk aversion in the near future. The volatility of global bond yields will likely intensify, which may affect domestic 10-year government bond yields. Therefore, the interest rate risks of bond investments held by domestic financial institutions are worthy of close attention.

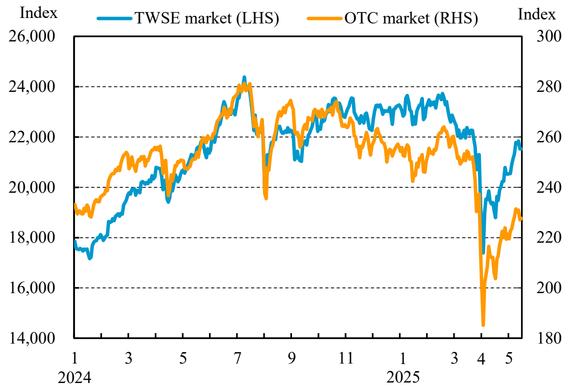
3.1.2 Equity markets

Stock indices repeatedly reached historical highs and trading was notably active in 2024

Stock indices repeatedly reached historical highs

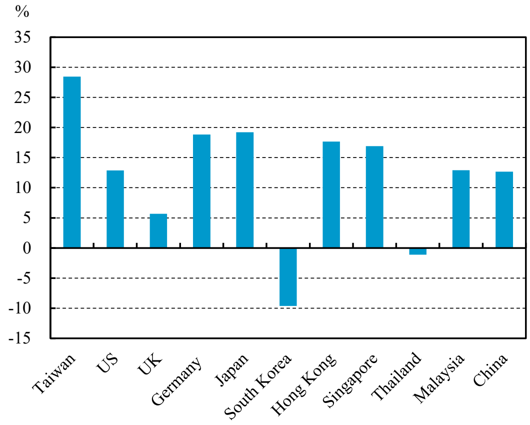
In the first half of 2024, bolstered by favorable factors such as the rallies in international stock markets, continued net buying of TWSE stocks by domestic securities investment trust enterprises, and the popularity of high-dividend equity exchange-traded funds (ETFs), the TAIEX of the TWSE market fluctuated upward, reaching a historical high of 24,390 on July 11. However, owing to a decline in US stock indices and heightened geopolitical tensions in the Middle East, the TAIEX plummeted to a low of 19,831 in August. Subsequently, the TAIEX fluctuated upward to 23,035 at year end (Chart 3.7), posting an increase of 28.47% year on year and surging higher than the major indices in other international stock markets (Chart 3.8). The Taipei Exchange Capitalization Weighted Stock Index (TPEX) of the OTC market closely tracked the movements of the TAIEX during the first three quarters of 2024, though small and mid-cap stocks underperformed in Q4. The TPEX registered 256 at year end and posted an increase of 9.33% year on year.

Chart 3.7 Taiwan's stock market indices



Sources: TWSE and TPEx.

Chart 3.8 Major stock market performance



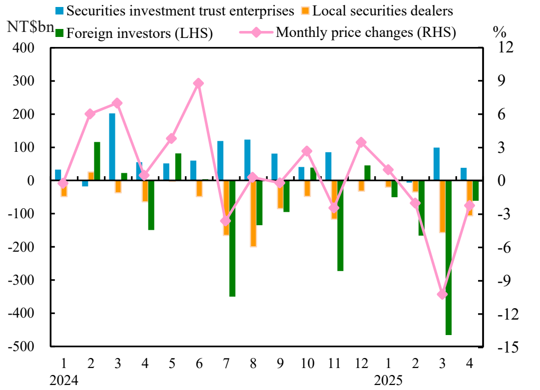
Notes: 1. Changes are figures at the end of 2024 compared to those at the end of 2023.
2. Market performance is based on TWSE Weighted Index for Taiwan, DJIA Index for the US, FTSE-100 Index for the UK, DAX Index for Germany, NK-225 Index for Japan, KOSPI Index for South Korea, Hang Seng Index for Hong Kong, Straits Times Index for Singapore, SET Index for Thailand, Kuala Lumpur Composite Index for Malaysia, and SSE Composite Index for China.

Source: TWSE.

The significant expansion of ETF issuance bolstered the rise in the TAIEX in 2024

In the TWSE market, foreign investors posted net sales of NT$695.1 billion in 2024, mainly driven by profit-taking amid successive record highs in the TAIEX and the depreciation of the NT dollar against the US dollar. Local securities dealers also registered net sales of NT$823.8 billion as they adjusted their shareholdings or took hedging positions. However, as securities investment trust enterprises ramped up their issuance of ETFs, they passively invested in index constituents, resulting in net purchases totaling NT$832.1 billion for the year, which became a major force supporting the TAIEX's uptrend (Chart 3.9).

Chart 3.9 Net buying/selling amount by institutional investors and monthly price changes in the TWSE market

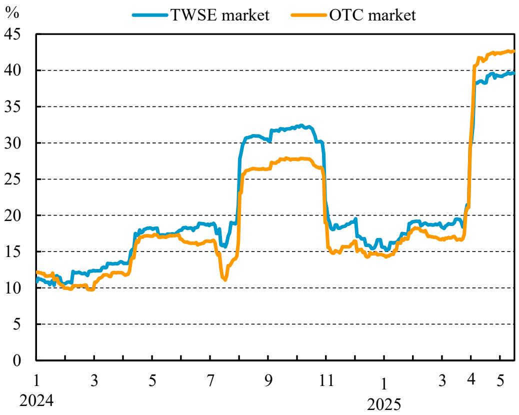


Note: Institutional investors are divided into securities investment trust enterprises, local securities dealers, and foreign investors.
Source: TWSE.

Volatility in the stock markets increased before stabilizing

Impacted by rising uncertainty surrounding the US economy and geopolitical risks in 2024, the volatility in both the TWSE and OTC markets gradually increased, reaching relatively high levels in Q3. Subsequently, it stabilized amid a mix of negative and positive developments, ending the year at 15.23% and 14.25% in the respective markets (Chart 3.10).

Chart 3.10 Stock price volatility in Taiwan's markets



Note: Volatility refers to the annualized standard deviation of 60-day daily index returns.
Sources: TWSE, TPEx, and CBC.

The price-to-earnings (P/E) ratio of the TAIEX rose, reflecting positive market expectations for Taiwan's technology sector

The domestic stock market is dominated by technology stocks, with electronics industry stocks – particularly in semiconductors, electronic components, telecommunications, and information technology services – accounting for over 70% of the TAIEX. The application of AI has fueled strong demand across related supply chains, boosting the earnings of semiconductor and other electronics-related companies in recent years. As a consequence, the P/E ratio of the TAIEX climbed from 10.39 at the end of 2022 to 21.29 at the end of 2024 (Chart 3.11), likely reflecting optimistic investor sentiment toward the future prospects of Taiwan's technology sector. Nevertheless, multiple factors such as underlying fundamentals, industry trends, and domestic and global macroeconomic conditions warrant continued close attention.

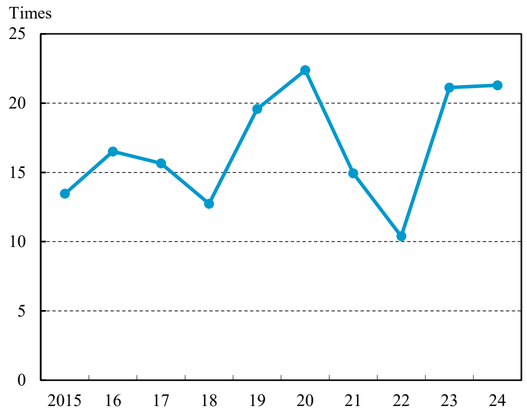
Trading value surged and turnover rates trended upwards

Encouraged by strong interest from resident investors, trading activity in the domestic stock markets was vibrant in 2024. The monthly average trading value in both the TWSE and the OTC markets reached NT$7.69 trillion and NT$1.94 trillion in 2024, respectively, marking increases of 46.10% and 38.02% year on year. As a consequence, the annual turnover rates in terms of trading value rose to 135.40% and 360.49% in the TWSE and the OTC markets (Chart 3.12), respectively, surpassing those in most major international stock markets (Chart 3.13). This indicated that trading in Taiwan's stock markets remained highly active and liquidity remained ample.

Domestic ETF market expanded significantly

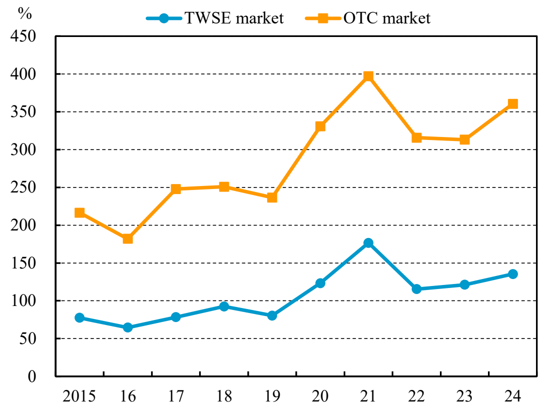
Driven by the strong performance of domestic

Chart 3.11 Price-to-earnings ratio of the TAIEX



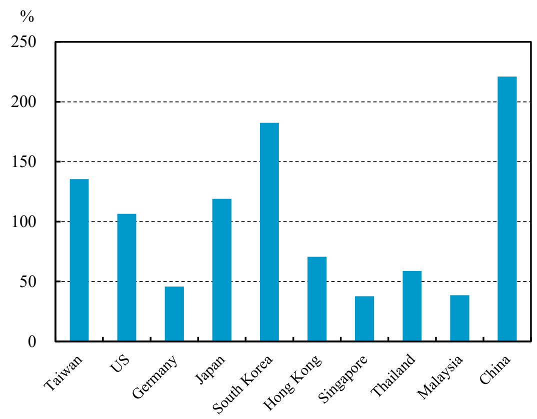
Source: TWSE.

Chart 3.12 Annual turnover rates in Taiwan's stock markets



Sources: TWSE and TPEx.

Chart 3.13 Turnover rates in major stock markets



Note: Figures refer to accumulated turnover rates in 2024.
Source: TWSE.

stock markets and the appeal of high-dividend yields, the size of equity ETFs expanded significantly in 2024. In addition, increased market optimism about interest rate cuts by major central banks around the world contributed to a substantial rise in bond ETFs investing in foreign bonds. The total size of ETFs reached NT$6.4 trillion at the end of 2024, representing a year-on-year increase of 65.11%. The number of ETF funds and total beneficiaries also rose to 260 and 14.37 million, respectively, both hitting historical highs.[33]

In December 2024, the FSC amended relevant regulations to officially allow the issuance of active ETFs and passive multi-asset ETFs, thereby providing investors with more diversified investment options. Nevertheless, considering that ETFs may contribute to stock price co-movements and pose systemic risks, close attention should be paid to market developments and their potential impacts on the financial system (Box 2).

Domestic stock markets have become increasingly volatile amid uncertainty surrounding US tariff policies from the beginning of 2025 onwards

Stock indices experienced sharp volatility and a notable retreat

From January to March 2025, domestic stock markets continued to fluctuate and consolidate. However, following the announcement of the US reciprocal tariff policies on April 2, global stock markets plunged, and the TAIEX and the TPEX also tumbled for several consecutive days. Subsequently, as market sentiment gradually stabilized and foreign investors increased their holdings of domestic stocks, both indices rebounded quickly, closing at 21,526 and 228, respectively, on May 20 (Chart 3.7).

Heavy net selling by foreign investors and local securities dealers triggered steep declines in the stock market

Since the beginning of 2025, mounting uncertainty surrounding US tariff policies has exerted significant funding pressure on the TWSE market. Driven by heightened risk aversion sentiment, foreign investors offloaded and short-sold their holdings of domestic stocks, leading to net sales of NT$743.6 billion by the end of April (Chart 3.9), surpassing the total amount of 2024. Local securities dealers also recorded net sales of NT$318.2 billion. Although securities investment trust enterprises posted net purchases of NT$130.4 billion, the TAIEX continued on a downward trend, suggesting that market confidence remained fragile amid uncertainty

[33] Offshore ETFs, futures ETFs, and leveraged/inverse futures ETFs were not included.

surrounding US tariff policies.

Volatility in the stock markets surged to a multi-year high

The domestic stock markets remained relatively stable in 2025 Q1, while market sentiment deteriorated sharply in April following the announcement of the US reciprocal tariff policies, which pushed up the VIX index and triggered heightened volatility in domestic stock markets. Volatility levels in the TWSE and the OTC markets surged to multi-year highs and remained elevated, registering 39.63% and 42.64%, respectively, on May 20 (Chart 3.10). This reflected sustained caution among market participants amid uncertainty surrounding the Trump administration's policies.

Chart 3.14 NTD/USD exchange rate

Source: CBC.

Domestic stock markets are highly correlated with international stock markets. Given the recent uncertainties arising from the ongoing effects of US tariff policies and escalating geopolitical risks, which may disrupt global economic prospects and international stock market performance, as well as adversely affect domestic stock markets, close attention is warranted.

3.1.3 FX market

The NT dollar appreciated after an initial depreciation against the US dollar, while FX market trading volume increased

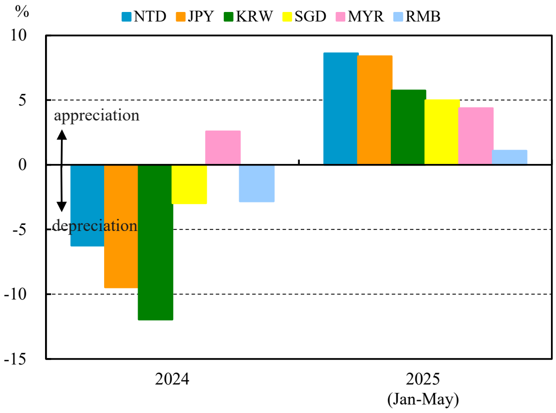
In 2024, most major Asian currencies depreciated against the strong US dollar except for the MYR. The NT dollar exchange rate stood at 32.781 against the US dollar at the end of 2024 (Chart 3.14), depreciating by 6.24% from the end of the previous year. The extent of the NT dollar depreciation was moderate compared to other Asian currencies (Chart 3.15). From January to April 2025, the NT dollar appreciated following a period of depreciation against the US dollar, and remained relatively stable compared to other major currencies. Nevertheless, driven by foreign capital inflows into domestic stock markets and market expectations for NT dollar appreciation, which boosted US dollar supply, the NT dollar appreciated sharply in early May and closed at 30.179 against the US dollar on May 20.

The average daily trading volume in Taiwan's FX market amounted to US$44.6 billion in 2024, marking a 17.90% rise compared to a year earlier, primarily because of an increase in interbank transactions (Chart 3.16). In March 2025, the average daily trading volume amounted to US$48.6 billion, up by 5.68% over the same period of the previous year.

NT dollar exchange rate volatility increased, but remained relatively stable over the long term

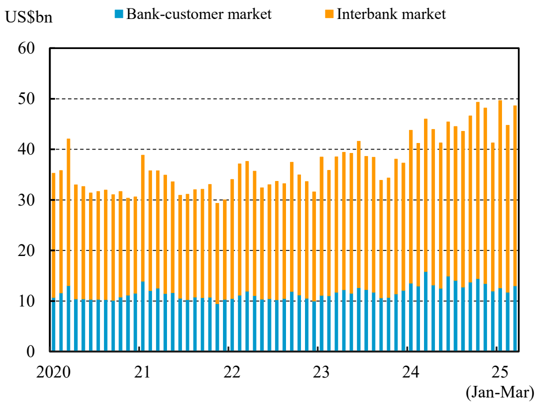
The volatility of the NT dollar exchange rate against the US dollar fluctuated between 2.27% and 5.74% in 2024, with an annual average of 3.97%, which was relatively low compared to those of other major currencies. From January to April 2025, the volatility of the NT dollar exchange rate ranged between 1.92% and 5.73% (Chart 3.17). Driven by foreign capital inflows and market expectations, the volatility of the NT dollar surged in early May. Nevertheless, the average volatility of the NT dollar for the period from January 1 to May 20 was 5.32%, still lower than that of other major currencies, indicating that the NT dollar remained relatively stable over the long term.

Chart 3.15 Exchange rate changes of major Asian currencies against the US dollar



Note: Changes in 2024 are figures at the end of the year compared to those at the end of 2023; changes in the period of Jan-May 2025 are figures on May 20 compared to those at the end of 2024.
Source: CBC.

Chart 3.16 FX market trading volume



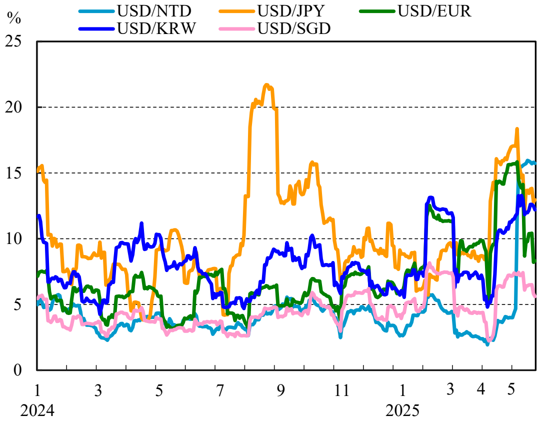
Notes: 1. Trading volume is the monthly average of daily data.
2. The latest data for trading volume are as of March 2025.
Source: CBC.

The nominal and real effective exchange rate indices of the NT dollar fluctuated within a narrow range

In 2024, as foreign investors repatriated funds for profit-taking and dividend distributions, the NEER index of the NT dollar declined to 101.10 at year end, a decrease of 1.89% from 103.05 at the end of 2023. The NEER of the NT dollar fluctuated within a narrow range and remained relatively stable compared to other major Asian currencies. From 2025 onwards, the NT dollar appreciated significantly against the US dollar. The NEER of the NT dollar rose to 105.85 on May 20, registering an increase of 4.70% compared to the end of 2024 (Chart 3.18).

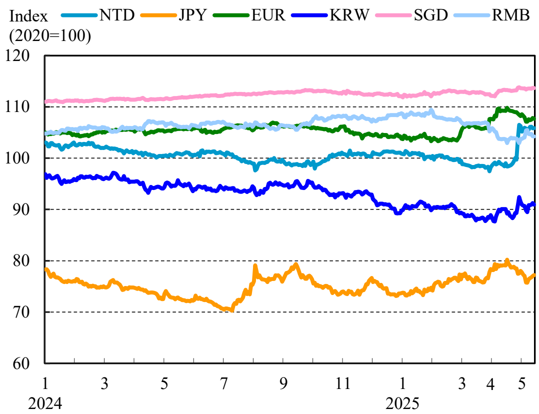
During the same period, the real effective exchange rate (REER) index of the NT dollar also fluctuated within a limited range. It stood at 98.77 in December 2024, a decrease of 0.65% from 99.42 in December 2023. The volatility of the NT dollar's REER remained relatively mild compared to other major Asian currencies. In April 2025, the NT dollar's REER declined to 96.32, a decrease of 2.48% compared to December 2024.

Chart 3.17 Exchange rate volatility of various currencies versus the US dollar



Note: Volatility refers to the annualized standard deviation of 20-day daily returns.
Source: CBC.

Chart 3.18 NT dollar NEER index



Source: BIS.

Box 2
The development and supervisory issues of Taiwan's ETF market

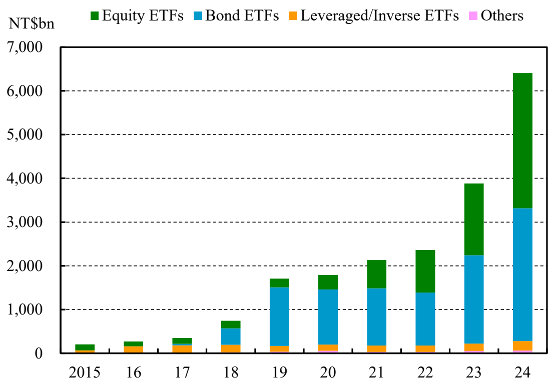
The development of Taiwan's ETF market began more than two decades ago. In recent years, the market expanded rapidly, driven by repeated record highs in the domestic equity markets, the appeal of high dividend yields, and expectations of US policy rate cuts. In particular, high-dividend ETFs saw a surge in fundraising that even led some retail investors to terminate time deposits or take out loans to invest in ETFs. This increasingly drew attention across sectors, including from the regulators. This box outlines the development of Taiwan's ETF market, highlights potential risks to investors and the financial system, and analyzes recent market challenges and regulatory responses, in the hope of providing a useful reference for policy deliberation.

1. ETF market development in Taiwan

1.1 ETFs have grown rapidly since 2018, initially driven by bond ETFs and more recently by equity ETFs

The first ETF listed on the TWSE was the Yuanta/P-shares Taiwan Top 50 ETF issued in June 2003. Following the gradual easing of related regulations, the ETF market began to develop, albeit at a slow pace. In 2018, the market experienced a breakthrough as a deregulation move excluded investments by life insurance companies in NTD-denominated bond ETFs from their overseas investment cap. This policy change attracted significant inflows and fueled rapid growth in bond ETFs. In more recent years, repeated record highs in the domestic stock markets and the rising popularity of high-dividend equity ETFs among investors have led to substantial growth in the equity ETF market (Chart B2.1). Meanwhile, expectations of Fed rate cuts starting from the second half of 2023 further boosted demand for overseas bond ETFs.

Chart B2.1 Types and Sizes of ETFs in Taiwan

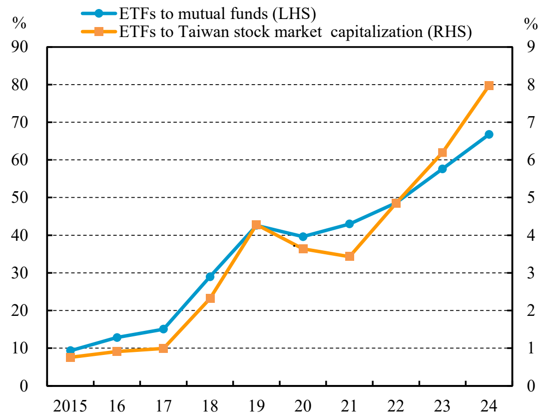


Sources: FSC and SITCA.

As of the end of 2024, the fund size of ETFs reached NT$6.4 trillion, representing a remarkable growth of approximately 32 times compared with that of NT$202.1 billion at the end of 2015. The number of ETFs increased sharply from 34 to 260 over the same period, and that of ETF investors also expanded substantially from 240,000 to 14.37

million, reflecting an increase of 60 times.[1] Since March 2023, the fund size of ETFs has officially surpassed that of regular mutual funds issued by domestic securities investment trust enterprises (SITEs). The share of ETFs in Taiwan stock market capitalization has also continued to rise (Chart B2.2), showing that ETFs have become one of the major investment products in Taiwan's capital market.

Chart B2.2 Comparison of the fund size



Sources: FSC and SITCA.

1.2 Trading value increased, but overall turnover rate was relatively low

The trading value of domestically listed ETFs was NT$6.7 trillion in 2024, representing a huge increase of 4.1 times compared to NT$1.6 trillion in 2015. However, over the past three years, the average annual turnover rate by trading value in the ETF market stood at 106.3%, which was lower than that of 124.0% in TWSE stock trading, reflecting not only the rapid expansion of the ETF market but also the fact that, unlike in the stock market, ETF investors usually prefer a "buy and hold" strategy that resulted in a lower frequency of transactions.

1.3 Domestic equity ETFs showed a high concentration in technology stocks

As of the end of 2024, many domestic equity ETFs tracking broad-market indices or adopting high-dividend strategies exhibited a high allocation to technology-related sectors (e.g., electronics and semiconductors), reflecting a notable industry concentration. For example, the top three ETFs by total assets under management were the Yuanta/P-shares Taiwan Top 50 ETF (0050, NT$436.1 billion), the Cathay MSCI Taiwan ESG Sustainability High Dividend Yield ETF (00878, NT$376.3 billion), and the Yuanta/P-shares Taiwan Dividend Plus ETF (0056, NT$363.8 billion). The abovementioned funds allocated 70.7%, 56.0%, and 61.0% of their assets, respectively, to electronics or semiconductor stocks.[2] The high concentration of these industries in domestic equity ETFs may weaken portfolio diversification, thus warranting close attention.

1.4 The recent regulatory approval of active ETFs and passive multi-asset ETFs has contributed to greater product diversification in the ETF market

To promote the development of the asset management market in Taiwan, provide impetus for asset management business growth, and support the policy objective of establishing Taiwan as an "Asian asset management center," the FSC amended relevant regulations in December 2024 to formally permit the issuance of active ETFs and passive multi-asset ETFs. In early May 2025, the first active ETF in Taiwan, the NEXT FUNDS – Nomura Taiwan SMART Select Active ETF (00980A), was listed. More active ETFs are expected to be introduced into the market in the future. However, investors should be aware that the performance of active ETFs is highly dependent on fund managers' investment capabilities and generally involves higher operational risk compared to passive ETFs. In addition, passive multi-asset ETFs may carry different levels of risk depending on their allocation strategies and equity-bond proportions. Investors should carefully evaluate their risk tolerance and select ETF products that align with their investment objectives and styles, ensuring both portfolio security and performance.

2. Potential risks of ETFs and market challenges in Taiwan

ETFs are widely favored by investors for such advantages as risk diversification and trading convenience. However, they may still involve certain risks. Moreover, the rapid expansion of the ETF market may also pose potential impacts to overall financial stability, which warrants close attention.

2.1 Potential risks to investors

(1) Discount/Premium risk: ETF prices in the secondary market are determined by market supply and demand. The prices may deviate from their net asset value, resulting in premiums or discounts that affect investors' actual returns.

(2) Tracking error risk: Tracking error refers to the difference between the returns of an ETF and those of its underlying index. Common causes of tracking errors include fund expenses, exchange rate differences between the trading currency and the denominated currency, etc.

(3) Liquidation risk: If an ETF is delisted upon regulatory approval, investors who purchased the ETF at a premium may be exposed to potential losses due to fund liquidation.

(4) Liquidity risk: ETF market makers are responsible for providing bid and ask quotes. If they fail to properly fulfill their quoting obligations or cease to perform such obligations, investors may face the risk of being unable to buy or sell ETFs.

2.2 Potential risks to the financial system

(1) Systemic risk: The "basket-trading" feature of ETFs may lead to more synchronized volume and price movements among constituent securities. This can increase the frequency of simultaneous mass buying or selling, thereby weakening the effect of risk diversification and potentially amplifying systemic risk in the financial market.

(2) **Stock price co-movement risk:** During the periods of excessive market optimism or heightened uncertainty, herd behavior may emerge as some investors mimic the behavior of others, leading to concentrated buying or selling, thus exacerbating short-term price volatility.

(3) **Concentration risk:** If the underlying assets are concentrated in a limited number of companies, it may result in excessive correlation among constituent stocks, making the price movements across constituent stocks more aligned and thus reducing the diversification benefits of ETF portfolios.

2.3 Challenges of the ETF market in Taiwan

The recent investment surge in equity ETFs was driven by expectations of Fed rate cuts, domestic stock market rallies and high dividend yields. Meanwhile, repeated record highs in stock markets, combined with aggressive marketing campaigns by SITEs, have triggered a frenzy of buying among investors. Moreover, in order to boost distribution rates to attract investors, some SITEs misused the funds' income equalization reserves or even rebalanced their holdings frequently. Such practices may increase investment costs and erode returns, thereby potentially undermining the long-term interests of investors.

3. Regulatory framework and supervisory enhancements in Taiwan

To safeguard ETF market stability and protect investor interests, the TWSE strengthened product standards and information disclosure requirements for ETFs. The FSC also introduced multiple supervisory measures to promote sound development of Taiwan's ETF market.

3.1. ETF product regulation

Taiwan has not yet enacted dedicated regulations for ETFs. Instead, relevant provisions are dispersed across various regulations governing securities investment trusts, securities exchanges and the self-regulatory rules of the Securities Investment Trust and Consulting Association (SITCA). In addition, the TWSE has imposed eligibility criteria and standards on the components of the underlying indices. These include: (1) the components must be listed on domestic or foreign stock exchanges, (2) the components must be sufficiently diversified, with no single component security exceeding 30% of the index and the cumulative weight of the top five component securities not exceeding 65%,[3] and (3) the components must meet certain liquidity requirements. The TWSE also sets different liquidity standards based on the component characteristics of the index to ensure that ETFs are equipped with reasonable trading and arbitrage mechanisms.

3.2. Reinforcement of index compilation review mechanisms

The FSC required the TWSE and the TPEx to examine past performance when reviewing index compilation, so as to assess whether the constituent securities of an index are likely to be changed frequently. By managing the replacement rate of an index's constituent stocks through retrospective review, it would help to stabilize the investment structure of ETFs.

3.3 Disclosure of dividend sources and distribution orders

The FSC required SITEs to disclose the composition of sources of ETF dividends, so as to enhance market discipline. Furthermore, the distribution order shall be dividends from constituent securities, capital gains, and finally, income equalization reserves. These requirements aim to promote market self-discipline and information transparency, thus preventing investors from being misled.

3.4. Regulation of advertising and marketing activities

The FSC required the SITCA to develop a governance mechanism for advertising collaborations between SITEs and financial influencers and to formulate relevant self-regulatory guidelines. In addition, ETF advertisements are prohibited from using dividend payout rates or distribution amounts as the main headline or the primary promotional message. Moreover, high-dividend ETFs are required to include warning statements such as "no guaranteed income or dividends" to remind investors of ETFs' product nature and associated risks.

3.5. Wide-ranging enhancement of market supervision

The FSC strengthened its oversight of the ETF market through the following measures: (1) Supporting and monitoring SITEs in enhancing their assessment of the concentration and liquidity of constituent securities in the ETFs they issue and the indices they track, in order to keep stock prices and market liquidity from being excessively affected during position building and massive subscription or redemption; (2) Overseeing the TWSE and the TPEx in regular evaluation of ETFs' holdings and in building transaction databases to support stable market operations; (3) Drawing on the *Good Practices Relating to the Implementation of the IOSCO Principles for Exchange Traded Funds – Final Report* published by the International Organization of Securities Commissions (IOSCO) to enhance supervisory measures in the following three aspects, namely product structure, information disclosure, and liquidity provision; (4) underscoring ETFs as a focus in financial examinations, with the findings to serve as a reference for amending relevant regulations and self-regulatory practices.

4. Conclusion

Owing to their strengths in risk diversification, trading convenience, and cost efficiency, ETFs have emerged as an increasingly important tool for asset allocation. In recent years, as the size and the number of participants in Taiwan's ETF market have grown rapidly and product diversity has increased gradually, ETFs have gained significant and undeniable influence on the local financial market. However, rapid market expansion and growing capital concentration may also pose potentially adverse implications for the financial market, such as heightened market volatility, risk contagion, and excessive industry concentration, all of which warrant close attention. In line with its macroprudential supervision duties, the Bank will continue to conduct relevant research and monitor new developments as well as potential risks in Taiwan's ETF market. Additionally, the Bank will, as warranted by changes in the market, share its research findings through the supervisory communication platform in a timely manner, and work jointly with the FSC to safeguard financial stability.

Notes: 1. The number of funds and that of beneficiaries exclude offshore ETFs, futures ETFs, and leveraged/inverse futures ETFs.
2. Data on allocations to electronics and semiconductor stocks were collated from SITE websites as of January 2025.
3. In February 2025, the FSC indicated that if the proposed rule amendments by TWSE are deemed appropriate, the 30% cap on individual securities' weights in ETF underlying indices may be lifted.

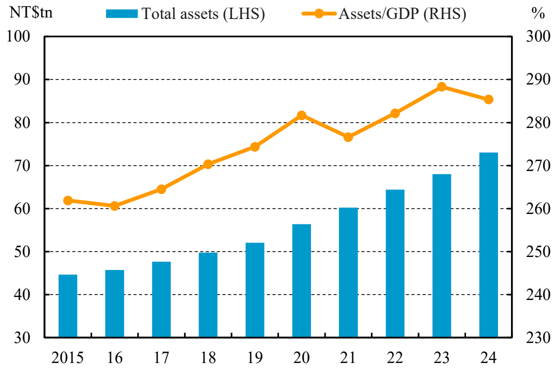
3.2 Financial institutions

In 2024, domestic financial institutions performed well. Domestic banks achieved record-high profits, while maintaining sound asset quality and adequate capital levels. Life insurance companies saw a notable rebound in profits, and their overall capital levels remained satisfactory, yet they still faced elevated market risk. Bills finance companies also experienced stronger profit growth; despite a high liquidity risk, their capital stayed at satisfactory levels. Overall, domestic banks, life insurance companies, and bills finance companies maintained stable and sound operations.

3.2.1 Domestic banks

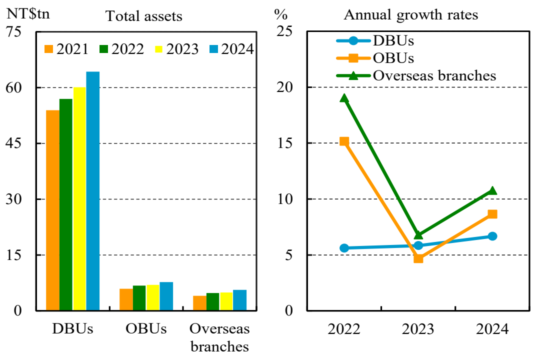
In 2024, the total assets of domestic banks[34] continued to expand, while asset quality improved. The sectoral concentration of corporate loans and the concentration in real estate-secured credit both declined marginally, and exposures to China continued to decline. While credit quality of overseas real estate-secured lending improved moderately, vulnerabilities remained elevated. The estimated value at risk (VaR) associated with market risk exposures increased, albeit with limited impact on capital adequacy ratios. Liquidity in the banking system was ample, and overall liquidity risk remained relatively low. The profits of domestic banks reached a historical high in 2024. Although the average capital adequacy ratio declined slightly, the capacity to absorb losses remained satisfactory.

Chart 3.19 Total assets of domestic banks



Sources:CBC and DGBAS.

Chart 3.20 Total assets of domestic banks by sector



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

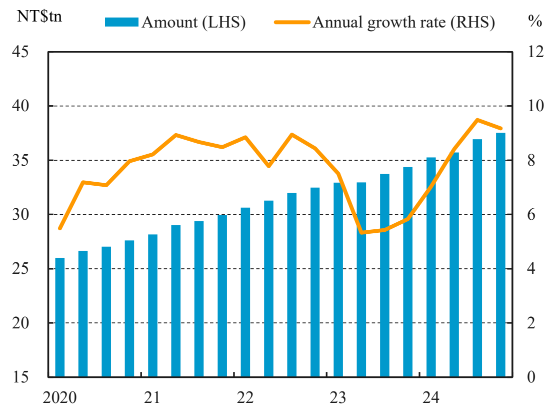
Total assets kept growing

The total assets of domestic banks kept growing in 2024 and reached NT$73.03 trillion at the end of the year, with an annual growth rate of 7.35% compared to 5.66% a

[34] Includes the Agricultural Bank of Taiwan. As of the end of 2024, there were 39 domestic banks in total.

year earlier. Given the relatively larger increase in domestic GDP, the ratio of total assets to annual GDP declined to 285.37% (Chart 3.19). By sector, the annual asset growth rates of offshore banking units (OBUs) and overseas branches rebounded notably, driven by robust growth in both investment and loans. Meanwhile, the asset growth rate of domestic banking units (DBUs) also continued on an upward trend (Chart 3.20).

Chart 3.21 Outstanding loans in domestic banks



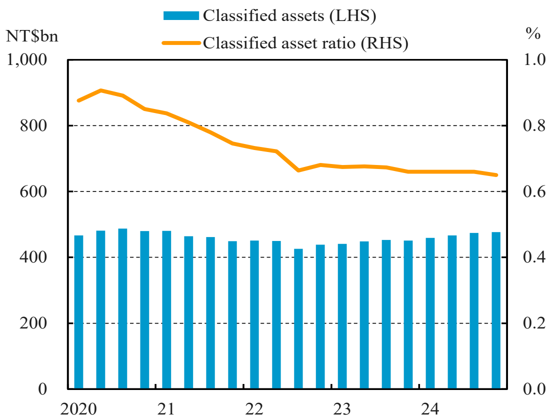
Note: Loans of OBUs and overseas branches are excluded.
Source: CBC.

Credit risk

Customer loan growth accelerated

Customer loans [35] remained the primary source of credit risk for domestic banks. The outstanding customer loans of DBUs stood at NT$37.52 trillion at the end of 2024, accounting for 51.38% of total assets, with the annual growth rate accelerating from 5.83% a year earlier to 9.17% (Chart 3.21). Among these loans, the annual growth rate of household borrowing rose steadily from 7.03% a year earlier to 11.95%, driven by sustained demand for housing loans. The annual growth rate of corporate loans also increased from 5.61% a year earlier to 6.57%, reflecting stronger corporate funding demand amid an improvement in the domestic economy. Moreover, the annual growth rate of government loans rebounded from -5.91% in 2023 to 3.06% as the government stepped up borrowing to support higher public expenditure.

Chart 3.22 Classified assets of domestic banks



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

Asset quality remained sound

At the end of 2024, the outstanding classified assets [36] of domestic banks amounted to

[35] The term "customer loans" refers to discounting, overdrafts, other loans, and import bill advances, but excludes export bill purchases, collections, and interbank call loans.

[36] 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.

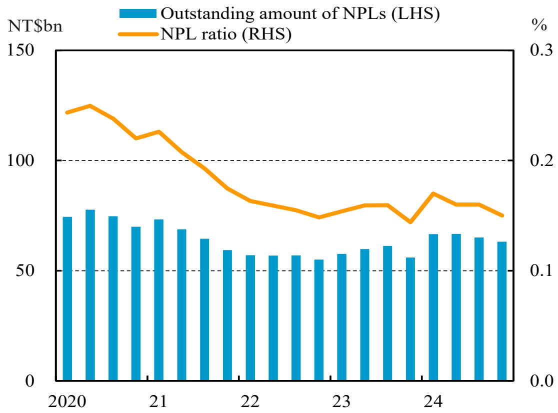
NT$476.4 billion, reflecting a 5.65% increase from a year earlier. Nevertheless, the average classified asset ratio edged down by 0.01 pps to 0.65% (Chart 3.22). Although the amount of the expected losses of classified assets[37] increased by NT$1.8 billion year-on-year to NT$52.3 billion, they only accounted for 8.31% of allowances for doubtful accounts and loss provisions, indicating sufficient provisions to cover expected losses without eroding equity.

The outstanding NPLs of domestic banks registered NT$63.1 billion at the end of 2024, increasing by 12.76% from the end of the previous year. The average NPL ratio also rose slightly from 0.14% to 0.15% over the same period (Chart 3.23). Furthermore, with total provisions showing a smaller increase, both the loan coverage ratio and the NPL coverage ratio dropped to 1.36% and 919.15%, respectively, at the end of 2024 (Chart 3.24). Nonetheless, the overall capacity of domestic banks to cover potential loan losses remained adequate.

The share of real estate-secured credit declined

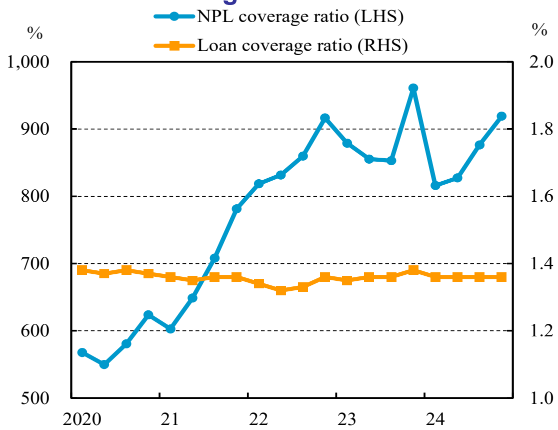
At the end of 2024, real estate-secured credit granted by domestic banks amounted to NT$25.61 trillion, accounting for 57.93% of total credit.[38] The ratio decreased marginally by 0.06 pps from the previous year, indicating a slight reduction in concentration (Chart

Chart 3.23 NPLs of domestic banks



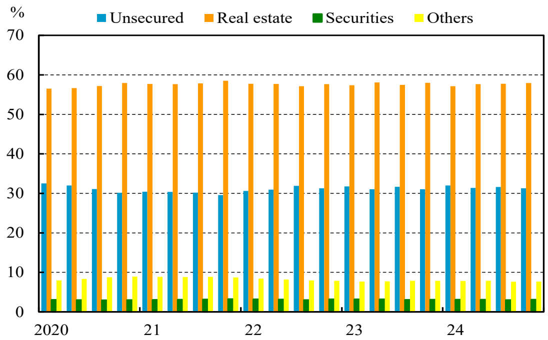
Note: Excludes interbank loans.
Source: CBC.

Chart 3.24 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.

Chart 3.25 Credit by type of collateral in domestic banks

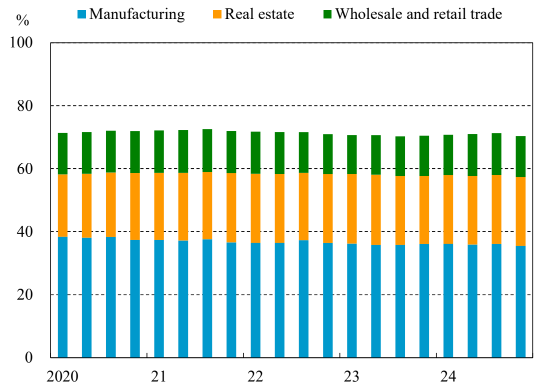


Source: CBC.

37 Such loss refers to losses from loans, acceptances, guarantees, credit cards, and factoring without recourse.
38 The term "credit" herein includes loans, guarantee payments receivable, and acceptances receivable.

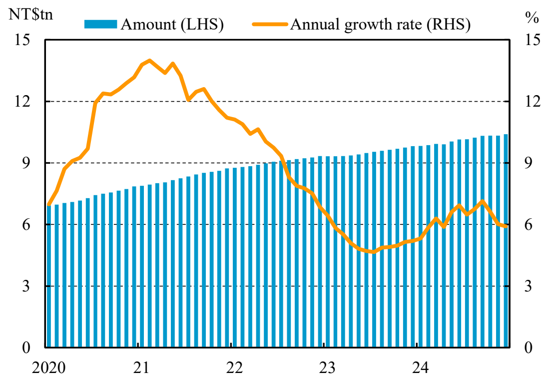
3.25). In the second half of 2024, with the Bank tightening selective credit control measures and banks adopting stricter loan approval processes, housing market transaction volumes declined, and housing price increases moderated. Given that lingering uncertainties over domestic and external economic and financial conditions could dampen homebuying sentiment, and considering the ongoing pressure from inventory overhang of unsold newly-built housing units, future developments in the real estate market should be closely monitored for their potential impact on banks' credit quality.

Chart 3.26 Shares of corporate loans of the three largest industries



Notes: 1. Industry share = loans to industry / total corporate loans outstanding.
2. Exposures of OBUs and overseas branches were excluded.
Source: CBC.

Chart 3.27 Outstanding SME loans in domestic banks



Source: CBC.

Credit concentration in corporate loans slightly decreased

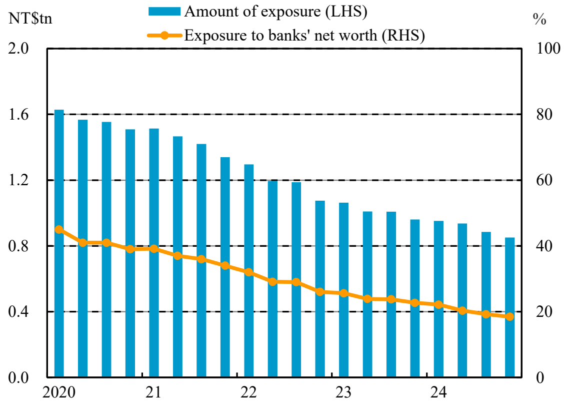
Corporate loans granted by the DBUs of domestic banks (excluding OBUs and overseas branches) stood at NT$16.18 trillion at the end of 2024, with the largest three industries being manufacturing (NT$5.75 trillion), real estate (NT$3.53 trillion), and wholesale and retail trade (NT$2.11 trillion). Combined, these three industries accounted for 70.38% of corporate loans, slightly down from 70.52% in the previous year (Chart 3.26), indicating that credit concentration in corporate loans decreased modestly. Within manufacturing,[39] which was the largest corporate-lending sector, loans to the electronics industry made up the largest share at 33.02% with an amount of NT$1.90 trillion at the end of 2024, expanding slightly from a share of 32.36% in the previous year.

Regarding credit extended to small and medium-sized enterprises (SMEs), the outstanding balance of SME loans granted by domestic banks grew by NT$580.8 billion year on year, reaching NT$10.40 trillion at the end of 2024, with a faster annual growth rate of 5.91% (Chart

[39] 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.

3.27). The share of SME loans in total corporate loans declined slightly from 64.69% at the end of the previous year to 64.29%. In addition, the outstanding balance of SME loans guaranteed by the Small and Medium Enterprise Credit Guarantee Fund (SMEG) rose by 19.20% year on year to NT$1.37 trillion at the end of 2024, mainly driven by banks' lending under the government's post-pandemic revitalization loan programs and low-carbon smart loan schemes.

Chart 3.28 Exposures of domestic banks to China



Source: FSC.

Credit quality of overseas CRE showed a slight improvement, but vulnerabilities remained elevated

In the first half of 2024, the credit quality of US and European CRE loans extended by domestic banks deteriorated, driven by weakened demand owing to the post-pandemic shift to remote work, higher borrowing costs, and a sharp decline in office building prices. Although there was a slight improvement in the second half of the year, vulnerabilities remained high. Nonetheless, as the above US and European CRE exposures accounted for less than 0.5% of total loans of domestic banks, the associated risk was deemed manageable.

Considering that vulnerabilities associated with the global CRE sector remain high, several international organizations and foreign regulatory authorities, such as the IMF, the Fed and the Financial Stability Oversight Council, have recently urged that countries should strengthen the monitoring and management of risks associated with CRE loans.[40] Therefore, domestic banks should also take note and closely monitor developments in the credit quality of overseas CRE exposures.

Exposures to China continued to decline, but potential risks increased

At the end of 2024, the exposures of domestic banks to China amounted to NT$0.85 trillion, a decrease of 11.38% from the previous year driven primarily by a 12.47% reduction in credit extended. The above exposures as a percentage of net worth decreased to 18% (Chart 3.28), hitting a new record low and remaining well below the statutory ceiling of 100%.

Given the ongoing adjustment in China's property market, subdued domestic demand, and a shrinking labor force, short-term economic growth in China remains constrained. In addition,

[40] Please refer to IMF (2024), *Global Financial Stability Report*, October; Fed (2024), *Financial Stability Report*, November; FSOC (2024), *Annual Report*, December.

the new US administration's policies have accelerated the decoupling of US industries from China, with further higher tariffs and tighter technology restrictions. These developments may heighten economic and financial risks in China. Accordingly, domestic banks should continue to closely monitor the potential impact on the credit quality of their exposures to China.

Market risk

Estimated VaR for market risk exposures increased

At the end of 2024, among the market risk exposures of domestic banks, net positions in interest rate-sensitive instruments were the largest, followed by net FX positions, while net equity positions were the smallest. Based on the Bank's VaR model,[41] the estimated total VaR for market risk exposures of domestic banks stood at NT$433 billion at the end of 2024, increasing by NT$74.3 billion or 20.71% compared to a year earlier (Table 3.1). Among the components, the interest rate VaR rose by 20.04% year on year owing to higher net positions in debt securities and heightened volatility in short-term US and Taiwanese government bonds. The equities VaR increased by 22.56% as banks significantly expanded their net positions in equity securities. The FX VaR surged by 104.17% compared to the end of the previous year, driven by heightened

Table 3.1 Market risks in domestic banks

Unit: NT$bn

Type of risk	Item	End-Dec. 2023	End-Dec. 2024	Changes	
				Amount	pps
Foreign exchange	Net position	178.5	176.8	-1.7	-0.95
	VaR	2.4	4.9	2.5	104.17
	VaR/net position (%)	1.34	2.77		1.43
Interest rate	Net position	8,723.9	8,924.0	200.1	2.29
	VaR	339.9	408.0	68.1	20.04
	VaR/net position (%)	3.90	4.57		0.67
Equities	Net position	91.9	115.4	23.5	25.57
	VaR	16.4	20.1	3.7	22.56
	VaR/net position (%)	17.85	17.42		-0.43
Total VaR		358.7	433.0	74.3	20.71

Source: CBC.

41 The Bank's market risk model applies a dynamic Nelson-Siegel term structure model and a multivariate first-order vector autoregressive model (VAR(1)) for interest rate risk, a random walk model for exchange rate risk, and an AR(1)-EGARCH(1,1) model for equity price risk. See CBC (2016), Box 2, *Financial Stability Report (Issue 10)* for details. The model primarily measures net trading book positions affected by market price fluctuations. In addition to assuming a normal distribution, it also supports alternative distributional assumptions including the t-distribution and SGED, providing users with greater flexibility for risk assessment.

volatility in the NT dollar exchange rate against the US dollar (Table 3.1).

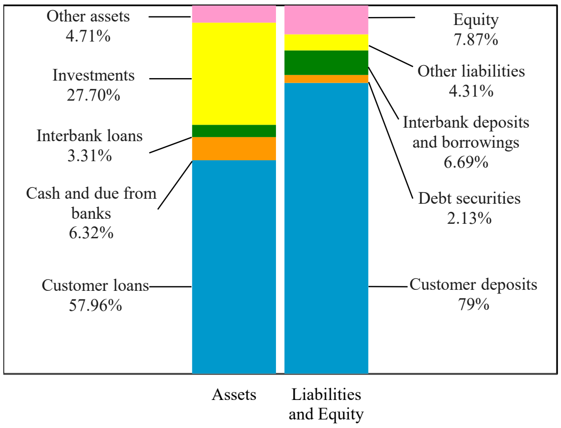
The impact of market risk on capital adequacy ratios was limited

According to the estimation mentioned above, the total VaR would lead to a decrease of 1.44 pps[42] in the average capital adequacy ratio of domestic banks, causing the ratio to drop from 15.03% to 13.59%. Nevertheless, it would still remain above the statutory minimum requirement of 10.5%. Considering that policy uncertainties stemming from a series of tariff hikes and other measures proposed by the Trump administration have amplified financial market volatility, coupled with persistent global geopolitical tensions that may further intensify market turbulence and elevate market risk, related developments warrant close attention.

Liquidity risk

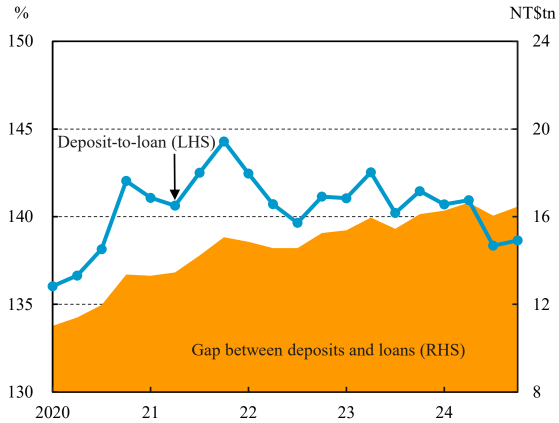
Liquidity in the banking system remained ample

Chart 3.29 Asset/liability structure of domestic banks



Notes: 1. Figures are as of end-December 2024.
2. Equity includes loss provisions. Interbank deposits include deposits with the CBC.
Source: CBC.

Chart 3.30 Deposit-to-loan ratio of domestic banks



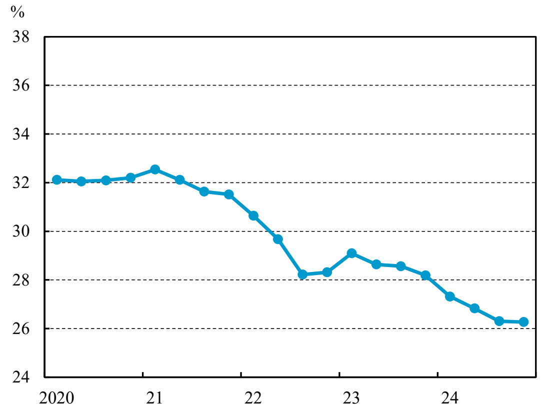
Source: CBC.

The asset and liability structure of domestic banks remained largely unchanged in 2024. In terms of the sources of funds, customer deposits, which tend to be relatively stable, still accounted for the largest share with 79% of the total, followed by equity at 7.87%. As for the uses of funds, customer loans constituted the largest portion at 57.96%, followed by securities investments at 27.70% (Chart 3.29).

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.

At the end of 2024, loan growth outpaced deposit growth, resulting in a decline in the average deposit-to-loan ratio of domestic banks to 138.65%, lower than that at the end of the previous year. The funding surplus (i.e., the amount by which deposits exceed loans) was NT$16.46 trillion (Chart 3.30). The overall liquidity position of domestic banks remained abundant.

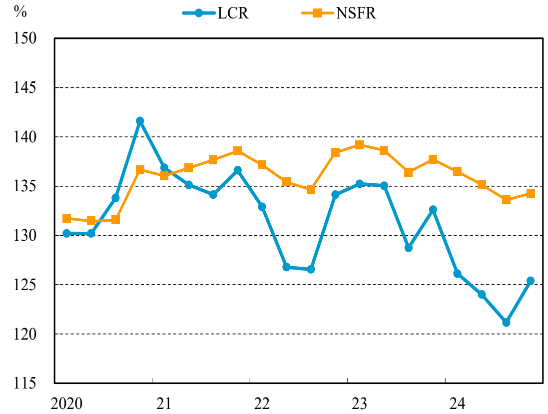
Chart 3.31 Liquid reserve ratio of domestic banks



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

Overall liquidity risk remained relatively low

Chart 3.32 LCR and NSFR of domestic banks



Source: CBC.

The average NT dollar liquid reserve ratio of domestic banks remained well above the statutory minimum standard of 10% throughout 2024, registering 26.27% in December (Chart 3.31), a decrease of 1.92 pps compared to the same period of the previous year, while the ratios of the individual banks each exceeded 15%. At the end of 2024, the average liquidity coverage ratio (LCR) of domestic banks declined to 125.38% from 132.60% at the end of the previous year (Chart 3.32) mainly because significant increases in unsecured wholesale deposits and other deposits led to higher cash outflows. Meanwhile, the average net stable funding ratio (NSFR) of domestic banks fell from 137.71% at the end of the previous year to 134.28% (Chart 3.32), primarily driven by a substantial rise in claims on non-financial institutions with maturities exceeding one year. Nonetheless, as all banks maintained their NSFRs well above the statutory minimum standard,[43] the overall liquidity risk of domestic banks was relatively low.

[43] According to the *Standards Implementing the Net Stable Funding Ratio of Banks*, the minimum standard for banks is 100%.

Profitability

Profits in 2024 hit new historical highs

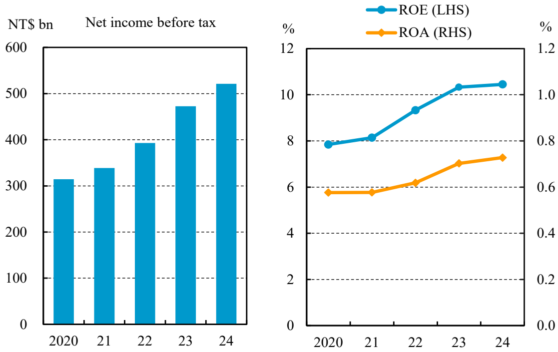
Benefiting from increases in net gains from valuations and in disposals of financial assets, along with a significant rise in net fee income, the net income before tax of domestic banks increased by 10.31% over the previous year to NT$521.3 billion, marking a new historical high. The average ROE and ROA also went up to 10.45% and 0.73%, respectively (Chart 3.33).

In 2024, four small banks posted operating losses. They nonetheless met the statutory minimum capital adequacy requirement, so the impact on the overall financial system was limited. All the other banks remained profitable, with the individual banks' ROE and ROA exhibiting a mixed performance. The number of banks with an ROE of 10% or higher remained unchanged at 16. Meanwhile, six banks recorded ROAs above the international benchmark of 1%, up from five banks in the previous year (Chart 3.34).

Factors that might affect future profitability

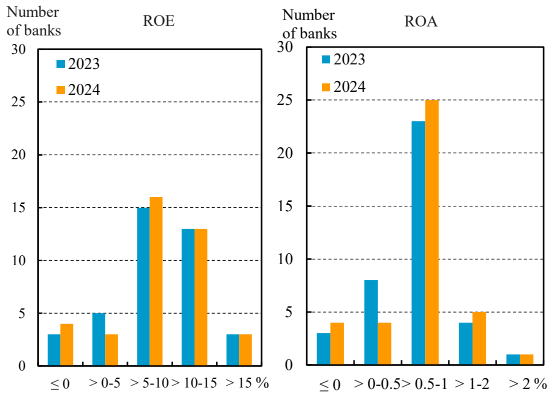
As preferential deposit schemes launched by some banks significantly pushed up deposit rates, the average interest rate spread between deposits and loans of domestic banks narrowed from 1.39% at the end of the previous year to 1.36% at the end of 2024 (Chart 3.35). This could dampen future profitability. Other

Chart 3.33 Net income before tax of domestic banks



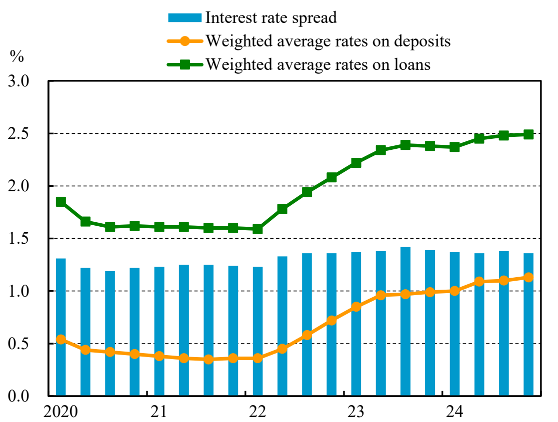
Notes: 1. ROE = net income before tax/average equity.
2. ROA = net income before tax/average assets.
Source: CBC.

Chart 3.34 Domestic banks classified by ROE and ROA



Source: CBC.

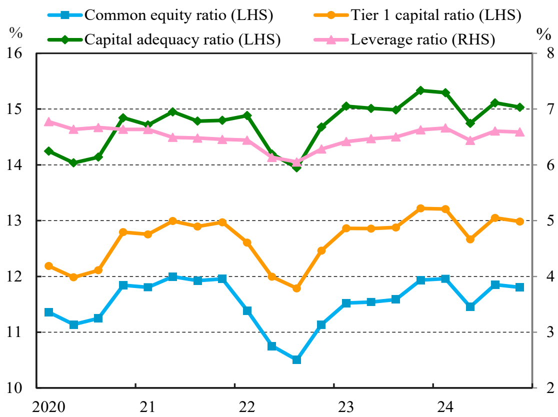
Chart 3.35 Interest rate spread of domestic banks



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.

factors that may weigh on profitability include: (1) US tariff policies, which may directly or indirectly undermine the repayment capacity of corporate and household sectors, thereby impacting banks' asset quality and profitability; and (2) mounting global geopolitical risks and high uncertainty surrounding US tariff policies may significantly raise financial market volatility, which could in turn adversely affect the valuation and realized gains of banks' equity and bond investments, ultimately constraining the growth of future investment income.

Chart 3.36 Capital ratios and leverage ratios of domestic banks

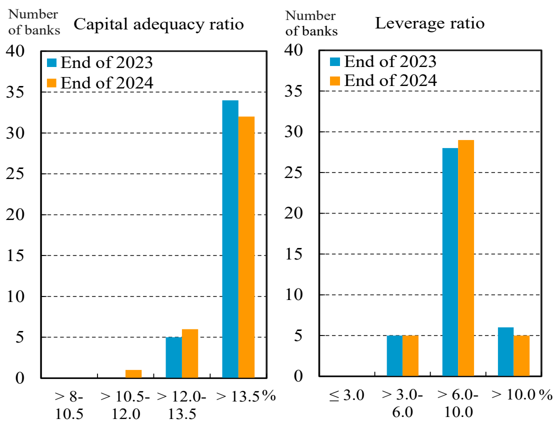


Notes: 1. Common equity ratio = common equity Tier 1 capital/risk-weighted assets.
2. Tier 1 capital ratio = Tier 1 capital/risk-weighted assets.
3. Capital adequacy ratio = regulatory capital/risk-weighted assets.
4. Leverage ratio = Tier 1 capital/total exposure.
Source: CBC.

Capital adequacy

Capital ratios slightly decreased but still showed satisfactory adequacy

Chart 3.37 Capital ratios and leverage ratios of domestic banks



Source: CBC.

In 2024, benefiting from accumulated earnings and a decrease in valuation losses on financial assets, the regulatory capital of domestic banks rose compared to the previous year. However, the expansion in loans led to a greater increase in risk-weighted assets. As a result, the average common equity ratio, Tier 1 capital ratio, and capital adequacy ratio declined to 11.81%, 12.98%, and 15.03%, respectively, at the end of 2024 (Chart 3.36), all slightly lower compared to the end of the previous year.

Among the components of regulatory capital, common equity Tier 1 (CET1) capital accounted for 78.53%. The high proportion 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 6.59% at the end of 2024 (Chart 3.36), down slightly from 6.63% a year earlier but still well above the statutory standard of 3%, indicating that financial leverage remained at a sound level.

All domestic banks had capital ratios and leverage ratios above the statutory minimum

At the end of 2024, the capital ratios of six domestic systemically important banks (D-SIBs) and non-D-SIBs were all above the statutory minimum standards or the relevant capital buffer requirements set by the FSC in 2024.[44] The leverage ratios of all domestic banks also exceeded the statutory minimum standard of 3% (Chart 3.37).

Table 3.2 Systemic risk indicators for the banking system

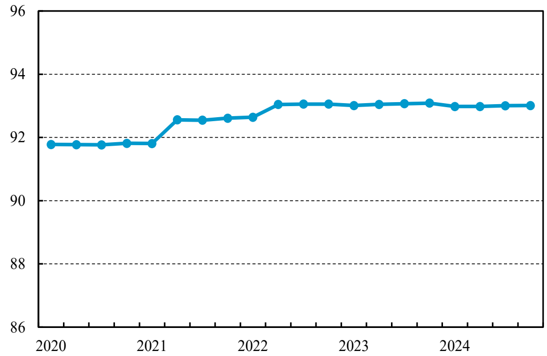
Banking System	Standard & Poor's		Fitch	
	BICRA		BSI/MPI	
	2024/2	2025/2	2023/7	2024/9
Singapore	2	2	aa/2	aa/1
Hong Kong	2	2	a/2	a/2
Japan	3	3	a/3	a/2
South Korea	3	3	a/2	a/2
Taiwan	**4**	**4**	**bbb/2**	**bbb/1**
Malaysia	4	4	bbb/1	bbb/1
Philippines	5	5	bb/1	bb/1
China	6	6	bbb/1	bbb/1
Thailand	7	7	bbb/1	bbb/1
Indonesia	6	6	bb/1	bb/1

Sources: Standard & Poor's and Fitch Ratings.

Credit ratings

Average credit rating level improved

Chart 3.38 Credit rating index of domestic banks



Sources: Taiwan Ratings and Fitch Ratings, index compiled by the CBC.

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)[45] 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. Meanwhile, Fitch Ratings upgraded Taiwan's banking system's rating from bbb/2 to bbb/1 in its Banking System Indicators/Macro-Prudential Indicator (BSI/MPI),[46] citing a projected small decline in the credit-to-GDP ratio of Taiwan's banking system in 2024[47] that could reduce overall vulnerabilities in the macro environment (Table 3.2).

[44] 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).

[45] 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.

[46] 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 (strongest), aa, a, bbb, bb, b, ccc, cc, c to f (fail). The MPI indicates the vulnerability of the macro environment on a scale from 1 (lowest vulnerability), 2, 2* to 3 (highest vulnerability).

[47] See Fitch Ratings (2024), "Macro-Prudential Risk Monitor," September.

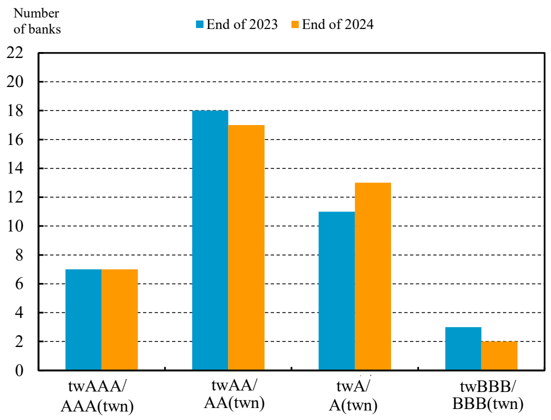
In addition, the weighted average credit rating index[48] was broadly the same as that at the end of the previous year (Chart 3.38). Overall, the credit rating level remained steady.

Rating outlooks for most domestic banks remained stable or positive

As of the end of 2024, most 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 3.39).[49] In terms of rating outlooks, except for two banks with a "rating watch – developing" status, those of the rest remained stable or positive.

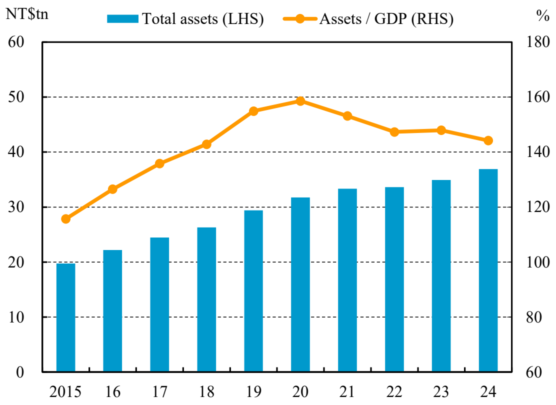
Taiwan Ratings projected that in 2025, Taiwan's banking industry would experience steady growth in both net interest income and fee income, and the NPL ratio would remain at a low level. Furthermore, the banks' sound capital levels would support their resilience against potential economic shocks.[50]

Chart 3.39 Number of domestic banks classified by credit ratings



Sources: Taiwan Ratings and Fitch Ratings.

Chart 3.40 Total assets of life insurance companies



Sources: TIGF and DGBAS.

3.2.2 Life insurance companies

In 2024, the total assets of life insurance companies continued to grow. The average equity to asset ratio improved, and overall credit ratings remained stable. Their profits significantly increased and foreign investment positions continued to expand, but FX risk, interest rate risk, and equity risk all increased. In addition, premium income returned to positive growth, but the net cash outflow for the whole year widened, warranting continued attention to future developments of cash flows.

[48] 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.

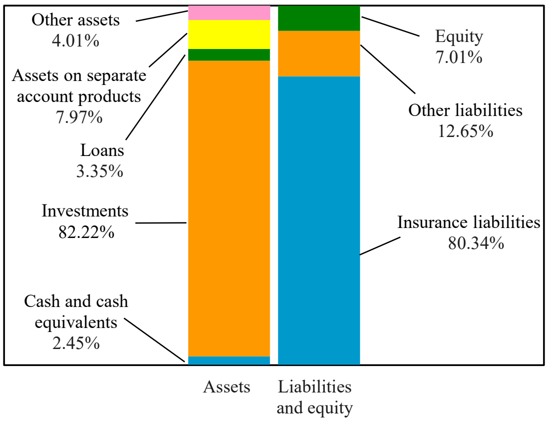
[49] Since one bank was downgraded from twAA- to twA+, and the other bank's credit rating changed from twBBB+ to A-(twn) as of switching the rating agency, the number of domestic banks with credit ratings of twAA/AA(twn) decreased by one, twA/A(twn) increased by two, and twBBB/BBB(twn) decreased by one as of the end of 2024.

[50] Press release by Taiwan Ratings on December 17, 2024.

Assets kept growing

The total assets of life insurance companies reached NT$36.90 trillion at the end of 2024, equivalent to 144.18% of annual GDP (Chart 3.40). The annual growth rate of total assets increased to 5.72% from 3.81% a year earlier, indicating sustained asset growth. The market structure of the life insurance industry remained roughly unchanged at the end of 2024, as the top three companies in terms of assets held a combined market share of 54.64%.

Chart 3.41 Asset/liability structure of life insurance companies

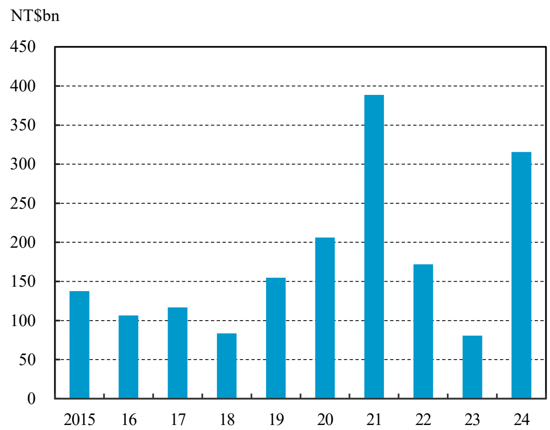


Note: Figures are as of the end of 2024.
Source: TIGF.

Investment positions slightly decreased

In terms of the use of funds of life insurance companies as of the end of 2024, investments continued to take up the primary share of total assets, but the share declined slightly to 82.22%.[51] As for the sources of funds, insurance liabilities accounted for the largest share, comprising 80.34%. Meanwhile, the share of equity increased to 7.01% mainly owing to significant profit growth and the stabilization of the domestic stock market (Chart 3.41).

Chart 3.42 Net income before tax of life insurance companies



Source: TIGF.

Pretax income rebounded substantially in 2024

Benefiting from the growth in net investment income, life insurance companies posted a pre-tax net income of NT$315.5 billion in 2024, a considerable year-on-year increase of 291.24% from NT$80.6 billion a year earlier (Chart 3.42). Their average ROE and ROA were 13.06%

[51] Foreign investments and domestic portfolio investments (including investments in insurance-related enterprises) made up 62.40% and 16.87% of total assets, respectively.

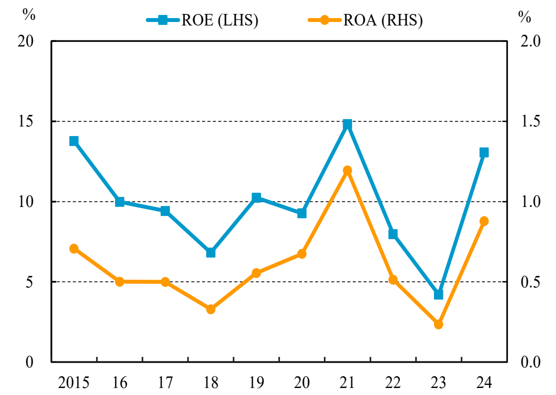
and 0.88%, respectively, much higher than the 4.20% and 0.24% registered a year earlier (Chart 3.43).

Average RBC ratio and equity to asset ratio both increased

At the end of 2024, the average RBC ratio rose to 331.95% from 298.09% a year earlier, mainly driven by capital injections through the issuance of long-term subordinated bonds and sustained profitability (Chart 3.44).[52] Among life insurers, one life insurance company saw its ratio fall below the statutory minimum of 200% (Chart 3.45).

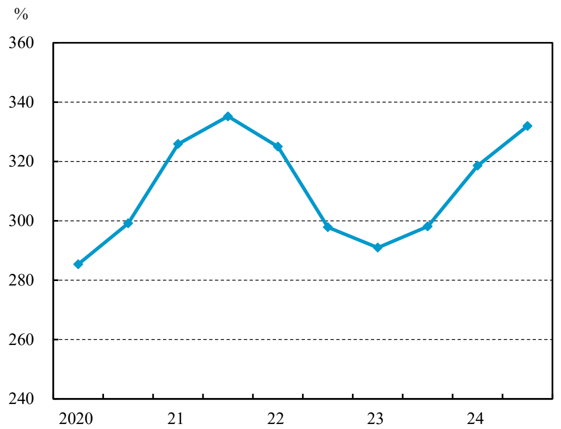
Furthermore, benefiting from higher retained earnings owing to increased profits, the average equity to asset ratio rebounded to 7.62% at the end of 2024, slightly higher than the 7.12% registered a year earlier (Chart 3.46). However, one life insurance company's ratio was still below the statutory minimum of 3%.

Chart 3.43 ROE & ROA of life insurance companies



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

Chart 3.44 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: TIGF.

Overall credit ratings remained stable

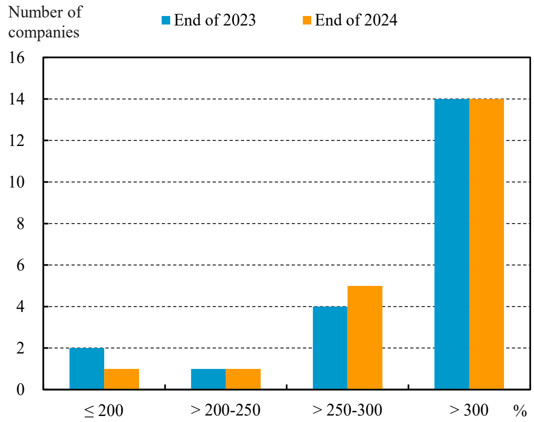
Among the 16 life insurance companies rated by credit rating agencies in 2024, one company was upgraded by Taiwan Ratings to twAA+ due to improved capital adequacy and profitability, while another one was downgraded to twA+ as a result of persistently weak operating performance. The credit ratings for the remaining companies were unchanged. At the year-end, with the exception of one company rated twA-, all the other life insurance companies maintained credit ratings above twA or its equivalent. Among them, the top three companies in terms of assets all retained twAA or twAA+ ratings, representing a strong capacity to meet their financial commitments. As for rating prospects, one company was assigned with a negative outlook due to weak operating performance. Two

[52] Life insurance companies are required to report their capital adequacy ratio data to the regulatory authority every six months.

other companies were placed on CreditWatch Developing and CreditWatch Negative, respectively, due to uncertainties related to a possible merger between their parent companies. The remaining companies were assigned with stable outlooks.

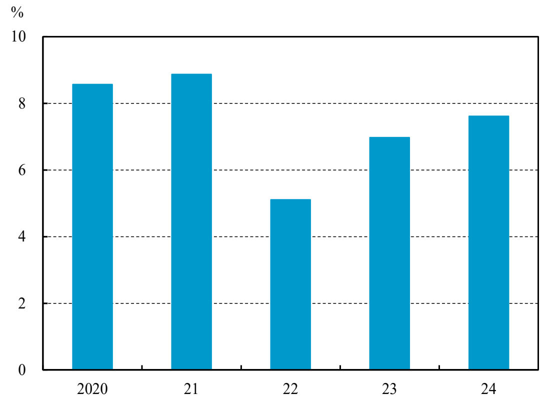
Taiwan Ratings indicated [53] that the profitability of life insurers is expected to maintain steady growth in 2025, ahead of the implementation of the new-generation solvency regime. However, FX risk and market uncertainties remain key influencing factors and warrant continued monitoring.

Chart 3.45 Number of life insurance companies classified by RBC ratios



Source: TIGF.

Chart 3.46 Equity to asset ratios of life insurance companies



Note: For assets, the assets of investment-linked insurance products in separate accounts are excluded.
Source: TIGF.

Amid recent sharp fluctuations in financial markets, foreign investment positions faced higher market risk

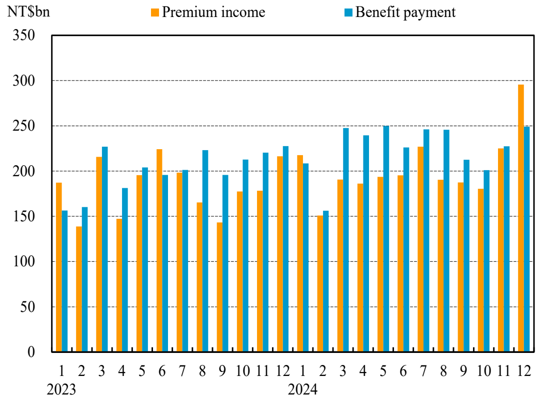
Foreign investment positions of life insurance companies grew continuously and reached NT$23.03 trillion at the end of 2024. Securities investments constituted the largest share, of which about 90% went to bills and bonds and 10% to equities. Domestic securities investments also continued to grow, amounting to NT$6.40 trillion, of which approximately 70% was invested in bonds and 30% in stocks. In April 2025, the announcement of reciprocal tariff policies by the US triggered a sharp downturn in global stock markets and substantial volatility in US Treasury yields. Although financial markets temporarily stabilized following the postponement of the tariff implementation, uncertainties remained elevated. While most bond holdings by life insurers are classified as held-to-maturity, the positions of financial assets measured at fair value remain substantial and are vulnerable to fluctuations in financial markets, resulting in higher risks in related stock investment and interest rate exposure.

Furthermore, foreign investment positions of life insurance companies were primarily

[53] Taiwan Ratings (2024), "2025 Taiwan Credit Outlook," December.

denominated in US dollars. In order to mitigate the impacts of exchange rate fluctuations, life insurance companies actively employed derivative financial instruments for FX hedging, basket currency hedging, as well as the accumulation of FX valuation reserves. To enhance the flexibility of hedging strategies and strengthen capital adequacy, the FSC amended and promulgated the *Directions for the Appropriation of Foreign Exchange Valuation Reserves by Life Insurance Enterprises* (new approach) in September 2024, raising the rates of charge and offset to valuation reserves. As of the end of December 2024, four life insurers had applied for and received approval to adopt the new approach. However, the NT dollar has experienced increased volatility against the US dollar since May 2025, resulting in heightened FX risk for unhedged positions. Continued close monitoring of the potential impact on life insurers is warranted.

Chart 3.47 Premium income and benefit payment of life insurance companies



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

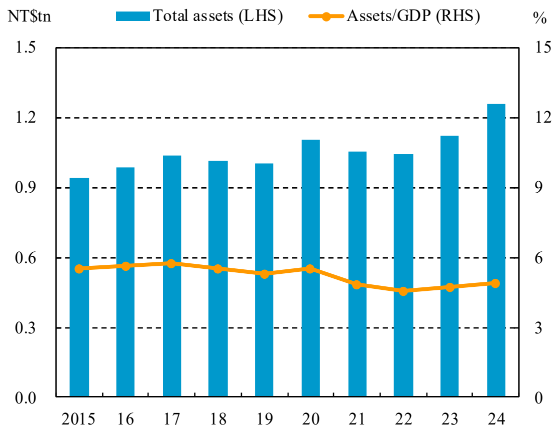
Close attention should be paid to future changes in cash flows

As the US dollar appreciated, there was a surge in policy surrenders in USD-denominated insurance policies. As a result, monthly premium income during the first three quarters of 2024 was mostly lower than benefit payment (Chart 3.47), resulting in a continued widening of net cash outflow. However, in the fourth quarter, net cash flow turned positive and amounted to NT$23.4 billion, supported by a rebound in the sales of investment-linked and interest-sensitive insurance policies. Nevertheless, the total net cash outflow for the year still reached NT$269.6 billion, higher than the NT$217.5 billion recorded in the previous year. At the end of 2024, life insurance companies held NT$903.8 billion in cash and cash equivalents, which was sufficient to cover the cash outflows. That said, the recent sharp appreciation of the NT dollar may exert additional pressure on their cash flows. The FSC has strengthened its monitoring of cash flows from the operating, investing, and financing activities of life insurers. Furthermore, it will adjust regulatory measures as needed in response to market and policy changes to ensure market stability and protect the interests of policyholders.

3.2.3 Bills finance companies

In 2024, the total assets of bills finance companies expanded, along with an increase in their guarantee balances. Meanwhile, there was a higher concentration of credit secured by real estate. Nevertheless, the quality of credit assets remained satisfactory. The capital adequacy ratio trended downwards due to a greater increase in risk-weighted assets. While liquidity risk and interest rate risk were still high, profitability improved.

Chart 3.48 Total assets of bills finance companies

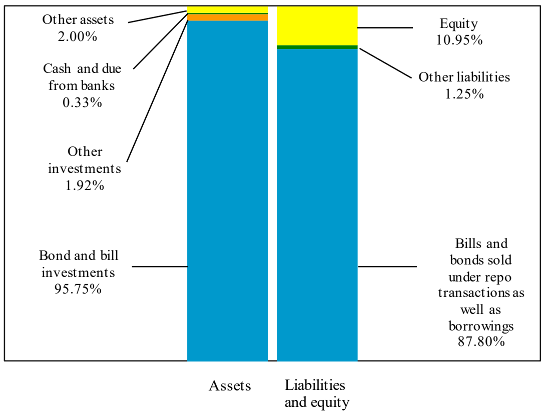


Sources: CBC and DGBAS.

Total assets increased

The total assets of bills finance companies stood at NT$1.26 trillion at the end of 2024, an increase of 11.96% from a year earlier, mainly owing to greater investments in corporate bonds and CP. The ratio of their total assets to annual GDP rose further to 4.90% over the same period (Chart 3.48).

Chart 3.49 Asset/liability structure of bills finance companies



Note: Figures are as of the end of 2024.
Sources: CBC and FSC.

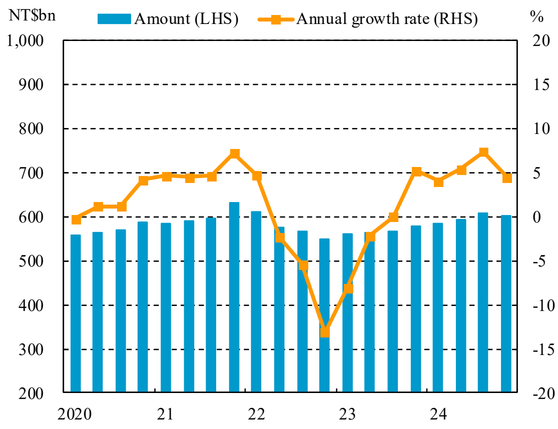
In terms of the asset and liability structure of bills finance companies, bill and bond investments constituted the largest share, at 95.75% of total assets as of the end of 2024. On the liability side, bills and bonds sold under short-term repo transactions as well as borrowings accounted for 87.80% of total liabilities, while the proportion of equity declined to 10.95% (Chart 3.49). The asset and liability structure remained roughly unchanged compared to a year earlier.

Credit risk

Guarantee liabilities increased, and the concentration of real estate-secured credit rose

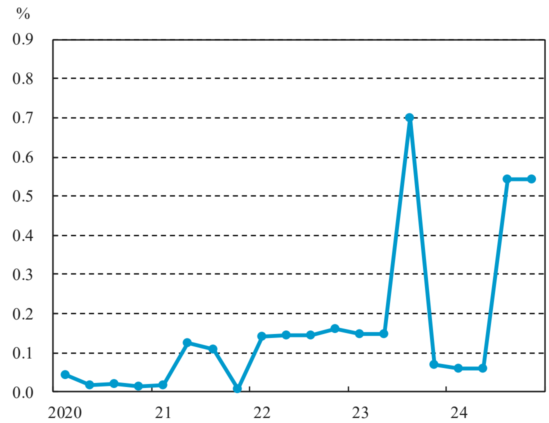
The amount of CP guaranteed by bills finance companies registered NT$603.9 billion at the end of 2024, increasing by 4.53% year on year (Chart 3.50). This was because of stronger willingness to issue CP driven by a rebound in corporate investment. However, owing to a greater increase in equity, the average ratio of guarantee liabilities to equity declined to a multiple of 4.70 times, and the ratio for each company remained below the regulatory ceiling of 5 or 5.5 times.

Chart 3.50 Outstanding CP guaranteed by bills finance companies



Source: CBC.

Chart 3.51 Guaranteed advances ratio of bills finance companies



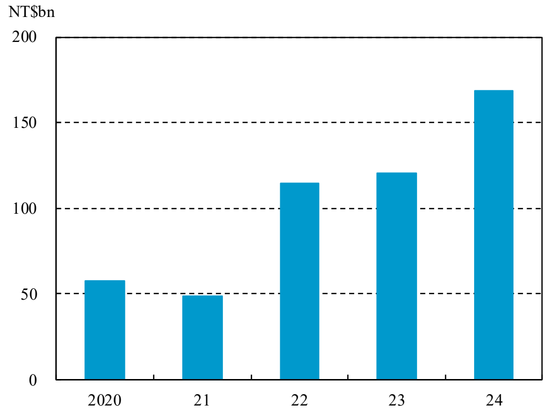
Note: Guaranteed advances ratio = overdue guarantee advances/(overdue guarantee advances + guarantees).
Source: CBC.

At the end of 2024, guarantees granted to the real estate and construction industries increased to 31.02% of the total credit of bills finance companies. Among these, the proportion of guarantees to the real estate industry regulated by the FSC expanded to 26.67%, still below the regulatory ceiling of 30%. In addition, the share of credit secured by real estate also increased to 41.36%. Considering a recent slowdown in domestic real estate market transactions, still-high housing prices, and ongoing inventory overhang pressures from unsold newly built residential housing units, bills finance companies should monitor closely the potential impacts of these factors on the asset quality of their mortgage-related credit.

Guaranteed advances ratio rose, while credit quality remained sound

At the end of 2024, the guaranteed advances ratio of bills finance companies substantially rose to 0.54% (Chart 3.51), mainly owing to an increase in guaranteed advances triggered by defaults from certain syndicated loan borrowers. Nonetheless, the overall credit quality remained sound. The ratio of credit loss reserves to guaranteed advances[54] dropped to 2.39 times because of a greater increase in the amount of guaranteed advances, but the reserves remained sufficient to cover potential credit losses.

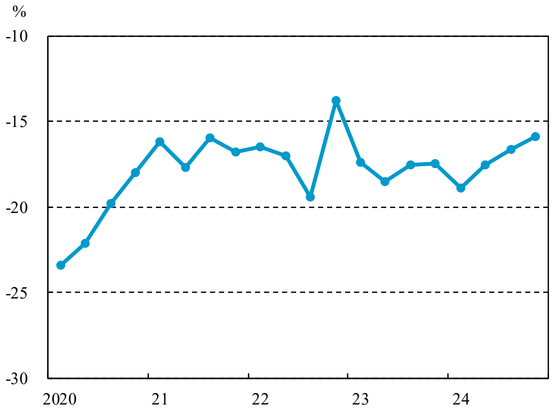
Chart 3.52 Outstanding amount of non-guaranteed CP investments of bills finance companies



Source: CBC.

Investment in non-guaranteed CP issued by the securities industry reached a historical high, and its potential credit risk warrants attention

Chart 3.53 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.

The non-guaranteed CP investment of bills finance companies stood at NT$168.7 billion at the end of 2024, representing an increase of 39.80% year on year (Chart 3.52). This was because bills finance companies increased their holdings of non-guaranteed CP to obtain wider yield spreads between long-term bond investments and short-term reverse repo transactions amid rising interest rates in the primary market. Each company's ratio of non-guaranteed CP investment to equity remained below the ceiling of 2 times. The investment in non-guaranteed CP issued by the securities industry surged from NT$17.2 billion at the end of the previous year to a record high of NT$55.6 billion. This was mainly due to the fact that securities firms actively issued non-guaranteed CP (CP2) to meet their customers' financing needs while expanding securities financing business and investment positions amid the booming stock market in recent years. The securities industry accounted for the biggest share, at 32.82%, of the issuers' total non-guaranteed CP investments, followed by the leasing industry with non-guaranteed CP investments reaching NT$40.3 billion.

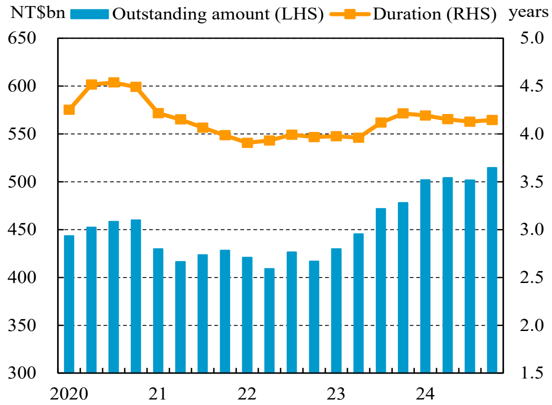
[54] Credit loss reserves to guaranteed advances ratio = (provisions + loss reserves to guarantees)/guaranteed advances.

Considering that the securities and leasing industries could pose higher potential credit risks as they tend to rely on short-term sources for funding long-term investments, such impacts on the asset quality of bills finance companies warrant close attention.

Liquidity risk remained high

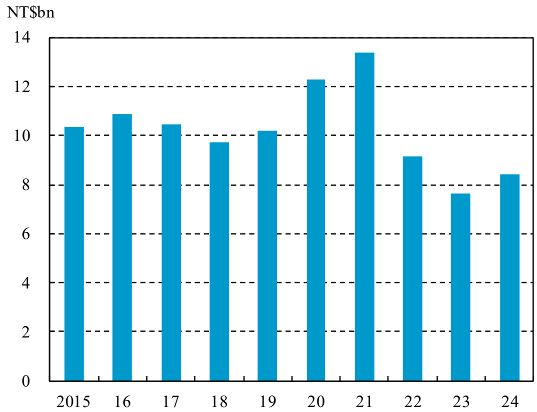
As of the end of 2024, more than 80% of funding for bills finance companies came from short-term interbank borrowing and repurchase agreements with financial institutions, while more than 90% of their assets were invested in bills and bonds, 42.24% of which were long-term bonds. Given the above structure, there continued to be a maturity mismatch between assets and liabilities. Nevertheless, the average ratio of the 0-30 day maturity gap to total NTD-denominated assets trended down to -15.88% at the end of the year (Chart 3.53), reflecting a declining but still high liquidity risk.

Chart 3.54 Outstanding amount of fixed-rate bond investments and bond duration of bills finance companies



Source: FSC.

Chart 3.55 Net income before tax of bills finance companies



Source: CBC.

Moreover, the average ratio of major liabilities[55] to equity rose to 8.55 times at the end of 2024 because the expansion in bill and bond repo transactions resulted in an increase in major liabilities and led to a higher degree of overall financial leverage. However, 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 2024, the outstanding amount of fixed-rate bond investments of bills finance companies increased by 7.70% to NT$514.8 billion with the average duration shortened to 4.15 years (Chart 3.54). Given a myriad of uncertainties surrounding the global economic outlook, the

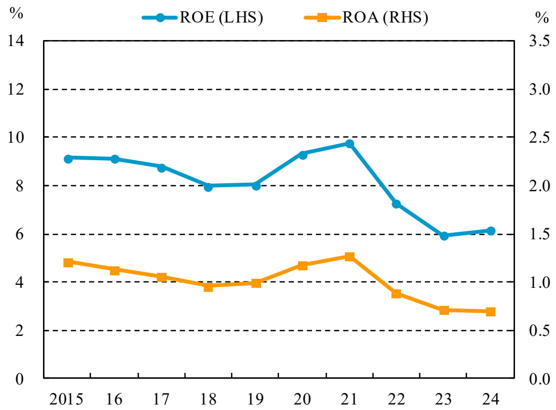
[55] Major liabilities include call loans, repo transactions, as well as issuance of corporate bonds and CP.

divergence in major central banks' monetary policies could widen, further exacerbating financial market volatility. Therefore, the interest rate risk of bond investments warrants close attention.

Profitability rebounded

The net income before tax of bills finance companies increased by 10.31% year on year to NT$8.4 billion in 2024 (Chart 3.55). This was due to increases in gains from the disposal of debt instruments and net interest income. Thus, the average ROE rose to 6.16%, while the average ROA decreased to 0.70% because of a greater increase in assets (Chart 3.56).

Chart 3.56 ROE & ROA of bills finance companies

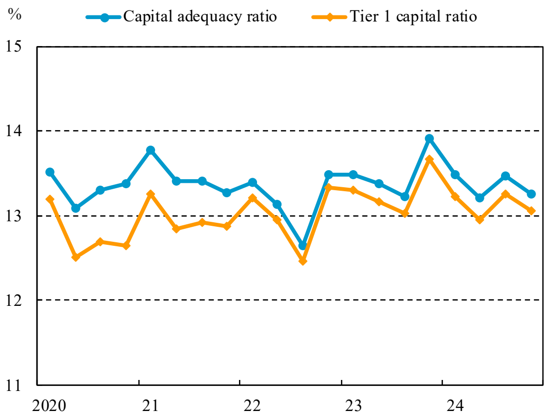


Notes: 1. ROE = net income before tax/average equity.
2. ROA = net income before tax/average assets.
Source: CBC.

Average capital adequacy ratio declined

At the end of 2024, the average Tier 1 capital ratio and capital adequacy ratio declined to 13.05% and 13.26%, respectively (Chart 3.57), mainly because of a significant increase in risk-weighted assets resulting from the expansion of CP guarantee business. Notwithstanding, the capital adequacy ratio stayed well above the statutory minimum of 8% for each company.

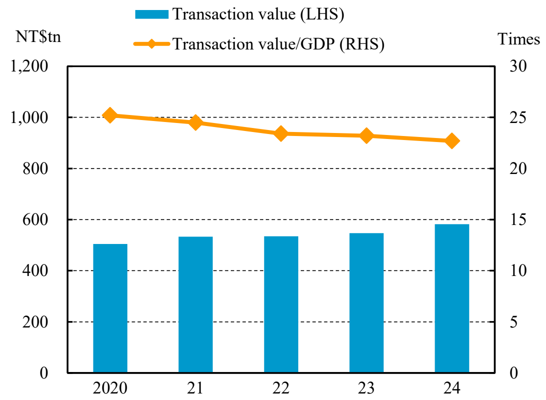
Chart 3.57 Average capital adequacy ratios of bills finance companies



Source: CBC.

3.3 Financial infrastructure

Chart 3.58 Funds transferred via the CIFS



Note: GDP in 2024 was published by DGBAS on May 28, 2025.
Sources: CBC and DGBAS.

In 2024, Taiwan's payment and settlement systems operated smoothly. Continued progress was made in advancing shared infrastructure for retail payments; for instance, the promotion of the TWQR (common QR code payment standard) has helped drive the widespread adoption and innovative development of electronic payments. The Bank and the FSC also undertook timely regulatory revisions and adopted supervisory measures to facilitate the sound and stable development of the financial sector. Meanwhile, appropriate measures were implemented to address climate-related risks, aiming to mitigate their potential impacts. Furthermore, to position Taiwan as an Asian asset management center, the FSC formulated five major initiatives and proposed 16 implementation strategies, while the Bank supported this effort by amending relevant FX regulations.

3.3.1 Payment and settlement systems

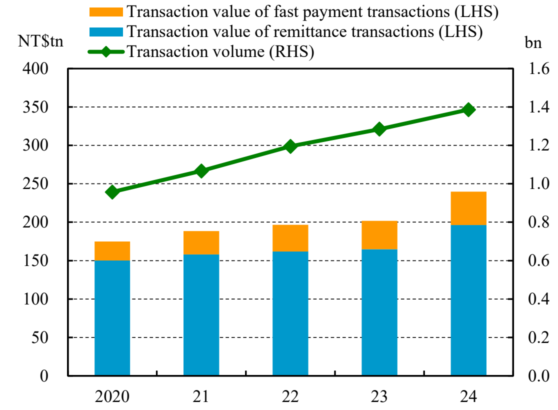
The Bank's CIFS and the FISC's IFIS functioned well in 2024, accompanied by steady growth in transaction values. Meanwhile, the FISC continued to strengthen the shared infrastructure for retail payments. With an increase in public adoption of e-payment instruments, consumer spending via electronic payment continued expanding.

Overview of the CIFS's operation

The CIFS handles large-value interbank funds transfers (e.g., FX, interbank lending, and related transactions) and provides the final settlement of interbank transfers by connecting with various clearing systems, such as those for domestic securities, bills, bonds and retail payments. In 2024, the total value of funds transferred via the CIFS reached approximately NT$582 trillion, nearly 22.7 times the size of the GDP for the year (Chart 3.58).

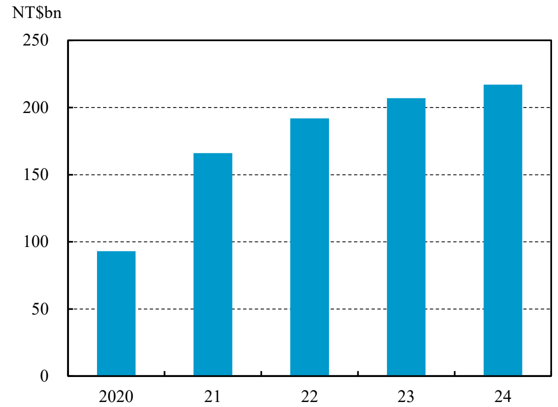
In terms of retail payments, transactions are primarily processed through the IFIS, which utilizes the funds deposited by financial institutions in the Interbank Funds Transfer Guarantee Special Account (hereinafter the Guarantee Account)[56] under the CIFS to clear and settle interbank payment transactions on a trade-by-trade basis,[57] with final settlement completed through the CIFS. In 2024, approximately 1.39 billion transactions were processed by the IFIS, with the value totaling around NT$240 trillion, representing year-on-year increases of 7.93% and 18.88%, respectively. Among these, fast payment transactions[58] amounted to approximately NT$43 trillion, reflecting a 17.53% increase from the previous year (Chart 3.59). The average end-of-day balance of retained clearing funds in the Guarantee Account stood at about NT$217 billion, an annual increase of 4.88% (Chart 3.60), which was deemed sufficient to support 24-hour fast payment transactions.

Chart 3.59 Transaction value and volume processed by the IFIS



Source: CBC.

Chart 3.60 Average end-of-day balance of retained clearing funds in the Interbank Funds Transfer Guarantee Special Account



Source: CBC.

Development of shared infrastructure for retail payments

To address the fragmentation of the e-payment market, the FISC established a shared platform for cross-institution e-payments in October 2021. This platform enables interconnectivity both among e-payment institutions and between e-payment and financial institutions, facilitating the seamless flow of information and funds across these institutions. Through apps set up by e-payment institutions, users can conveniently conduct fund transfers, pay bills and taxes, and

56 The Guarantee Account, established jointly by financial institutions with the Bank, adopts a pre-funding mechanism. During the operating hours of the CIFS, financial institutions may allocate and deposit clearing funds required for interbank transactions. When the public makes interbank withdrawals or transfers, the FISC system promptly deploys these funds to clear transactions between financial institutions.

57 Interbank payment transactions include remittances, automated teller machine (ATM) withdrawals, transfers (including online and mobile transfers), tax payments and corporate funds transfers.

58 A "fast payment transaction" refers to a payment transaction in which funds become available to the payee in real time or near real time, excluding remittance transactions that do not operate on a 24/7 basis.

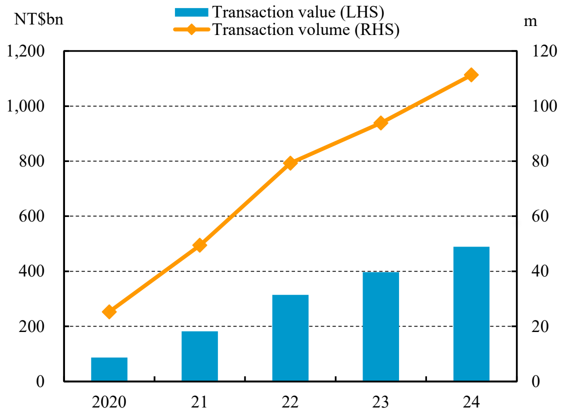
make purchases across various service providers, thereby enhancing overall payment efficiency.

In addition, efforts to promote the use of the TWQR system are ongoing, along with continued expansion of its application scenarios. For example, the TWQR Transit Code,[59] designed to enable cross-sector interoperability between the payment and transportation industries, was officially launched in March 2025, further contributing to the sound development of a nationwide integrated payment ecosystem.

By the end of 2024, 42 banks, nine e-payment institutions, and over 590,000 affiliated merchants had adopted the TWQR system. Over the year, TWQR processed approximately NT$489.5 billion in value across 111 million transactions (Chart 3.61). Compared to the previous year, the transaction value and volume grew by 23.28% and 18.58%, respectively.

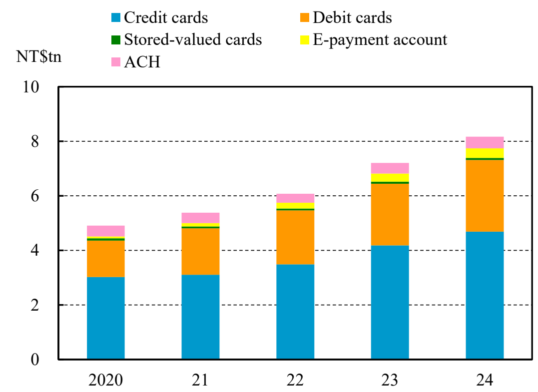
The FISC also expanded the system to promote the development of cross-border payments, launching TWQR cross-border shopping services in 2021 with an initial focus on outbound transactions. The service is currently available in Japan and South Korea for Taiwanese travelers via mobile payment. Going forward, the FISC plans to launch a "TWQR Cross-Border Platform for Inbound Transactions" that will enable merchants in Taiwan to accept payments from foreign tourists using their home-country e-wallets, thereby further expanding the TWQR cross-border mobile payment ecosystem.

Chart 3.61 Transaction value and volume via TWQR



Source: CBC.

Chart 3.62 Consumption via non-cash payment tools



Notes: 1. The consumption statistics of debit cards include consumer purchases with domestic chip bank cards, VISA and other international debit cards, UnionPay cards, and ATM transfers for shopping payments.
2. ACH interbank collection refers to the handling by payment institutions of funds deducted from and transferred to the relevant accounts through the ACH system of the TCH on behalf of customers.

Sources: CBC, FSC and FISC.

[59] The TWQR Transit Code was developed by the FISC via integrating Taiwan's Common QR Code Payment Standard with the Transportation Ticket QR Code Data Format Standard by the Ministry of Transportation and Communications. Utilizing the "Common Platform for Electronic Payment Institutions," the payment systems of the financial institutions and the e-payment institutions are connected, allowing users to conveniently access and use public transportation services simply by presenting the TWQR Transit Code on a payment app.

Domestic consumption via e-payment instruments

In 2024, total domestic spending through e-payment instruments reached NT$8.17 trillion (Chart 3.62), marking a year-on-year increase of 13.37%. Among these instruments, spending via credit cards, debit cards, and e-payment continued to rise, with annual increases of NT$498.4 billion, NT$369.3 billion, and NT$62.6 billion, respectively. This growth was primarily driven by improved user convenience, supported by the ongoing enhancement of shared infrastructure for retail payments.

3.3.2 Amendment to domestic banks' capital regulations in line with international standards

In line with the risk management framework under the finalized reforms of Basel III, the FSC amended the *Methods for Calculating Bank's Regulatory Capital and Risk-Weighted Assets* (RWA) (hereinafter referred to as the *Methods*) in December 2023 and January 2025, respectively (Table 3.3). The *Methods* were implemented in phases starting from January 1, 2025, with the aim of strengthening the resilience of Taiwan's financial system.

Table 3.3 Main amendments of the *Methods for Calculating Bank's Regulatory Capital and RWA*

Items	Main amendments
The first amendment in December 2023	
Standardized Approach for credit risk	● Amended the risk weights for corporate, equity, and retail exposures, as well as the credit conversion factors for off-balance sheet items. The risk weights for equity exposures will be increased gradually through a five-year linear phase-in arrangement ● Introduced due diligence requirement mandating that banks using external credit ratings to calculate capital must conduct reviews at least annually. In addition, the definitions of defaulted exposures were clarified, and related regulations on credit risk mitigation techniques were amended
Internal Ratings-Based (IRB) Approach	● Excluded exposures not eligible for the IRB Approach (e.g., equity exposures), adjusted risk components – including probability of default, loss given default, exposure at default – and improved the internal model validation framework ● Adjusted the qualifications and procedures of application for banks. Following completion of the pilot program, banks must prepare relevant audit reports, obtain approval from the board of directors, and submit the required documents to the FSC for review
New output floor regulations	Required that RWA calculated by banks under the IRB Approach shall be no less than 72.5% of those calculated under the Standardized Approach. If this requirement is not met, capital shall be calculated based on 72.5% of the RWA derived from the Standardized Approach
Operational risk	Revised the capital calculation method by replacing the existing Basic Indicator Approach, Standardized Approach, and Advanced Measurement Approach, with the New Standardized Approach
Leverage ratio	Enhanced the exposure measurement for the leverage ratio and introduced new regulations regarding the treatment of clearing services

Items	Main amendments
The second amendment in January 2025	
Market risk	● Defined the scope and criteria for distinguishing between banking and trading books, and, in principle, prohibited the transfer of positions between the two books ● Introduced a New Standardized Approach for capital calculation to enhance risk sensitivity of RWA measurements ● Outlined the eligibility requirements for banks applying the New Standardized Approach. Banks that do not meet the requirements shall apply the Simplified Standardized Approach. In addition, prior approval from the FSC is required to adopt the Internal Model Approach
Counterparty credit valuation adjustment (CVA) framework	● Classified the capital calculation for CVA risk into two methods: the Basic Approach and the Standardized Approach. Banks intending to adopt the Standardized Approach shall obtain prior approval from the FSC ● Specified that, if the notional amount of a bank's non-centrally cleared derivatives is less than NT$4 trillion, the CVA capital requirement may be set equal to the capital requirement for counterparty credit risk
Securitization exposure	● Amended the definition of securitization transactions to clarify that the cash flows generated from the underlying asset pool must be used to service at least two distinct, stratified risk positions or tranches ● Revised the hierarchy of approaches for calculating capital requirements, which shall follow the order of the Internal Ratings-Based Approach, the External Ratings-Based Approach, and the Standardized Approach. Banks intending to adopt the Internal Ratings-Based Approach shall obtain prior approval from the FSC ● Enhanced the risk sensitivity of the capital calculation method by expanding the set of input parameters used to determine capital requirements
Batch credit guarantees	Raised the portion of batch credit guarantees eligible for a 20% risk weight from half of the guaranteed amount to the actual guaranteed coverage ratio. Banks are also required to comply with the due diligence requirements in accordance with the Standardized Approach for credit risk

Source: FSC.

To assess the impact of the amended *Methods* on banks, the FSC requested 38 domestic banks to conduct trial calculations, of which the results showed a limited impact on domestic banks' relevant financial health indicators.

3.3.3 Localization and transitional measures for the new-generation solvency regime of the insurance industry

To assist domestic insurers in transitioning smoothly to the new-generation solvency regime and to facilitate the adoption of IFRS 17 Insurance Contracts starting 2026, the FSC has introduced a series of localization and transitional adjustment measures to be implemented in four phases. Accordingly, these measures were rolled out successively in July and November 2023, and in April and December 2024.[60]

[60] For details on the localization and transitional adjustment measures introduced in the previous three phases, please refer to Chapter 3.3, "Financial Infrastructure," in the CBC (2024), *Financial Stability Report*, published in May.

The Phase 4 adjustment measures were formulated by the FSC with reference to the Insurance Capital Standard (ICS) issued by the International Association of Insurance Supervisors (IAIS) on December 5, 2024. The FSC also took full account of international practices, feedback from domestic insurance-related organizations and insurers, and the current conditions of Taiwan's insurance market.

The key elements of the Phase 4 adjustment measures include: (1) incorporation of the latest ICS calculation formulas for estimating the present value of insurance liabilities, interest rate risk, non-default spread risk (NDSR),[61] and the tax allowances on RBC; (2) for insurers approved to adopt transitional measures, the RBC set aside before the adoption will serve as the cap on the calculation of Tier 1 Limited (T1L) and Tier 2 (T2) capital; (3) the capital charge ratio for NDSR will follow a 15-year linear phase-in mechanism, increasing in equal annual increments from 0% to 100%; and (4) the capital requirement rates under localized risk test scenarios were revised downward to 10% for mortality, 10% for longevity, 7.5% for morbidity, and 35% for lapse risk.

Regarding the capital charges for interest rate risk, the adjustment of confidence level for VaR, and the criteria for identifying high-interest-rate policies, the FSC will conduct a thorough assessment of the feasibility and appropriateness of related measures after all insurers have completed their trial calculations. Moreover, the FSC will continue revising the capital adequacy regulations for the insurance sector by incorporating all relevant transitional adjustment measures. It will also closely monitor international practices in solvency regimes to facilitate timely review and refinement of the domestic framework.

3.3.4 Latest developments in efforts by domestic and foreign supervisory authorities to address climate risks

Given that climate risks may affect the financial system through their impact on the real economy, the Network for Greening the Financial System (NGFS) recommends that national authorities should strengthen existing prudential supervisory measures to address the adverse effects of climate change.[62] However, owing to the lack of sufficient climate-related data, the challenges in quantifying climate risks, and the risk heterogeneity across sectors, most central banks and financial regulators currently prioritize stress testing, scenario analysis, and enhanced information disclosure as their main tools for assessing and addressing climate-related risks. The FSC continues to refine its climate change scenario analysis model (Table

[61] This refers to the risk that arises even in the absence of default of assets such as bonds. Changes in interest rates may cause shifts in their credit ratings and in turn affect the valuation of both assets and liabilities of the insurer, ultimately leading to volatility in its equity.
[62] NGFS (2020), "Guide for Supervisors Integrating Climate-related and Environmental Risks into Prudential Supervision," May.

3.4) and has required domestic banks to conduct trial calculations. As for climate-related macroprudential instruments, most national authorities are still in the research and review phase.

The Bank continues to collect and study information on key international practices for assessing climate-related risks in the financial sector and on the macroprudential tools employed to address such risks. This information will serve as a valuable reference for future assessments and the potential applications of relevant macroprudential instruments.

Table 3.4 Central banks'/regulators' measures to assess climate risks

Sovereignty	Central banks/regulators	Measures to assess climate risks
US	Fed	Requires the six largest banks to submit the results of their climate risk scenario analyses to gain insights into their strategies and challenges in managing climate-related financial risks
Canada	The Office of the Superintendent of Financial Institutions (OSFI)	1.Collaborates with the Bank of Canada to conduct climate risk scenario analysis 2.Issues climate risk management guidelines for financial institutions 3.Collects climate-related exposure data from financial institutions
Euro area	ECB	1.Assesses the impact of climate change on financial institutions in the euro area through scenario analysis and stress testing 2.Develops macroeconomic models to monitor the effects of climate change on the economy, the financial system, and the transmission channels of monetary policy 3.Publishes statistical indicators related to climate risk – such as carbon footprints of financial institutions' portfolios, physical risk exposures, and green financial instruments – to enhance climate risk data analysis capabilities
UK	BoE	1.Adopts forward-looking approaches to calibrate climate-related risks 2.Has conducted biennial climate change stress tests since 2021 3.Collaborates with relevant government agencies to enhance climate-related information disclosure
Hong Kong	Hong Kong Monetary Authority (HKMA)	1.Revises the CAMEL framework to incorporate climate-related risks and enhance climate risk management assessments 2.Integrates climate-risk stress testing into the HKMA's supervisor-driven stress testing framework 3.Plans to embed climate risk considerations into the

Sovereignty	Central banks/regulators	Measures to assess climate risks
		HKMA's banking supervisory review processes to encourage institutions to enhance their own risk management capabilities
Japan	BoJ	1.Encourages financial institutions to enhance their disclosures in line with the Task Force on Climate-related Financial Disclosures (TCFD) framework, which has been incorporated into Japan's revised Corporate Governance Code 2.Conducts climate-related scenario analysis and stress testing in collaboration with the Financial Services Agency (FSA) 3.Collects climate-related data and refines analytical tools to strengthen research and the assessment of climate change impacts
Australia	Australian Prudential Regulation Authority (APRA)	Carries out climate vulnerability assessments for Australia's five largest banks
Taiwan	FSC	A climate change scenario analysis framework has been established for domestic banks. The 2024 version focuses primarily on the addition of short-term scenarios, updates to medium- and long-term scenario settings, adjustments to methodologies and parameters, inclusion of physical risk assessments for overseas counterparties, and providing the option for banks to adopt dynamic balance sheets upon prior application

Sources: Official websites of central banks or supervisory authorities.

3.3.5 Policies for developing an Asian asset management center and further relaxation of FX regulations

FSC's strategy for developing Taiwan into an Asian asset management hub

To promote Taiwan as an Asian asset management center, the FSC unveiled a strategic development blueprint in September 2024, comprising five major initiatives: (1) strengthening asset management business, (2) integrating financial inclusion and sustainability, (3) promoting wealth management, (4) facilitating investments in public infrastructure, and (5) expanding Taiwan-bound investment. These are supported by 16 detailed implementation strategies. Through regulatory easing and cross-agency collaboration, the FSC aims to achieve two core objectives: (1) retaining domestic capital while attracting foreign investment, and (2) channeling investment into Taiwan to support industrial development. The initiative outlines key milestones to guide implementation – “achieving tangible results within two years, making significant progress within four years, and realizing substantial success within six years.” As of April 2025, an array of regulatory relaxations and market-opening measures had already been implemented.

As part of the efforts to strengthen asset management, the FSC has focused on expanding the scale of domestic asset management business, collaborating with Kaohsiung City Government to establish an asset management hub, and encouraging financial institutions to set up operations and collectively conduct pilot runs of related businesses. Under the initiative to integrate financial inclusion and sustainability, the FSC is promoting the Taiwan Individual Saving Account (TISA), a locally tailored financial instrument that encourages long-term investment. In parallel, efforts are underway to develop green financial instruments and cultivate talent in sustainable finance.

In terms of promoting wealth management, the FSC has amended relevant regulations to remove the asset size threshold for banks applying to engage in high-asset management business. Additionally, it is actively supporting the development of family office services and related initiatives. To foster investment in public infrastructure, the FSC has lowered the risk coefficients for fund and venture capital investments in public infrastructure projects, encouraged the insurance sector to increase such investments, and steered capital toward the government-designated “5+2” innovative industries and Taiwan’s six core strategic industries. With regard to expanding investment in Taiwan, the FSC is also promoting legal amendments to enable the issuance of Real Estate Investment Trusts (REITs) under a fund structure.

The Bank’s adjustments to FX-related regulations in support of asset management policy

To support the FSC’s initiative to position Taiwan as an Asian asset management center, the Bank has continued to revise or refine relevant FX regulations. Key measures are as follows:

- In October 2024, the Bank amended the *Regulations Governing the Declaration of Foreign Exchange Receipts and Disbursements or Transactions*, raising the annual cumulative FX settlement threshold for nationals. Specifically, the threshold was increased from US$5 million to US$10 million for associations and individuals, and from US$50 million to US$100 million for companies and firms.

- In December 2024, the Bank authorized securities firms to conduct FC-denominated securities trust business. It also clarified that when banks accept high-asset clients’ holdings

– such as foreign bonds, offshore structured products, or FC-denominated structured bonds – as collateral for FC loans, such transactions are exempt from the documentation requirements under the *Directions Governing Banking Enterprises for Operating Foreign Exchange Business*. Additionally, the previous annual quota of US$50 million for discretionary investment in FC-denominated securities was abolished.

- In January 2025, the Bank amended the *Directions Governing Banking Enterprises for Operating Foreign Exchange Business* to relax restrictions for authorized banks to grant loans secured by the beneficial rights of specific money trusts denominated in FCs. Specifically, authorized banks may now grant such loans on behalf of the trustors with no restriction on the currency denomination of the loan proceeds.

3.4 General assessment of Taiwan's financial system

Overall, the financial system in Taiwan remained sound and resilient in 2024. In financial markets, the outstanding amount of bill and bond issuance expanded, and trading volume in the secondary market increased. Domestic stock indices of TWSE- and OTC-listed companies repeatedly hit new highs with active trading. The NT dollar broadly showed a moderate depreciating trend with relatively low volatility. Regarding financial institutions, domestic banks continued to post record-high profits, with sound asset quality and adequate capital levels. Life insurance companies saw a notable rebound in profits, greater momentum for premium income growth, and an increase in the average RBC ratio. Bills finance companies also experienced improved profits, with the guarantee business expanding. With respect to financial infrastructure, domestic payment and settlement systems operated smoothly. The Bank and the FSC made timely regulatory revisions and adopted due supervisory measures to facilitate the stable development of the financial sector. Meanwhile, appropriate measures were implemented to address climate risks with the aim of mitigating potential impacts therefrom. Overall, Taiwan's financial system remained largely stable throughout 2024.

Entering 2025, against a backdrop of uncertainty surrounding the new US administration's policy direction, domestic stock indices declined sharply before gradually rebounding; the NT dollar exchange rate movements became more volatile but remained relatively stable over the longer term; the money and bond markets also continued to exhibit subdued volatility. Meanwhile, the asset quality of financial institutions was not significantly affected under the circumstances, with average NPL ratios remaining at historical lows. However, should the impact of US tariff policies cause Taiwan to record a reduction in exports, declines in corporate revenues, or a rise in unemployment, the debt servicing capacity of corporate and household sectors – the main borrowers of financial institutions – could be impaired. This may result in higher credit default risk, which would in turn adversely affect the asset quality, profitability, and capital adequacy of financial institutions.

Moreover, heighted volatility in both domestic and international financial markets could dampen the investment performance of financial institutions, particularly life insurance companies, which hold sizable investment portfolios in both domestic and foreign markets and are more exposed to market risks. The Bank will continue to closely monitor developments in US tariff policies and related negotiations between the US and other major economies, so as to identify potential risks and to respond in a prudent manner.