# I. Overview

## Potential macro environmental risk factors

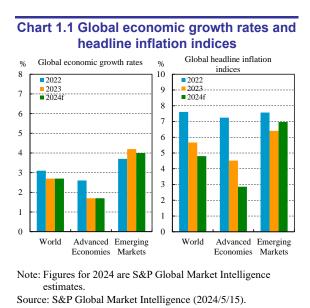
#### International economic and financial conditions

# Global economic growth showed resilience, while inflation moderated but still remained at elevated levels

In 2023, major central banks raised interest rates to combat inflation, thus limiting the momentum for economic growth. Nevertheless, thanks to greater-than-expected government spending and household consumption, along with a higher-than-expected labor force participation rate, the global economic growth rate only mildly dropped to 2.7%, demonstrating resilience in economic activity. Meanwhile, with suppressed oil price increases and a gradual downward trend in commodity prices, the global consumer price index (CPI) inflation rate declined to 5.7% (Chart 1.1).

Looking ahead to 2024, global manufacturing and services sectors are expected to recover

potentially boosting economic gradually, growth momentum. Notwithstanding, considering various negative factors such as geopolitical tensions, elevated funding costs, as well as uncertain monetary policy stances of central banks in the US and Europe, S&P Global<sup>1</sup> estimates that the global economic growth rate will remain at 2.7%. For advanced economies, growth is projected to stay at 1.7%, while the rate in emerging economies is expected to drop to 4.0%. Additionally, although a constant softening in labor markets and relatively tight monetary policies helped



<sup>&</sup>lt;sup>1</sup> S&P Global Market Intelligence (2024), *Global Executive Summary*, May.

cool inflation, ongoing geopolitical tensions could pose upside risks to international commodity prices again. In light of this, together with food insecurity arising from extreme climate events and rigidity of services sector prices, S&P Global predicts that the global CPI annual growth rate will drop moderately to 4.8% in 2024 (Chart 1.1), with only a slight decrease. Currently, central banks in the US and Europe intend to preserve interest rates at restrictive levels until inflation falls back to the desired range, though the timeline for potential rate cuts still remains highly uncertain. Therefore, the future trajectory of monetary policy is worthy of close attention.

#### Financial conditions turned to ease

In 2023, although major economies in Europe and the US continued to implement monetary tightening to tame inflation, investors anticipated that inflation would soon ease, leading to a more optimistic market expectation for interest rate cuts. As a result, global financial conditions turned to ease. On the other hand, in China, while financial conditions also became somewhat easier under monetary loosening, the overall condition remained relatively tight by historical standards owing to poor economic prospects and lingering pressures in the real estate market.

On the backdrop of supply chain disruptions, labor shortages, and a shifting preference to work from home, the commercial real estate (CRE) markets in the US and Europe witnessed a notable downturn. By the end of 2023, global real CRE prices had slumped, and the quality of loans had visibly deteriorated. In 2024, the IMF predicts that a drop in global CRE prices may have a significant impact on small and regional banks amid a tightening interest rate environment. These banks are generally less well capitalized and have a larger exposure to the CRE sector than large banks. If CRE prices fall, their funding ability will be constrained, thereby posing an adverse shock to the macro-financial environment.

In addition, geopolitical tensions will induce a reallocation of cross-border credit lines and portfolios. This could hinder capital accumulation, affect asset prices and allocations, and disrupt the international payment system, thereby jeopardizing macro-financial stability. Furthermore, the number of cyberattacks has skyrocketed, with banks being the most frequent targets. The IMF warns that cyberattacks can dampen market and public confidence in financial institutions, potentially leading to bank runs and posing liquidity risks in a severe scenario. Eventually, it will adversely affect macroeconomic and financial outcomes by undermining the ability of banks to grant loans and disrupting the functioning of payment systems.

#### Domestic macro environment

Taiwan's economic growth decelerated; domestic inflation rates maintained a gradual downward trend, and external debt servicing capacity remained sound

In 2023, although exports declined, domestic consumption momentum grew rapidly as the impact of the domestic pandemic diminished, resulting in the annual economic growth rate of 1.28% (Chart 1.2).<sup>2</sup> The domestic inflation rate gradually decreased, with the annual CPI

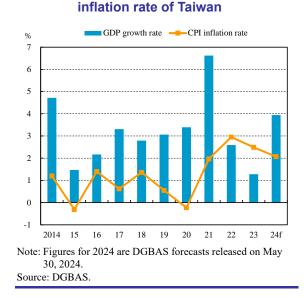


Chart 1.2 Economic growth rate and CPI

# inflation rate falling to 2.49%. Looking ahead to 2024, Taiwan's exports and private investment are expected to recover, private consumption is anticipated to grow moderately, and government expenditure is projected to keep increasing. Considering these, together with a lower base comparison period, the DGBAS predicts that the annual economic growth rate will rise to 3.94%, with the CPI annual inflation rate dropping to 2.07%.

Taiwan's external debt<sup>3</sup> slightly rose to US\$206.5 billion at the end of 2023, and FX reserves amounted to US\$570.6 billion, implying a robust capacity to service external debt. Since the government continued to promote several initiatives such as the Forward-looking Infrastructure Development Program, technology-driven power generation, and the net-zero transition, the government's fiscal deficit stood at NT\$145.6 billion,<sup>4</sup> equivalent to 0.62% of gross domestic product (GDP) for the year. This figure was much lower than those of major economies including the US, the UK, and Japan, as well as the internationally recognized minimum levels.<sup>5</sup> The ratio of total public debt to annual GDP continued dropping to 29.11%, implying that government debt still stayed within a manageable level.<sup>6</sup>

<sup>&</sup>lt;sup>2</sup> Data cited from the DGBAS in this report, including Taiwan's economic growth rate, GDP, and CPI figures of 2023, refer to its press release published on May 30, 2024.

<sup>&</sup>lt;sup>3</sup> External debt refers to the combined amount owed to foreign parties by Taiwan's public and private sectors, including long-term debt with a maturity of greater than one year and short-term debt with a maturity of one year or less. Among them, public external debt refers to the external debt for which the public sector is directly responsible for repayment or provides payment guarantees. Private external debt, on the other hand, refers to external debt that does not include payment guarantees from the public sector.

<sup>&</sup>lt;sup>4</sup> It is based on the latest data from the 2023 Yearbook of Public Finance Statistics, as of May 2024.

<sup>&</sup>lt;sup>5</sup> As a comparison, fiscal deficits in European Union (EU) member nations are not allowed to exceed 3% of GDP according to the *Maastricht Treaty* and the subsequent *Stability and Growth Pact*.

<sup>&</sup>lt;sup>6</sup> As a comparison, outstanding government debt in EU member nations is not allowed to exceed 60% of GDP according to the *Maastricht Treaty* and the subsequent *Stability and Growth Pact*.

## Revenue of the corporate sector sharply contracted, resulting in reduced overall profitability

Affected by continually weak global economic 2023, the corporate growth in sector experienced a significant reduction in annual revenue, leading to a decline in the overall profitability of both TWSE- and OTC-listed companies (Chart 1.3, left panel). Among them, key industries such as electronics, shipping, plastics, and steel witnessed a slump in profitability. At the end of the year, leverage ratios for both TWSE- and OTC-listed companies improved (Chart 1.3, right panel). Despite the fact that their current ratios and interest coverage ratios have both trended downwards, the overall short-term debt servicing capacity remained sound. Finally, the non-performing loan (NPL) ratio for corporate loans from financial institutions dropped to a new low of 0.18% at the end of 2023, suggesting satisfactory credit quality.

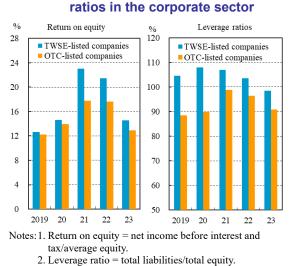
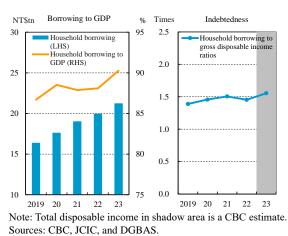


Chart 1.3 Return on equity and leverage

2. Leverage ratio = total habi Source: TEJ.



#### **Chart 1.4 Household indebtedness**

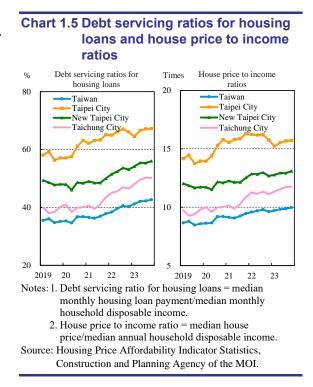
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Household borrowing reached NT\$21.25 trillion at the end of 2023, equivalent to 90.27% of annual GDP (Chart 1.4, left panel). The annual growth rate rebounded to 6.38%, indicating continuous borrowing growth. The ratio of household borrowing to total disposable income rose marginally to 1.55 (Chart 1.4, right panel), reflecting a higher debt burden. Meanwhile, the debt servicing ratio ascended to 48.72%, suggesting that short-term debt servicing pressure tightened. Nevertheless, household net worth<sup>7</sup> in Taiwan has been remarkable and has held at

<sup>&</sup>lt;sup>7</sup> Household net worth includes household net non-financial assets and net financial assets. Net non-financial assets include produced assets (buildings and constructions, transport equipment, machinery equipment, etc.) and non-produced assets (construction land, non-construction land, and other assets). Net financial assets are domestic and foreign financial assets minus liabilities (deposits, loans, shares of listed companies or other enterprises, life insurance reserves, etc.).

more than 8 times the GDP in 2022, showing a healthy financial condition. The NPL ratio of household borrowing from financial institutions slightly increased to 0.13% at the end of 2023, remaining at a low level and demonstrating satisfactory credit quality. Given the subtle dip in real regular wages and elevating interest burdens arising from a gradual increase in bank loan rates, it is important to closely monitor changes in the debt servicing capacity of some households with higher debt burdens.

# Transactions in the real estate market recovered and prices remained high, imposing a greater burden on homebuyers



Following the implementation of the new Preferential Housing Loans for the Youth in 2023 Q3, there was a positive growth in the total number of building ownership transfers nationwide. As a consequence, the year-on-year growth rate went up to 26.01% in 2024 Q1. In the meantime, the total number of land ownership transfers surged in line with the heating up of the real estate market, with the annual growth rate reaching 17.90% in 2024 Q1. Regarding housing prices, the national housing price index released by the Ministry of the Interior (MOI) continued to rise gradually in 2023. The Cathay housing price index (for newly built houses) peaked in 2023 Q2 before slightly declining, but then rebounded in 2024 Q1 owing to a housing market rally. The Sinyi housing price index (for existing houses) picked up quarter by quarter. In sum, the Cathay housing price index and Sinyi housing price index both reached highs of 188.93 and 157.01, respectively, in 2024 Q1. Taiwan's debt servicing ratio for housing loans and house price to income ratio both saw consistent growth each quarter, with Taipei City exhibiting the highest figures among the six metropolitan areas (Chart 1.5).

From the second half of 2023, with a surge in the amount of the Preferential Housing Loans for the Youth, the annual growth rate of outstanding loans for house purchases and refurbishments has bounced back, but the rate of outstanding construction loans has kept dropping. Regarding the interest rate of real estate loans, it elevated to a new peak in May and mildly declined afterwards. However, it demonstrated a slight rebound after the Bank's policy

rate hikes in March 2024. Furthermore, the NPL ratios of housing loans and construction loans granted by domestic banks dropped to 0.06% and 0.04%, respectively, at the end of March 2024, showing satisfactory risk management on real estate lending. Since December 2020, the Bank has adjusted its selective credit control measures five times. In order to urge financial institutions to comply with regulations, the Bank also actively cooperated with the FSC to launch targeted examinations toward mortgage loans. Moreover, relevant ministries and agencies successively amended the regulations to refine management schemes and to prevent short-term speculation and tax evasion, in order to foster sound development in the real estate market.

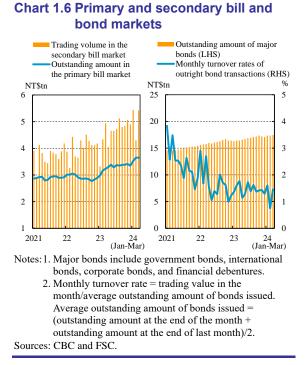
# **Financial system assessment**

#### **Financial markets**

# The outstanding amount of issuance and trading volume of bills and bonds expanded compared to the previous year

In 2023, mainly driven by a substantial rise in the issuance of commercial paper (CP), the outstanding amount of bill issuance in the primary market went up by 15.81% year on year,

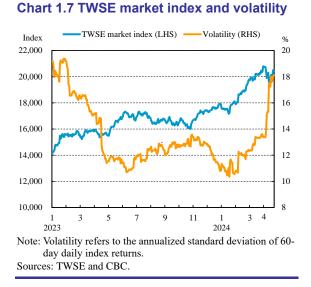
and the trading volume also increased by 14.50% year on year (Chart 1.6, left panel). The outstanding amount of bond issuance grew by 3.87% over the end of the previous year and reached a new high. This growth was primarily fueled by elevating bond issuance from stateowned enterprises such as Taiwan Power Company and Chinese Petroleum Corporation. Trading volume in the secondary market<sup>8</sup> held at the same level compared to the end of 2022, with the outright transaction volume shrinking by 3.26%. As a consequence, the average monthly outright turnover rate of major bonds9 continued its downward trend and declined further to a record low of 1.27% in 2024 Q1 (Chart 1.6, right panel).



<sup>&</sup>lt;sup>8</sup> Includes repo and outright transactions.

<sup>&</sup>lt;sup>9</sup> Includes government bonds, international bonds, corporate bonds, and financial debentures.

After the Bank raised policy interest rates and negotiable certificates of deposit (NCDs) interest rates in March 2023, the interbank overnight call loan rate trended upwards and then stabilized. Still, liquidity in financial markets remained ample. As for long-term market rates, during the first three quarters of 2023. Taiwan's benchmark 10-year government bond yields (hereinafter referred to as domestic 10-year government bond yields) fell gradually but then began to rise, peaking at 1.34% on October 19 before dropping again. Taking into account the



possibility that geopolitical tensions could disrupt global supply chains and drive inflation higher, there remains pressure for global bond yields to escalate, which could influence the dynamic of domestic 10-year government bond yields. Therefore, the interest rate risks related to bond investments of domestic financial institutions warrant close attention.

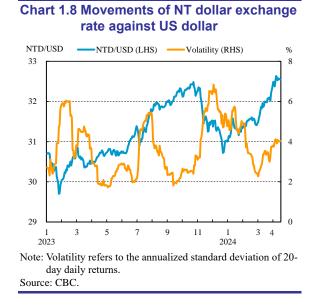
#### Stock indices fluctuated with an uptrend and reached historical highs

From 2023 onwards, benefiting from international stock market recovery and massive inflows of foreign capital to invest in Taiwan's stock markets, the domestic stock market has shown an upward trend. At the end of 2023, the Taiwan Stock Exchange Weighted Index (TAIEX) closed at 17,931, posting an increase of 26.83% year on year, with the volatility gradually stabilizing and slipping to 10.78% by December. From January to April 2024, driven by market expectations that major central banks will ease monetary policies and a rise in technology stocks, the TAIEX climbed steadily and kept reaching historical highs with mounting volatility (Chart 1.7).

In 2023, the annual turnover rate in terms of trading value in the TWSE market elevated to 121.19%, underpinned by a buoyant stock market with ample liquidity. Domestic stock markets are highly correlated with international stock markets. Considering that rising geopolitical risks, a limited decline in global inflation, and uncertain monetary policy stances by major central banks will all affect the global economy and international stock markets and, in turn, impact the performance of domestic stock markets, it is necessary to pay close attention to these developments.

Furthermore, supported by the excellent performance of domestic stock markets, expectations for the Fed's policy rate cuts, and the incentive to invest in high dividend products in recent years, the domestic ETF market has grown rapidly. As those products become more complex and investment risks grow, it warrants closely monitoring the associated risks.

## The NT dollar broadly depreciated against the US dollar, while its volatility remained relatively stable



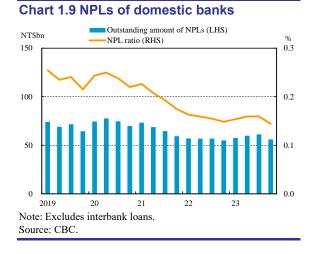
In the first half of 2023, the NT dollar exchange rate against the US dollar appreciated to below 30 but then stabilized. In the second half of the year, the strong US dollar led to the NT dollar reversing and sharply depreciating against the US dollar. Subsequently, with a fall in US government bond yields and the US dollar from November onwards, the NT dollar exchange rate rebounded to 30.735 against the US dollar at the end of 2023, depreciating by 0.09% from the end of the previous year. In early 2024, continuously tight monetary policies by the Fed, coupled with escalating geopolitical risks, have driven the US dollar at the end of April 2024, depreciating by 5.55% compared to the end of 2023. Moreover, in 2023, owing to improved export performance and inflows of foreign capital, the nominal effective exchange rate (NEER) index of the NT dollar slightly increased, reaching 103.05 at the end of the year. Yet, because of the strong US dollar, the NEER of the NT dollar dropped to 100.4 at the end of April 2024.

The volatility of the NT dollar exchange rate against the US dollar fluctuated between 1.72% and 6.83% in 2023 and registered an annual average of 3.6%. From January to April 2024, the volatility ranged between 2.27% and 5.74% (Chart 1.8), which was relatively stable compared to major currencies.

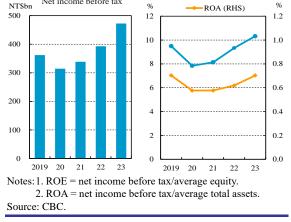
#### Financial institutions

Domestic banks saw improvements in asset quality and consistently set new records in profitability, with capital adequacy levels also rising

Growth in customer loans of domestic banks decelerated in 2023, while the credit concentration in corporate loans slightly decreased. However, the share of real estatesecured credit increased. The average NPL ratio declined to a record low of 0.14% at the end of the year (Chart 1.9), reflecting an improvement in credit quality, and the provisions for loan losses remained sufficient. Credit quality of overseas CRE deteriorated at the end of 2023, yet the risk was manageable because its share of total loans remained relatively low. Meanwhile, the exposures of domestic banks to China as a percentage of net worth continually descended to a new low of 23%. Nevertheless, the potential economic and







financial risks in China are still elevated, which warrant constant close attention.

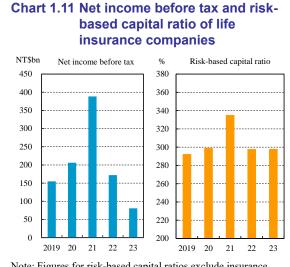
Benefiting from a pickup in profits from investment, gains on disposal, and valuation from FX swap transactions, the net income before tax kept rising by 20.30% to a new historical high of NT\$472.6 billion (Chart 1.10, left panel). The average return on equity (ROE) and the return on assets (ROA) also went up to 10.33% and 0.70%, respectively (Chart 1.10, right panel), showing an improvement in profitability. Furthermore, the capital adequacy ratio rose to 15.33% and the capital quality was satisfactory.

# Life insurance companies, after experiencing a slump in profits, saw a notable recovery, and their average RBC ratio improved

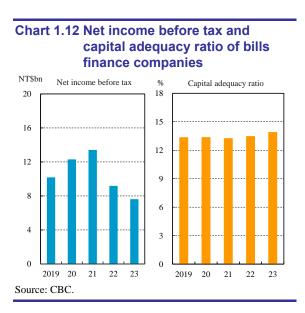
In 2023, life insurance companies saw a considerable year-on-year decrease in pretax income, down by 53.09% to NT\$80.6 billion (Chart 1.11, left panel). This mainly resulted from a huge

reduction in FX gains and the elevation of hedging costs. However, in 2024 Q1, primarily driven by an improvement in FX gains and investment revenue, the net income before tax rebounded sharply to NT\$96 billion from the same period of the previous year. The average RBC ratio slightly rose to 298.09% at the end of 2023 (Chart 1.11, right panel). The average equity to asset ratio<sup>10</sup> also climbed to 7.12%, suggesting enhanced capital adequacy.

Foreign investment positions of life insurance companies grew continuously and reached NT\$21.86 trillion at the end of 2023. Nonetheless, owing uncertainties to surrounding the US monetary policy outlook, as well as ongoing tensions from the Russia-Ukraine war and Middle Eastern conflicts, there are concerns about the impact on the performance of domestic and foreign stock and bond markets. Consequently, equity investment risk and interest rate risk are still elevated, and the FX risk inherent in largevalue open FX positions still remains high. Moreover, in 2023, premium income fell short of benefit payment. Although cash and cash-



Note: Figures for risk-based capital ratios exclude insurance companies taken into receivership by the FSC. Source: FSC.



equivalent positions were sufficient to cover these outflows, the future cash flow still warrants continuous attention.

# Bills finance companies' guarantee business recovered but saw a reduction in profitability and still-high liquidity risks

CP guaranteed by bills finance companies increased by 5.28% year on year in 2023, and the guaranteed advances ratio slid down to 0.07%, showing an enhancement in overall credit quality.

 $<sup>^{\</sup>rm 10}\,$  Assets are exclusive of the assets of insurance products in separate accounts.

The net income before tax of bills finance companies reduced by 17.05% year on year to NT\$7.6 billion in 2023 (Chart 1.12, left panel), owing to a decrease in net interest income resulting from a narrowing yield spread between their long-term bonds and short-term reverse repos, along with an increase in loss reserves to guarantees. The average capital adequacy ratio continuously rose to 13.91% at the end of 2023 (Chart 1.12, right panel), and the ratio for each company remained well above the statutory minimum standard of 8%. Nevertheless, bills finance companies still faced a maturity mismatch between assets and liabilities, reflecting an elevated liquidity risk.

#### Financial infrastructure

## Domestic payment systems functioned smoothly, and consumption via e-payment instruments expanded

The CBC Interbank Funds Transfer System (CIFS) functioned smoothly in 2023, settling funds worth a total of 23.2 times the GDP for the year. The total transaction values processed by the Interbank Financial Information System (IFIS) also increased by 2.63% compared to 2022. The overall consumption expenditure via a variety of e-payment tools<sup>11</sup> rose by 18.67%, mainly supported by the continuous improvement of shared infrastructure for retail payments, which has enhanced the convenience of e-payments. Additionally, the shared platform for cross-institution e-payments established by the Financial Information Service Co., Ltd. (FISC) introduced a new "e-payments for shopping" feature in October 2023. Meanwhile, Taiwan's common QR code payment standard was officially labeled as "TWQR." By means of the app of any e-payment institution, the public can seamlessly conduct transfers, bill payments, tax payments, and shopping transactions across different e-payment and financial institutions.

#### Other measures to strengthen the financial system

To promote the sustainable development of domestic enterprises and enhance the resilience of the financial industry in response to climate change risks, the FSC released the "Roadmap for Taiwan Listed Companies to Align with the IFRS Sustainability Disclosure Standards." Starting from 2026, listed companies will take a three-phase approach to adopt IFRS Sustainability Disclosure Standards. On top of that, the FSC has commissioned the Bankers Association of the Republic of China (BAROC) to develop a climate change scenario analysis model applicable to all domestic banks. The Bank also initiated research on climate risk

<sup>&</sup>lt;sup>11</sup> Non-cash payment tools include credit cards, debit cards, electronic tickets, electronic payment accounts, and ACH interbank collection.

methods for measuring and assessing climate change risks, which will serve as crucial references for future macro-stress tests on climate risks.

Moreover, in order to assist domestic insurers in gradually aligning with the International Financial Reporting Standards (IFRS) 17 and the new-generation solvency regime for the insurance industry, referred to as TW-ICS, the FSC has established transitional measures to help the industry smoothly align with international standards, thereby strengthening the resilience in sustainable operations for insurers. Furthermore, the FSC released guidelines for platforms involving digital lending and crypto assets to enhance protections for the rights and interests of customers. The FSC also launched the core principles and policies for AI applications, aiming to help financial institutions leverage the benefits of AI technology while effectively managing risks and safeguarding consumer rights.

## Measures to promote financial stability

# Measures undertaken by the Bank and the FSC to promote financial stability

#### Measures undertaken by the Bank to promote financial stability

From the beginning of 2023 onwards, Taiwan's inflation rate showed a downward trend. Nevertheless, considering that a proposed electricity rate hike could shift inflation expectations upwards, the Bank raised the policy rates by 0.125 percentage points in March 2024. The policy aims to tame domestic inflation expectations, sustain price stability and foster sound economic and financial development. Apart from that, with regard to international and domestic economic and financial conditions, the Bank conducted open market operations and managed reserve money at an appropriate level by issuing NCDs.

Moreover, the Bank adjusted selective credit control measures for the fifth time in June 2023, including the introduction of a 70% cap on the LTV ratio for a second home loan of a natural person for housing in a specific area, along with issuing measures targeting the funding needs of genuine homebuyers. The Bank also continually adopted flexible FX rate policies and undertook appropriate FX management measures (such as reinforcing off-site monitoring efforts and urging banks to enhance their exchange rate risk management) to safeguard the dynamic stability of the NT dollar exchange rate and maintain FX market order, thus ensuring sound financial development.

#### Measures undertaken by the FSC to maintain financial stability

The FSC required insurers to conduct stress tests and amended the formula for calculating their RBC ratios. Alongside that, for the sake of fortifying their risk-bearing capacity, the FSC approved that insurance companies could issue corporate bonds overseas as capital instruments. Likewise, to bolster banks' internal risk management capability and adopt more precise methods to measure and manage credit risk and credit assets, the FSC allowed banks to apply for the adoption of an internal ratings-based (IRB) approach for credit risk to calculate capital.

In addition, since the second half of 2023, given rapid growth of the ETF market in recent years, the FSC has successively introduced relevant supervisory measures to ensure the healthy development of the market and protect investor interests. These measures are based on ETF practices issued by international financial organizations and involve a gradual implementation of measures from three aspects, namely product structure, information disclosure and liquidity provision. The FSC also strengthened financial institutions' risk management for outsourcing operations and deliberated preventive measures against illegal offshore funds, targeting to reinforce the resilience of outsourcing operations and protect financial consumers.

# The Bank will continue to adopt measures to promote financial stability when necessary

In 2023, affected by interest rate hikes by major central banks and heightened geopolitical risks, global economic growth momentum waned. Since early 2024, the global economy has been expected to rebound amid easing inflation worldwide. However, ongoing geopolitical conflicts have compounded the uncertainties over global economic prospects. In this context, Taiwan's financial institutions maintained robust operations, and financial infrastructures operated smoothly. As a whole, Taiwan's financial system still remained stable. To facilitate sound business operations of financial institutions and promote financial stability, the Bank will keep adopting appropriate monetary, credit and FX policies, and the FSC will revamp relevant financial regulations and enhance financial supervisory measures.

Looking ahead, the trajectory of monetary policy stances by major central banks may affect global economic growth and financial stability. Geopolitical risks and climate change would add to the uncertainties of global inflation as well as trade and economic development. Moreover, the high interest rate environment and the spillover effect of economic downturn in China still exist. These, coupled with supply chain restructuring and fragmentation of the global economy stemming from the ongoing US-China competition and the rise of national security

awareness, could pose adverse impacts on global economic development and financial stability. Against this backdrop, the Bank will continue to pay close attention to the impacts of relevant subsequent developments on domestic economic and financial conditions and take appropriate response measures in a timely manner, thus fostering financial stability.