II. Potential macro environmental risk factors

2.1 International economic and financial conditions

2.1.1 International economic conditions

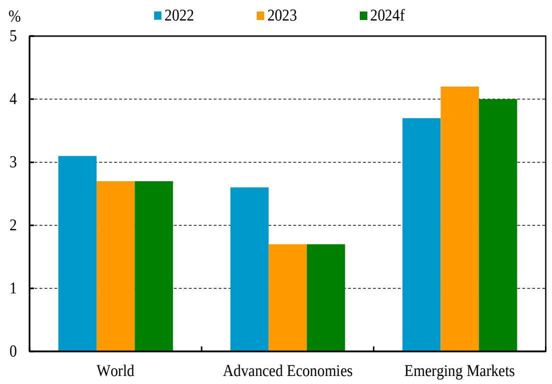
The economic growth rate saw only a slight decline throughout the year amid the global disinflation of 2023, reflecting resilient economic conditions. However, economic growth showed divergent paths across countries. Among them, the US and Japanese economies grew steadily, while the euro area experienced a sharp decline. China's economic growth somewhat exceeded the target, set at the beginning of the year, as a result of a lower base period in the previous year.

Looking ahead to 2024, in spite of the fact that global manufacturing and services sectors are expected to recover gradually, economic growth will stay at the same level owing to geopolitical tensions and still-high funding costs. Moreover, several adverse factors such as geopolitical issues are likely to limit the decline in global inflation, and the future trajectories of monetary policies in major economies are also highly uncertain.

Global economic growth showed resilience, but uncertainty remained elevated

During the global disinflation of 2023, sharp interest rate hikes by major central banks limited the momentum for economic growth. Nevertheless, thanks to greater-than-expected government spending and household consumption, employment and incomes saw steady growth. A higher-than-expected labor force participation rate also benefited a supply-side expansion. Moreover, the accumulation of substantial savings by the households in major advanced economies during the pandemic helped support global economic performance.

Chart 2.1 Global economic growth rates



Note: Figures for 2024 are S&P Global Market Intelligence estimates.
Source: S&P Global Market Intelligence (2024/5/15).

Consequently, the economic growth rate only experienced a mild deceleration, dropping to 2.7% in 2023 (Chart 2.1), showing that economic activities were still resilient.

Looking forward to 2024, the gradual recovery in global manufacturing and services sectors are anticipated to fuel momentum for economic growth. Nonetheless, geopolitical tensions and elevated funding costs owing to the high interest rate environment, as well as uncertain monetary policy stances of central banks in the US and Europe, may impede global economic growth. Additionally, upcoming elections in the most populous economies, including the European Union, the US, and India, will further complicate international political and economic conditions. S&P Global estimates[12] that the global economic growth rate will remain at 2.7% in 2024. For advanced economies, growth is projected to remain at 1.7%, while the rate in emerging economies is expected to drop to 4.0% (Chart 2.1).

China's economic growth may slow down

In 2023, the post-pandemic economic recovery in China fell short of expectations. Defaults by major real estate developers, such as Evergrande Group and Country Garden Holdings Company Limited, triggered a domino effect that led to a significant downturn in the real estate sector and severely undermined market confidence. This greatly reduced the effectiveness of the government's economic stabilization policies. Nonetheless, owing to the lower base effect, the annual economic growth rate still rose substantially to 5.2% in 2023, surpassing the initial target of 5.0%.

Looking ahead to 2024, a resurgence in the real estate sector in China appears unlikely in the short term. Rising local government debt risks, coupled with sluggish investment, weak domestic demand, and a rapidly deteriorating demographic structure, are expected to decelerate economic growth. S&P Global forecasts that the annual economic growth rate will decline to 4.8%. In terms of fiscal conditions, China is anticipated to maintain its expansionary fiscal policy and intensify regulatory efforts to stabilize the economy. According to the IMF, China's government debt-to-GDP ratio is projected to continue trending up to reach 88.6% in 2024.

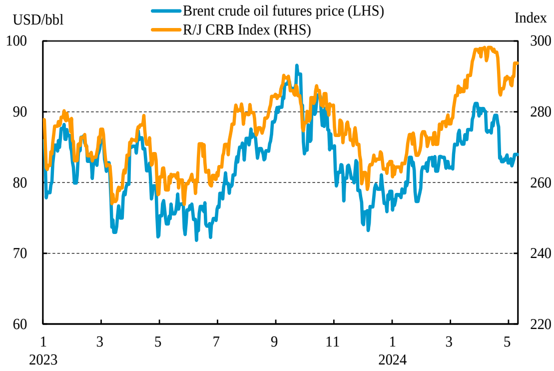
Global inflation moderated, but remained at elevated levels

In 2023, oil prices had been affected by a mix of bullish and bearish factors. Among them, the output cuts announced by the Organization of the Petroleum Exporting Countries and its allies

[12] S&P Global Market Intelligence estimate on May 15, 2024.

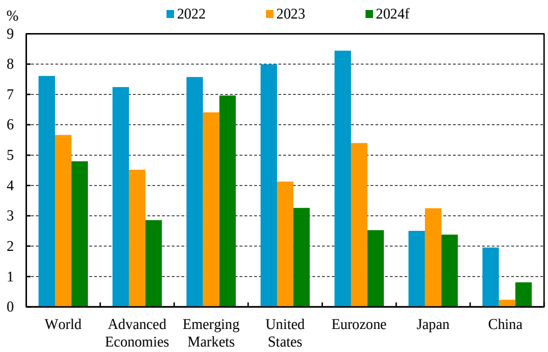
(OPEC+) and the Red Sea shipping crisis led to a rise in oil prices. On the contrary, market expectations of oversupply as a result of the deteriorating economic outlook in China, along with a greater-than-expected increase in output among non-OPEC countries, suppressed the potential rise in prices. In sum, crude oil prices fluctuated within a limited range throughout the year (Chart 2.2). In terms of commodity prices, as central banks in major economies continued to adopt tightening monetary policies to curb inflation, the annual average of the R/J CRB Index, designed to track overall global commodity prices, came down to 272 in 2023 from 285 the previous year. As a result, the global CPI inflation rate declined to 5.7% in 2023 from 7.6% in 2022. Among economies, advanced economies and emerging economies saw decreases to 4.5% and 6.4%, respectively (Chart 2.3), albeit still higher than the pre-Russia-Ukraine war level in 2021.[13]

Chart 2.2 Global commodity prices



Source: Bloomberg.

Chart 2.3 Global headline inflation indices



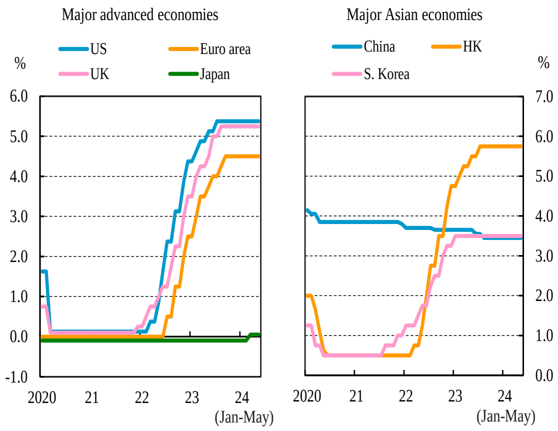
Note: Figures for 2024 are S&P Global Market Intelligence estimates.
Source: S&P Global Market Intelligence (2024/5/15).

From the beginning of 2024 onwards, a constant softening in labor markets and relatively tight monetary policies helped cool inflation. However, given ongoing geopolitical tensions, commodity prices may be exposed to upside risks again owing to shipping disruptions. Considering this, together with food insecurity arising from extreme climate events and El Niño, as well as rigidity of services sector prices, S&P Global predicts that the global CPI annual growth rate will drop only moderately from 5.7% to 4.8% in 2024. On one hand, the rate in advanced economies is expected to continuously decrease to 2.9%. On the other hand, S&P Global anticipates that the CPI inflation rate of emerging economies will rebound to 7.0% as many economies in Latin America and emerging Europe have already begun easing cycles (Chart 2.3).

[13] The global CPI inflation rate in 2021 was 3.9%. Among economies, advanced economies and emerging economies reported CPI inflation rates of 3.2% and 3.9%, respectively. For more details, please refer to CBC (2023), *Financial Stability Report*, May.

The future monetary policy path of major central banks remains unclear

Chart 2.4 Policy rates in major economies



Notes: 1. Advanced economies: figure for the US is based on the median of the federal funds rate target range; for the euro area, the interest rate on the main refinancing operations; for the UK, Bank Rate; for Japan, interest rate on banks' excess reserves.
2. Asian economies: figure for China is based on one-year loan prime rate; for Hong Kong, Base Rate; for South Korea, Base Rate.
3. Figures are as of May 15, 2024.

Sources: Central banks and monetary authority websites.

Since the second half of 2023, considering the progress made on combating inflation, together with subdued global manufacturing, moderate activity in services sectors such as tourism and entertainment, and rising global geopolitical risks that might hinder global trade recovery, most of the major economies' central banks have paused interest rate hikes but kept rates at an elevated level. Among them, the Fed put a hold on interest rate hikes after raising its target band for the federal funds rate to 5.25%-5.50% in July 2023, and continued to reduce the size of its balance sheet. The Fed emphasized it would maintain the target range until inflation was moving sustainably toward 2%.

The European Central Bank (ECB) suspended reinvestments under the asset purchase program as of July 2023, and raised its main interest rates two times, totaling 0.5 percentage points (pps), in July and September, respectively, before keeping them unchanged. The ECB stated that it would gradually adjust its monetary policy stance based on the incoming economic and financial data, the dynamics of underlying inflation and the transmission effects of monetary policy on the inflation outlook. In view of the ongoing inflationary pressures resulting from wage growth, the Bank of England (BoE) also paused rate hikes after raising its Bank Rate in August 2023 by 0.25 pps to 5.25%. As for Japan, thanks to relatively mild domestic inflationary pressures, the Bank of Japan (BOJ) kept an accommodative monetary policy. Nonetheless, in March 2023, the BOJ raised the policy rate by about 0.10 pps, ending its negative interest rate policy (Chart 2.4).

Among Asian economies, China continued its accommodative monetary policies to underpin the real economy. Since the second half of 2023, the People's Bank of China (PBOC) has successively reduced the loan prime rate and the reserve requirement ratio for financial institutions. Meanwhile, the Bank of Korea decided to maintain its restrictive monetary policy stance over a certain period of time in the future. It will keep its policy rate unchanged at 3.50% with the aim of ensuring price stability. The Hong Kong Monetary Authority, for the purpose of maintaining effective operation of the linked exchange rate system, raised the Base Rate by 0.25 pps in July 2023 following the Fed's rate hikes (Chart 2.4).

Currently, central banks in the US and Europe intend to maintain interest rates at restrictive levels until inflation falls back to the desired range. However, the timeline for rate cuts, to some extent, still remains uncertain. A premature pivot toward monetary easing could lead to an overheated economy triggering asset price bubbles, thus pushing up inflation once again. Instead, if rates were cut too late, it could result in a recession and, in turn, have an impact on the financial system. The future trajectory of monetary policy, therefore, warrants close attention.

2.1.2 Global financial conditions

From the beginning of 2023 onwards, despite the fact that global central banks maintained high interest rates to curb inflation, the pace of rate hikes has slowed, which has fueled optimism about future rate cuts. As a result, international stock and bond markets have rebounded noticeably and global financial conditions have turned to ease. However, despite a slight easing in China, the poor economic outlook, coupled with significant declines in property prices and corporate valuations, means that China's financial conditions have been kept somewhat tight by historical standards.

Looking ahead to 2024, several factors warrant close attention as they could heighten global financial instability risks, including the future trajectories of monetary policies among major central banks in advanced economies (e.g., the Fed), the deterioration of credit quality in the US CRE markets, the ongoing developments in China's financial and real estate markets, together with its substantial levels of local government debt, and the elevating geopolitical and cyber risks.

Financial conditions turned to ease

In 2023, although major economies, such as Europe and the US, continued to implement monetary tightening to tame inflation, investors anticipated that inflation would soon ease and central banks were likely to achieve a soft landing relying on their policy tools. Supported by widespread market expectations of interest rate cuts, corporate valuations in advanced economies like Europe and the US improved, resulting in gradually easing financial conditions. On the other hand, in China, financial conditions have eased slightly amid monetary loosening. However, concerns surrounding the lack of economic growth momentum and the pressure on the real estate market have raised financial stability risks. These issues have eroded the prices of risky assets and investor confidence, keeping financial conditions relatively tight.

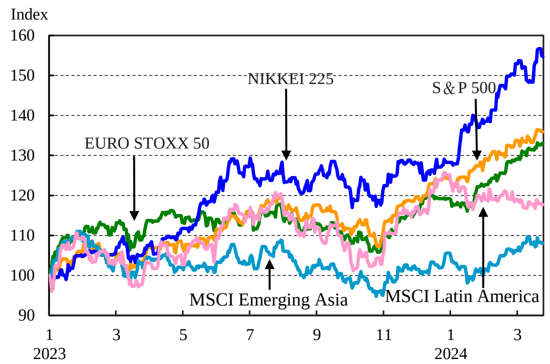
Since the beginning of 2024, market investors have held a cautiously optimistic outlook on achieving a soft landing. This, together with decreasing long-term bond yields and the recovery of stock and corporate bond markets, have further loosened financial conditions, especially in advanced economies. In emerging markets, decreasing volatility in exchange rates has led to a lower external financing risk, thus modestly easing financial conditions. In China, notwithstanding further easing of financial conditions compared to a year earlier, the overall condition remained tight by historical standards owing to persistent weakness in the real estate market.

The future trajectories of monetary policies in advanced economies will have decisive impacts on financial markets

From the beginning of 2023 onwards, amid abating inflation, global stock markets have been mildly recovering. Nonetheless, in October, the surge in US government bond yields reduced the attractiveness of stocks, bringing about capital outflows from stock markets and a reversal in prices. Since November, with market expectations that the Fed's rate hike cycle would conclude soon, along with optimistic prospects in industries like semiconductors fueled by robust demand for AI-related products, stock markets in Europe, the US, and Japan saw substantial gains, with Japan showing the most remarkable increase (Chart 2.5).

With regard to bond markets, in 2023, as a consequence of ongoing tightening monetary policies by central banks in Europe and the US, government bond yields gradually ascended. Among them, the yield on the US 10-year Treasury hit a 16-year high in October but later retreated as the market predicted a shift in the Fed's monetary policy stance. Subsequently, European and US bond yields fluctuated within a narrow range. Japan scrapped its negative interest rate policy, leading to mounting government bond yields. In China, monetary policy remained accommodative owing to a slower-than-expected economic recovery, which triggered a gradual decline in

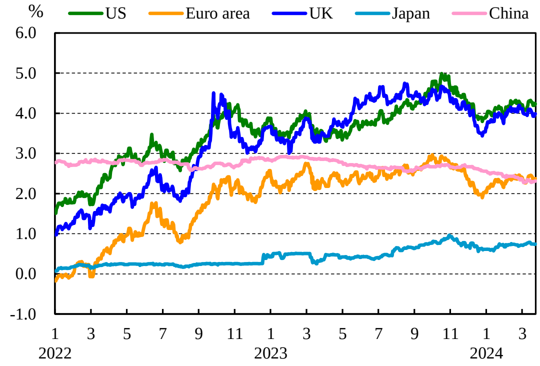
Chart 2.5 Major international equity indices



Notes: 1. January 1, 2023 = 100.
2. The EURO STOXX 50 refers to a stock index consisting of the largest 50 stocks in the 12 major economies of the euro area.
Source: Bloomberg.

bond yields (Chart 2.6). The movement of US interest rates has caused fluctuations in both the global financial cycle and financial asset prices. Therefore, the end of the Fed's rate hike cycle will undoubtedly pose a critical impact on global financial markets, warranting close attention.

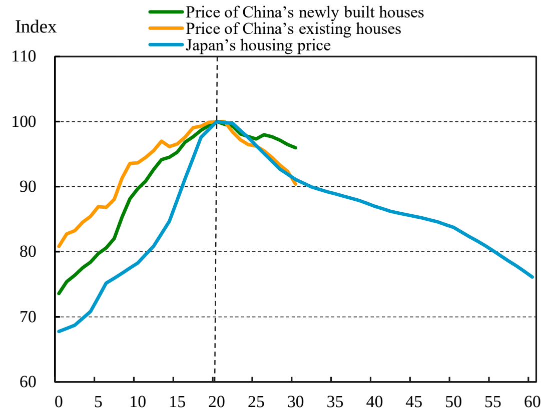
Chart 2.6 10-year government bond yields in major economies



Source: Bloomberg.

The weakening of China's housing and stock markets, coupled with unresolved local government debt issues, could exert a serious adverse effect on financial institutions

Chart 2.7 China versus Japan's 1990s housing market movements



Notes: 1. The vertical axis represents an index with the highest data point set to 100.
2. On the horizontal axis, the starting point of the data is 0, and 60 represents 60 months after the starting point. For China's data of newly built houses, the starting point is September 2021; for data of existing houses, the starting point is December 2021. The starting point for Japan's housing price data is September 1990.

Source: IMF (2024), Global Financial Stability Report, April.

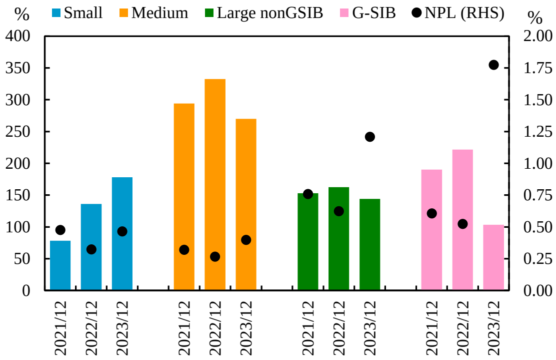
Compared to the housing price trajectories during Japan's real estate bubble in the early 1990s, China's housing market downturn has shown few signs of bottoming out and declines in the prices of newly built houses have been moderate (Chart 2.7). Yet, home prices, sales and investments have dropped off sharply. In spite of the government's supportive policies, the effectiveness in restoring home buyers' confidence was somewhat limited. The abovementioned policies include mortgage rate cuts, easing of home purchase restrictions, and encouraging banks to grant loans for real estate enterprises and the redevelopment of urban villages, which are literally traditional villages within a city.

Apart from the real estate market, the continuing operation of China's local government financing vehicles (LGFVs) has also raised market concerns. By the end of 2022, total LGFV debt reached 45% of GDP, with four-fifths held by banks, mainly in the form of loans. More than 30% of this LGFV debt has had an interest coverage ratio below 1, which can be considered nonperforming without government support. If the banks were to suffer half of the debt restructuring cost of the LGFV debt, they could face impairment charges of about RMB3.4

trillion, equivalent to a reduction of 1.7 pps in their average capital adequacy ratios.

Reflecting property market ailments as well as disinflationary pressures, China's stock market has come under pressure. In comparison to the strong rebound in global stock markets, Chinese and Hong Kong stock prices saw a slump, dragging down the net asset value of equity and hybrid mutual funds by over 20%. Since wealth management products such as funds are held almost exclusively by retail investors who lack experience in handling market volatility, an increase in bond yields could prompt large-scale redemptions by investors. This, in turn, would induce further spikes in yields and trigger tightening in other funding markets.

Chart 2.8 CRE coverage and NPL ratios in the US



Notes: 1. The left scale represents the coverage ratio, while the right scale represents the nonperforming loan rate.
2. Small banks correspond to banks with less than $10 billion in total assets, Medium banks correspond to banks with assets between $10 billion and $100 billion, Large nonGSIB corresponds to large banks with assets above $100 billion not classified as G-SIBs, and G-SIB corresponds to banks classified as G-SIBs.

Source: IMF (2024), *Global Financial Stability Report*, April.

The CRE sector in the US faced big challenges

Since the outbreak of the pandemic in 2020, the real estate market has undergone structural changes. Under the impacts of supply chain disruptions, labor shortages, and a shifting preference to work from home, the CRE market in the US and Europe witnessed a notable downturn. In 2023, global real CRE prices fell, with the US office sector dropping sharply by 23%. In a high interest rate environment, it was estimated that of the $1 trillion of debt maturing in the US CRE market in 2024 and 2025, the refinancing gap would exceed $300 billion. In addition, the quality of CRE loans also deteriorated markedly. The nonperforming CRE loan rate for US banks by the end of 2023 doubled from a year earlier, reaching 0.81%, and the coverage ratio slid to 154%, with a more pronounced decrease for global systemically important banks (G-SIBs) than for other banks (Chart 2.8).

In 2024, global CRE prices could decline by more than 10% in several segments. This may have a significant effect on small and regional banks, which are generally lower capitalized and have a larger exposure to the CRE sector than large banks, thus constraining their funding ability when CRE prices fall. Under severe scenarios, this could bring about more restrictive funding conditions, and ultimately form a vicious cycle of plummeting CRE prices and bank losses, which might pose an adverse shock to the macro-financial environment.

Geopolitical and cyber risks may threaten financial stability

With the outbreak of the Russia-Ukraine war, and conflicts between Israel and Palestine, as well as Israel and Iran, prolonged hostilities will continuously impose high uncertainty on the global economic outlook. If these conflicts escalate and severely impact economic activities, there would be a sudden pullback from risky assets, resulting in negative effects such as large declines in asset prices.[14] Furthermore, geopolitical tensions will induce a reallocation of cross-border credit lines and investment portfolios. A worsened situation could cause a reversal of capital flows from rival countries and a reduction in foreign direct investment. This, in turn, may affect asset prices and allocations, and disrupt the international payment system, thereby undermining macro-financial stability.

Since the outbreak of the COVID-19 pandemic in 2020, owing to increasing dependency on technology, together with financial innovation and Russia's invasion of Ukraine, the number of cyberattacks has almost doubled. Additionally, almost one-fifth of the cyberattacks in the past two decades have influenced the financial sector, with banks being the most frequent targets. Cyberattacks can dampen market and public confidence in financial institutions, potentially leading to bank runs and posing liquidity risks. Eventually it could adversely affect macroeconomic and financial outcomes by undermining the ability of banks to grant loans and disrupting the functioning of payment systems.

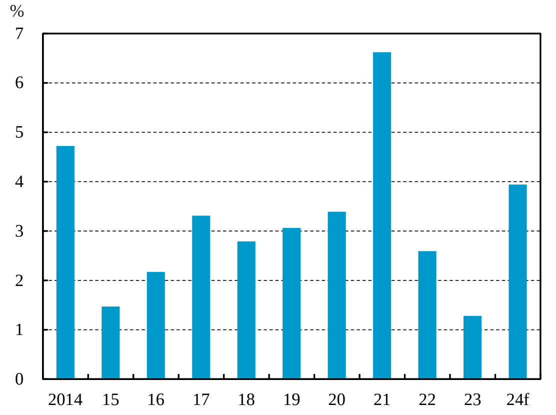
[14] OECD (2023), *OECD Economic Outlook, Volume 2023 Issue 2*, November.

2.2 Domestic macro environment

2.2.1 Domestic economic and fiscal conditions

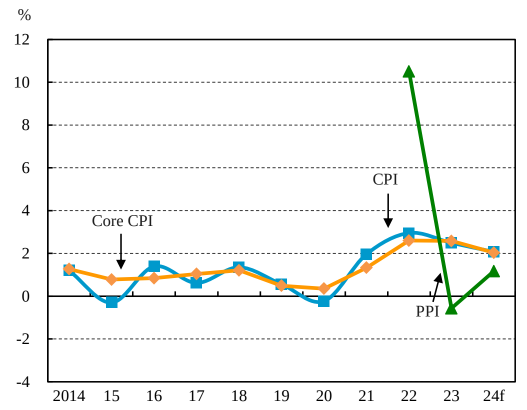
In 2023, under the environment of declining exports amid increasing private consumption, domestic economic growth decelerated and the inflation rate continued its downward trend. External debt servicing capacity stayed robust on the back of a persistent surplus in the balance of payments and ample FX reserves. Moreover, despite fiscal deficits, outstanding public debt stayed within a manageable level, which was conducive to weathering uncertainties surrounding international political and economic situations and maintaining economic growth momentum.

Chart 2.9 Economic growth rate in Taiwan



Note: Figure for 2024 is a DGBAS forecast released on May 30, 2024.
Source: DGBAS.

Chart 2.10 Consumer and wholesale price indices (% change, yoy)



Notes: 1. Figures for Core CPI in 2024 are CBC forecasts released on March 21, 2024; other figures are DGBAS statistical data and a forecast released on May 30, 2024.
2. DGBAS discontinued the calculation of the WPI from January 2023 and introduced the PPI from January 2021 to align with international practices.
Sources: DGBAS and CBC.

Taiwan's economic growth decelerated

In 2023, although exports declined, the impact of the domestic epidemic diminished, domestic consumption momentum grew rapidly, and private consumption continued to increase. The annual economic growth rate decelerated to 1.28% (Chart 2.9).[15] Looking ahead to 2024, the anticipated rebound in global commodity trade growth, together with expanded business opportunities in applications of emerging technologies, are expected to bolster exports and private investment momentum. In addition, moderate growth in private consumption, the further increase in government expenditure, and a lower base comparison period are expected to contribute to the economic recovery. Taking into account the strong demand for emerging technologies such as Artificial Intelligence (AI), which

[15] See Note 2.

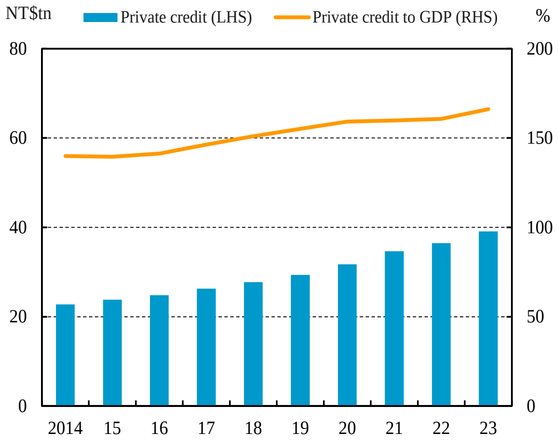
boosts Taiwan's international trade momentum, the DGBAS revised the annual economic growth rate forecast up to 3.94% (Chart 2.9).

Domestic inflation rates maintained a gradual downward trend

In 2023, as the global economy slowed down and demand weakened, international crude oil and raw material prices declined, resulting in a downward trend in annual producer price index (PPI) inflation. Annual PPI inflation dropped to -0.57% from 10.51% a year earlier. With regard to consumer prices, although domestic demand for entertainment and services increased significantly after the pandemic, commodity prices rose at a slower pace owing to declines in imported crude oil and other raw materials. As a result, annual CPI inflation decreased to 2.49% in 2023 from 2.95% a year earlier. Core CPI inflation, which excludes fruit, vegetables, and energy, also slightly decreased to 2.58% in 2023 from 2.61% a year earlier (Chart 2.10). In April 2024, influenced by the slower increase in food, entertainment, and services prices, annual CPI inflation continued to decrease to 1.95%. Similarly, annual core CPI inflation also decreased to 1.81%, maintaining a gradual downward trend.

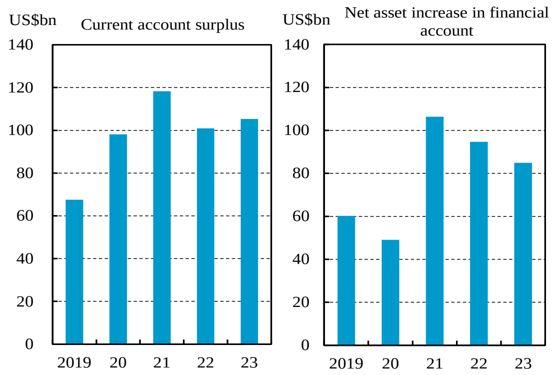
Looking ahead to 2024, international institutions forecast that oil prices will be slightly higher than they were a year earlier. Domestic commodity prices are expected to rise moderately, while inflation is anticipated to decrease because of the higher base period effect on domestic services prices. Therefore, the Bank forecasts that the domestic inflation rate will decelerate compared to a year earlier. However, following the domestic electricity price adjustment in April, the Bank revised its predicted annual CPI and core CPI inflation rates for 2024 upward to 2.16% and 2.03%, respectively, on March 21 (Chart 2.10), which

Chart 2.11 Private credit provided by financial institutions



Sources: DGBAS and CBC.

Chart 2.12 Current account surplus and net asset increase in financial account



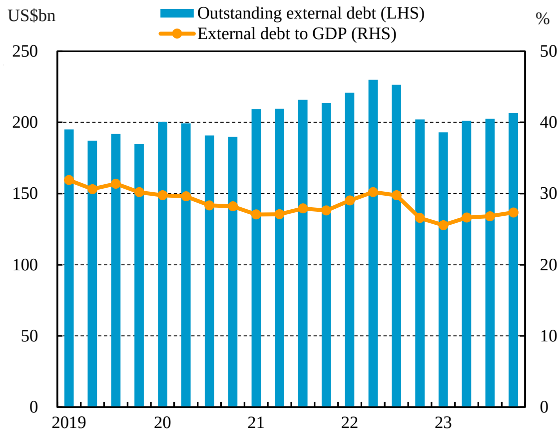
Source: CBC.

were still lower than 2.49% and 2.58% as compared to a year earlier. Furthermore, considering the still-high prices of essential consumer items such as medical care, food, and housing, the DGBAS revised its predicted annual CPI inflation rate for 2024 upward to 2.07% in May.

Credit to the private sector increased continually

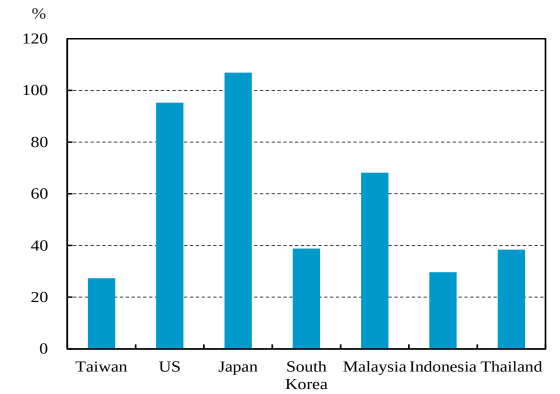
Private credit [16] to private enterprises and households provided by domestic financial institutions continued to grow in 2023, reaching NT$39.11 trillion at the end of the year, an increase of 7.29% year on year, which far exceeded the economic growth rate of 1.28% in the same year. The ratio of credit to GDP registered 166.11%, also higher than 160.72% as compared to a year earlier (Chart 2.11). This showed that the credit provided by domestic financial institutions was sufficient to support economic activity.

Chart 2.13 External debt servicing capacity



Notes: 1. Figures for outstanding external debts are on an end-of-period basis.
2. Figures for GDP are on an annualized basis.
Sources: CBC and DGBAS.

Chart 2.14 External debt to GDP in selected countries



Note: Figures are as of the end of 2023.
Sources: CEIC and DGBAS.

Current account sustained a surplus and FX reserves stayed ample

In 2023, owing to an increase in the merchandise trade surplus, the annual current account surplus rose to US$105.3 billion (Chart 2.12, left panel), or 13.95% of the year's GDP, an increase of US$4.4 billion, or 4.36% over the previous year.[17] In terms of the financial account, as banks and domestic securities investment trust funds increased foreign securities investments and enterprises also increased foreign direct investment, which boosted foreign assets, the financial account posted an increase of US$84.9 billion throughout the year (Chart

[16] Private credit refers to the loans granted by major financial institutions to various private enterprises, individuals, and non-profit organizations in Taiwan, as well as the purchases of securities such as stocks, corporate bonds, commercial paper, acceptance bills, beneficiary certificates issued by private enterprises, and the equities of long-term investments in private enterprises.

[17] For the ratio of current account deficit to GDP, it is generally deemed that its critical value as a risk measure is 3%. A country in which the reading is greater than 3% and has risen by at least 5 pps from the previous year is considered to be relatively high risk.

2.12, right panel). Meanwhile, the Bank's reserve assets increased by US$14.3 billion compared to the previous year.

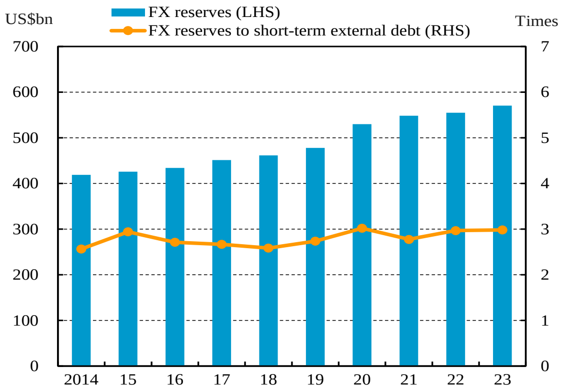
FX reserves amounted to US$570.6 billion at the end of 2023, rising by 2.82% from a year earlier, mainly supported by the earnings from portfolio investment operations of FX reserve assets. At the end of April 2024, the FX reserves slightly decreased to US$567 billion.

The scale of external debt expanded, while debt servicing capacity remained strong

Primarily because of an increase in the short-term external debt of the domestic banking sector, Taiwan's external debt[18] slightly rose to US$206.5 billion at the end of 2023, increasing by 2.15% compared to a year earlier (Chart 2.13). The largest share of external debt went for the private sector, registering US$205.6 billion, while the public sector share only reached US$0.9 billion. Taiwan's external debt to GDP stood at 27.35% at the end of 2023, slightly increasing from 26.57% at the end of the previous year. It was lower than those in the US and neighboring Asian countries (Chart 2.14), and far below the internationally recognized alert threshold.[19]

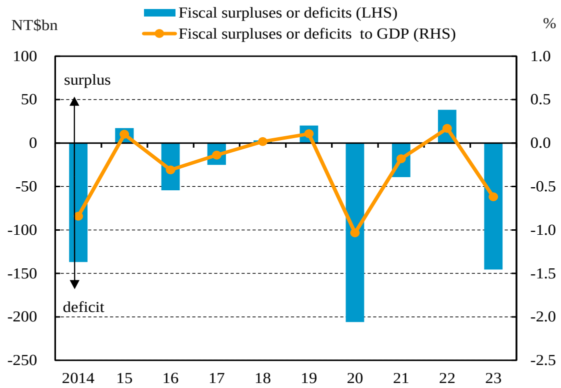
Furthermore, at the end of 2023, the ratio of FX reserves to short-term external debt slightly rose to 2.98 times owing to an increase in FX reserves (Chart 2.15), and was still much higher than the internationally recognized alert threshold,[20] implying that Taiwan's FX reserves have a decent capacity to meet short-term external debt obligations.

Chart 2.15 Short-term external debt servicing capacity



Source: CBC.

Chart 2.16 Fiscal surpluses or deficits



Notes: 1. Fiscal position data include those of central and local governments.
2. Figures for 2023 are final accounts for the central government and self-compiled final accounts for local governments.

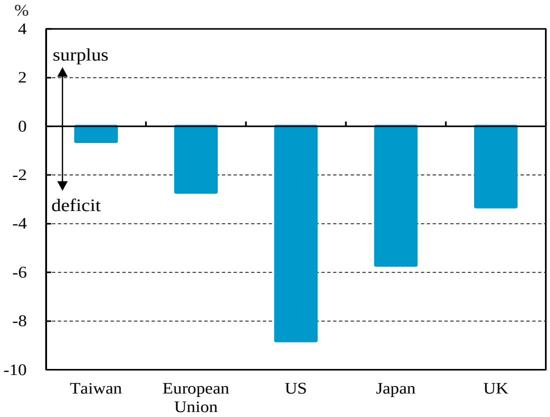
Sources: MOF and DGBAS.

[18] See Note 3.
[19] The general international consensus is that a country with a ratio of external debt to GDP lower than 50% is deemed to be relatively low risk.
[20] The general international consensus is that a country with a ratio of FX reserves to short-term external debt higher than 100% is deemed to be relatively low risk.

Although the fiscal position registered a deficit, government debt to GDP decreased and stayed within a manageable level

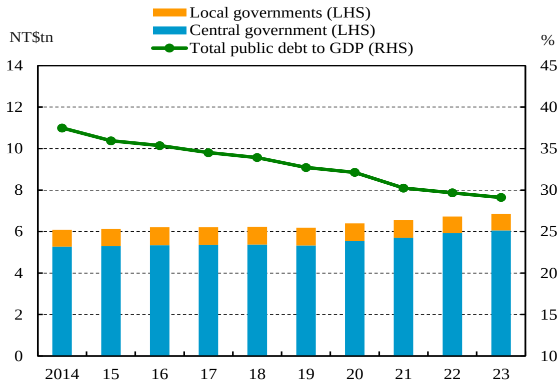
In 2023, to address uncertainties in international political and economic conditions and sustain economic growth momentum, the government continued to promote several initiatives such as the Forward-looking Infrastructure Development Program Phase 4, technology-driven power generation, the net-zero transition, improvements in defense and armaments, and measures to counter the falling fertility rate. Consequently, the government fiscal deficit stood at NT$145.6 billion,[21] equivalent to 0.62% of GDP for the year (Chart 2.16), which was much lower than those of major economies including the US, the UK, and Japan (Chart 2.17), and also much lower than internationally recognized minimum levels.[22]

Chart 2.17 Fiscal surpluses or deficits to GDP in selected countries



Note: Figures are as of the end of 2023.
Sources: IMF and MOF.

Chart 2.18 Public debt



Notes: 1. Outstanding public debt refers to non-self-liquidating debt with a maturity of one year or longer, excluding external debt.
2. Figures for 2023 are preliminary final accounts for the central government and self-compiled final accounts for local governments.

Sources: MOF and DGBAS.

The outstanding public debt at all levels of government[23] rose to NT$6.9 trillion at the end of 2023, increasing by 2.58% year on year. Nevertheless, the ratio of total public debt to the year's GDP continued to drop to 29.11% (Chart 2.18), indicating that government debt stayed within a manageable level.[24]

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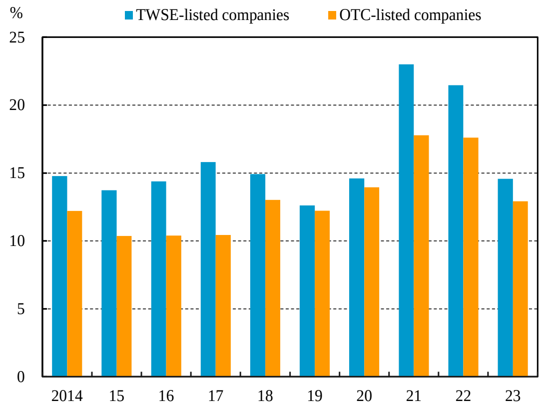
[21] See Note 4.
[22] See Note 5.
[23] The term "outstanding public debt at all levels of government" as used in this report refers to outstanding non-self-liquidating debt with a maturity of one year or longer.
[24] See Note 6.

2.2.2 Corporate sector and household sector

Corporate sector

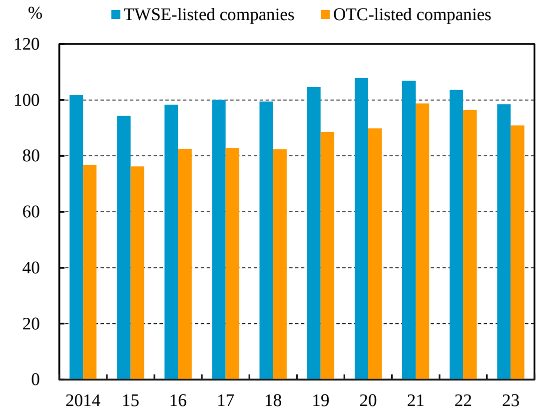
Since 2023, global economic growth has remained sluggish, resulting in a decline in overall profitability within the corporate sector. By the end of the year, listed companies had improved their financial leverage and maintained strong short-term debt servicing capacity, while their foreign currency debt positions continued to decrease. However, it remains imperative to prudently manage their exchange rate risks. The NPL ratio for corporate loans granted by financial institutions reached a new low at the end of the year, and the credit quality for the corporate sector was satisfactory.

Chart 2.19 Return on equity in corporate sector



Note: Return on equity = net income before interest and tax/average equity.
Source: TEJ.

Chart 2.20 Leverage ratios in corporate sector



Note: Leverage ratio = total liabilities/total equity.
Source: TEJ.

Decline in overall revenue of TWSE- and OTC-listed companies

Affected by continually weak global economic growth in 2023, the corporate sector experienced a significant reduction in annual revenue, leading to a decline in the overall profitability of listed companies. The average ROEs for TWSE- and OTC-listed companies decreased to 14.57% and 12.92%, respectively (Chart 2.19).

The leverage for listed companies improved, and their short-term debt servicing capacity remained sound

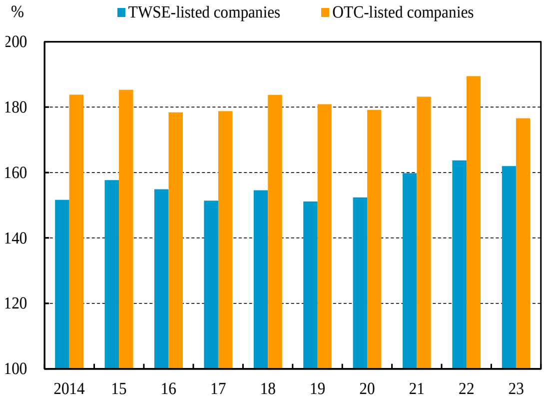
At the end of 2023, the average leverage ratios for TWSE- and OTC-listed companies decreased from 103.62% and 96.44% at the end of the previous year to 98.44% and 90.88%, respectively (Chart 2.20), indicating a continuous improvement in the overall financial leverage level of listed companies.

Furthermore, the current ratios for TWSE- and OTC-listed companies declined from 163.75% and 189.47% at the end of the previous year to 161.97% and 176.60%, respectively (Chart 2.21). Their average interest coverage ratios both dropped sharply from 22.87 times and 23.79 times at the end of the previous year to 10.83 times and 13.19 times, respectively (Chart 2.22), because of the decrease in net profits. However, the overall short-term debt servicing capacity of listed companies remained sound.

Foreign currency liabilities of the corporate sector contracted, yet their exchange rate risks still necessitate prudent management

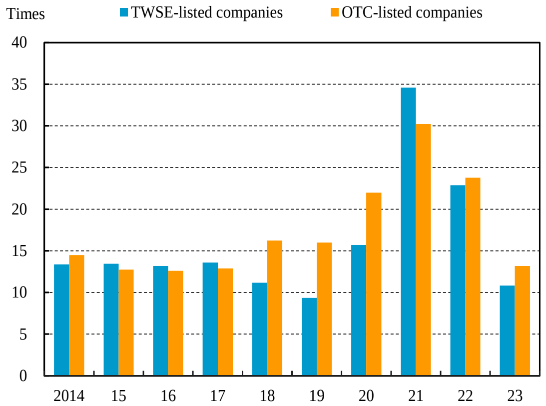
With the ongoing reduction in foreign currency liabilities, the foreign currency liability-to-equity ratios of listed companies decreased from 28.12% and 20.01% at the end of the previous year to 26.02% and 16.38%, respectively, as of the end of September 2023 (Chart 2.23). Given the uncertain monetary policies of major economies and the increasing geopolitical risks in recent years, spillover effects could exacerbate volatility in the international foreign exchange market, impacting the ability of listed companies to service their foreign currency liabilities. Therefore, it remains advisable for listed companies to continue prudently managing exchange rate risks.

Chart 2.21 Current ratios in corporate sector



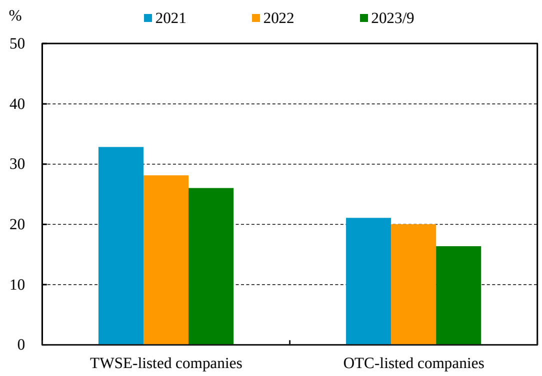
Note: Current ratio = current assets/current liabilities.
Source: TEJ.

Chart 2.22 Interest coverage ratios in corporate sector



Note: Interest coverage ratio = income before interest and tax/interest expenses.
Source: TEJ.

Chart 2.23 Foreign currency liability-to-equity ratios in corporate sector

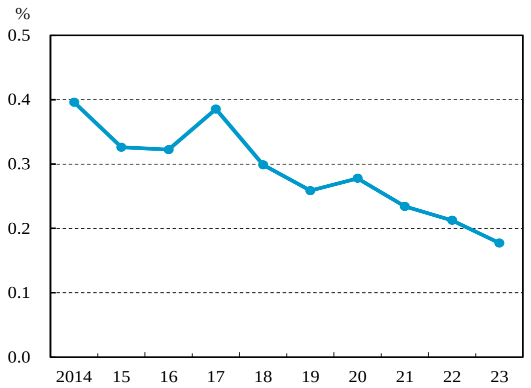


Note: Data on foreign currency liability in the corporate sector has been disseminated from 2020 onwards.
Source: TEJ.

Credit quality remained satisfactory as the NPL ratio of the corporate sector continued to reach a new low

At the end of 2023, the NPL ratio for corporate loans from financial institutions decreased to a new low of 0.18% from 0.21% a year earlier (Chart 2.24). This indicates that the overall credit quality of the corporate sector remained satisfactory.

Chart 2.24 NPL ratio of corporate loans

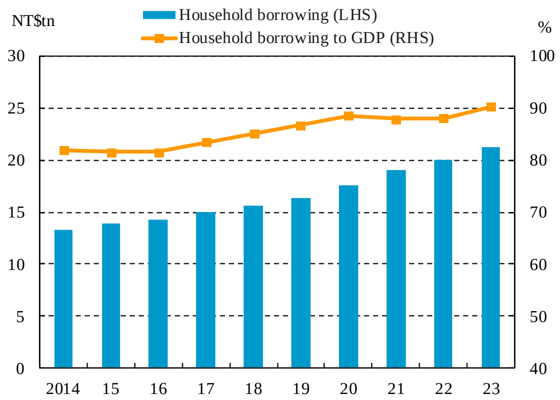


Source: JCIC.

Household sector

Household borrowing expanded continually and the short-term household debt servicing pressure tightened marginally in 2023. However, the household sector held enormous net worth, reflecting that the debt servicing capacity of households remained sound. Moreover, the NPL ratio of household borrowing from financial institutions grew slightly but remained at a low level, indicating sound credit quality of household borrowing. Nevertheless, considering the rise in interest rates on bank loans and the fall in real regular earnings for employees owing to inflation, the debt servicing capacity of some households with higher debt burdens warrants close attention.

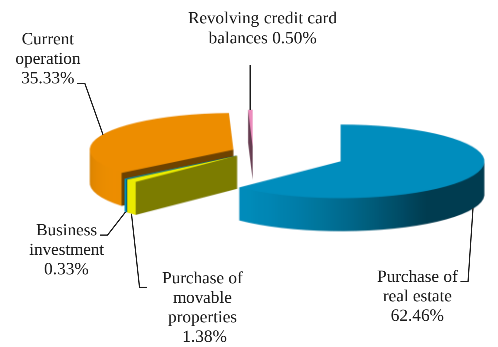
Chart 2.25 Household borrowing to GDP



Sources: CBC, JCIC, and DGBAS.

Household borrowing continually expanded

Chart 2.26 Household borrowing by purpose

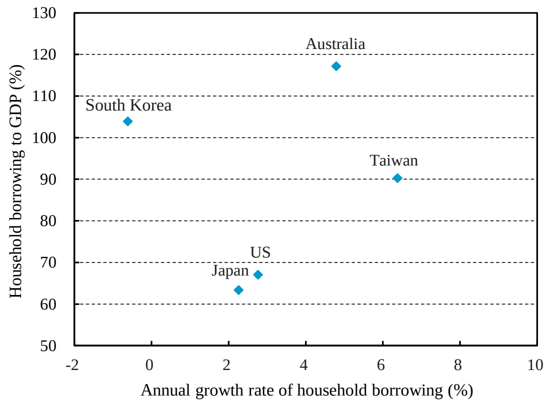


Note: Figures are as of the end of 2023.
Sources: CBC and JCIC.

Household borrowing reached NT$21.25 trillion at the end of 2023, equivalent to 90.27% of annual GDP for the year (Chart 2.25), slightly higher than the 88.10% of the previous year. The main purpose of household borrowing was to purchase real estate, accounting for 62.46% (Chart 2.26).

Household borrowing grew continually with the annual growth rate rebounding to 6.38% in 2023, mainly attributable to the purposes of real estate purchase and working capital needs. Compared to other countries, the household borrowing to GDP in Taiwan was higher than those in the US and Japan, but lower than those in South Korea and Australia. Nevertheless, owing to a higher growth of total household borrowing, the impact of household borrowing growth on household debt burden warrants attention (Chart 2.27).

Chart 2.27 Household indebtedness in selected countries

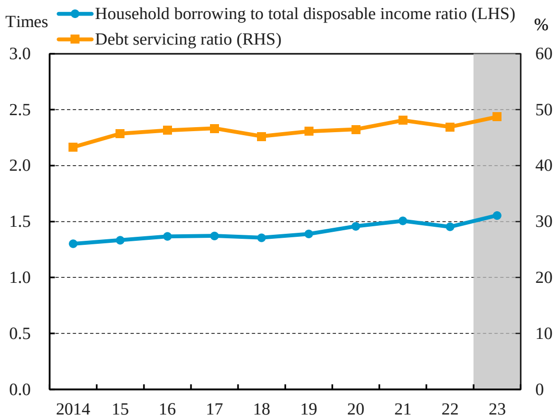


Note: Figures are as of the end of 2023.
Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, JCIC, and CBC.

Household indebtedness increased but net worth was high

The ratio of household borrowing to total disposable income[25] slightly increased to 1.55 in 2023, reflecting a rising household debt burden. Moreover, with the rise in interest rates on bank loans, the debt servicing ratio also ascended to 48.72% (Chart 2.28), indicating that short-term household debt servicing pressure tightened. However, household net worth[26] in Taiwan has been remarkable and held at more than 8 times the GDP in 2022. Compared to other countries, the household net worth to GDP ratio in Taiwan was far higher than those in the US, the UK, Singapore and South Korea (Chart 2.29), showing that the financial condition of households in Taiwan was sound.

Chart 2.28 Household indebtedness and debt servicing ratio



Note: Total disposable income in shaded area is a CBC estimate.
Sources: CBC, JCIC, and DGBAS.

The NPL ratios of household borrowing rose marginally, but remained at a low level, reflecting satisfactory credit quality

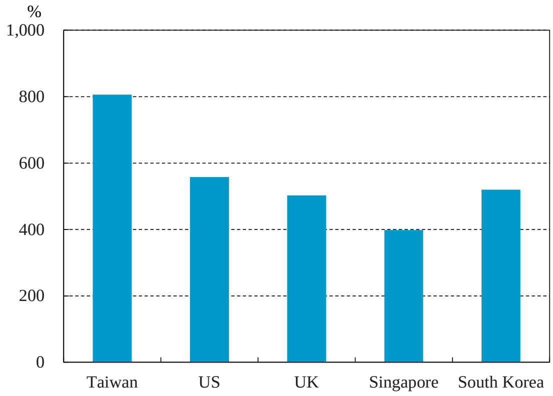
The NPL ratio of household borrowing rose marginally to 0.13% at the end of 2023 but remained at a low level. Among the categories, the NPL ratio of loans for purchase of real estate

[25] Total disposable income = disposable income + rental expenses + interest expenses.
[26] See Note 7.

declined further to a historical low of 0.07% (Chart 2.30), reflecting satisfactory credit quality.

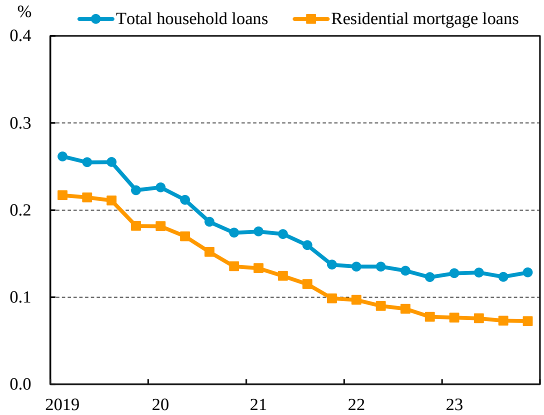
As the minimum wage rose in recent years, monthly regular earnings for employees registered an annual year on year growth rate of 2.19% in 2023. However, real monthly regular earnings for employees in 2023 decreased slightly by 0.05% year on year owing to inflation. This, coupled with rising interest rates on bank loans, indicated that the debt servicing capacity of some households with higher debt burdens warrants close attention.

Chart 2.29 Household net worth to GDP



Notes: 1. The household sector herein includes households and non-profit organizations.
2. Figures are as of the end of 2022.
Sources: DGBAS and official websites of selected countries.

Chart 2.30 NPL ratios of household borrowing



Source: JCIC.

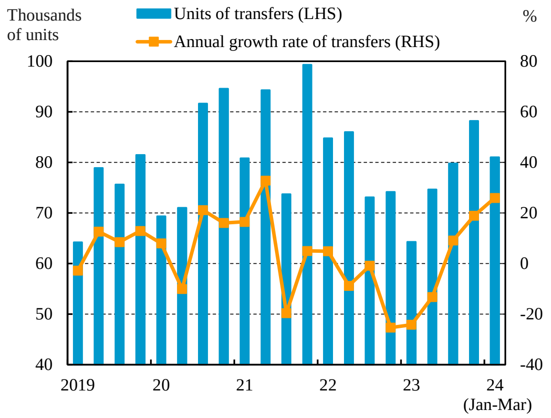
2.2.3 Real estate market

Transactions in the housing market grew quarter by quarter, bolstering the uptrend in house prices and pushing up the mortgage burden in 2023. Meanwhile, the number of newly built surplus housing (for sale) increased. As a result of the Bank's continuous implemention of targeted macroprudential measures, along with measures adopted by relevant ministries and government agencies to curb speculation in the housing market, the growth trends of banks' construction loans and house-purchasing loans slowed down. With a surge in the amount of the Preferential Housing Loans for the Youth,[27] the growth of banks' house-purchasing loans experienced a rebound in the second half of 2023. However, the related credit risk management remained sound.

[27] The enhanced project, new Preferential Housing Loans for the Youth, has been implemented since August 2023.

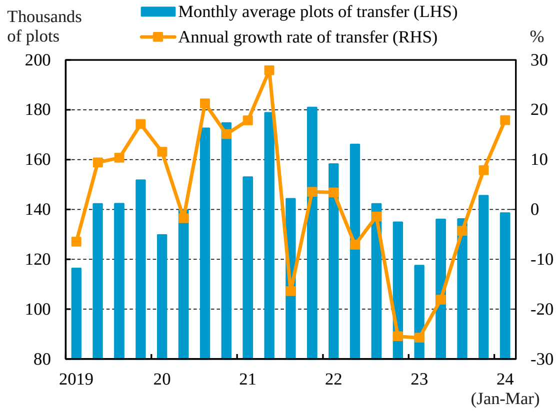
Transactions in the real estate market recovered

Chart 2.31 Number and growth of building transfers



Source: *Monthly Bulletin of Interior Statistics*, MOI.

Chart 2.32 Land transfers for transaction and annual growth rate



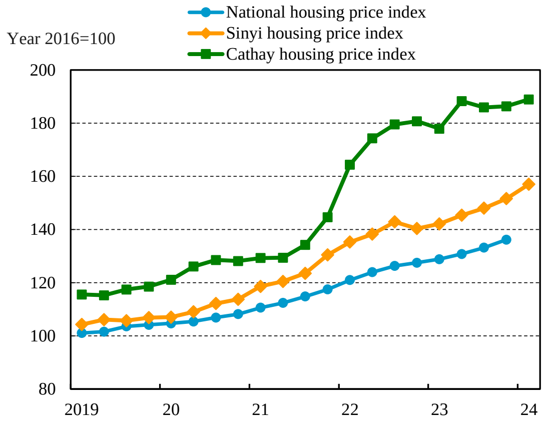
Source: *Monthly Bulletin of Interior Statistics*, MOI.

Domestic housing demand remained characterized by a wait-and-see sentiment during the first half of 2023 owing to the government's promulgation of partial amendments of *The Equalization of Land Rights Act* in February. This, coupled with a higher base period in the previous year, resulted in a continuously negative annual growth rate of the total number of building ownership transfers. Nevertheless, the demand for self-occupied residential houses had been stimulated since the implementation of the new Preferential Housing Loans for the Youth in August. Furthermore, coupled with the strong performance of Taiwan's stock markets and lingering inflationary pressures, it drove the demand for property investment. Additionally, there was an increased handover of new houses and a lower base period in the previous year, contributing to the growth rate turning positive with a year-on-year increase of 9.14% in Q3, and further rising to 18.94% in Q4. As a result, the total number of building ownership transfers decreased by 3.50% year on year to 307 thousand units in 2023 (Chart 2.31). In the first quarter of 2024, with a recovery of public confidence in buying houses and an expanding handover of new houses, the total number of building ownership transfers increased to 81 thousand units in Q1. Moreover, owing to a lower base period, the year-on-year growth rate went up to 26.01%.

In terms of land transactions, as a result of the lessening transactions in the housing market, real estate developers adjusted their land inventory downward in the first three quarters of 2023. Additionally, with the decline in exports from January to August, the land demand from manufacturers seeking to expand their factories diminished. Consequently, the total number of land ownership transfers showed negative growth in the first three quarters. As housing market transactions picked up in Q4, the annual growth rate rebounded (Chart 2.32), yet the entire year still experienced a decrease of 11.02% compared to the previous year.

From early 2024 onwards, as housing market transactions continued to increase, real estate developers became optimistic about the outlook of the housing market. This, coupled with a lower base period in the previous year, led to the total number of land ownership transfers surging to 17.90% in Q1 (Chart 2.32).

Chart 2.33 House price indices

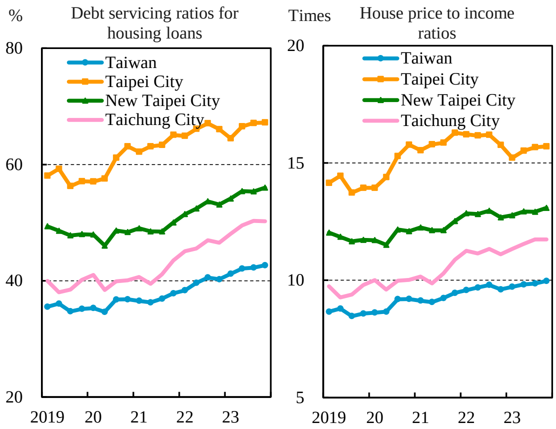


Note: For comparison purposes, all three indices use the same base year of 2016 (2016 average = 100).
Sources: MOI, Cathay Real Estate, and Sinyi Real Estate Inc.

Real estate prices remained high

The national housing price index released by the MOI continued to rise gradually in 2023 and reached a new high of 136.20 in Q4 (Chart 2.33). Moreover, the year-on-year growth rate in Q4 rose to 6.82%, ending the downward trend for five consecutive quarters. The Cathay housing price index (for newly built houses) hit a historical high of 188.32 in Q2 before slightly declining. Subsequently, with the housing market rebound, the index rose to 188.93 in 2024 Q1, increasing by 1.39% from the previous quarter, and the annual growth rate also expanded to 6.19%. The Sinyi housing price index (for existing houses) rose quarter by quarter in 2023, reaching a peak of 157.01 in 2024 Q1 (Chart 2.33), with the annual growth rate ascending to 10.48%.

Chart 2.34 Debt servicing ratios for housing loans and house price to income ratios



Source: *Statistics on Housing Affordability*, MOI.

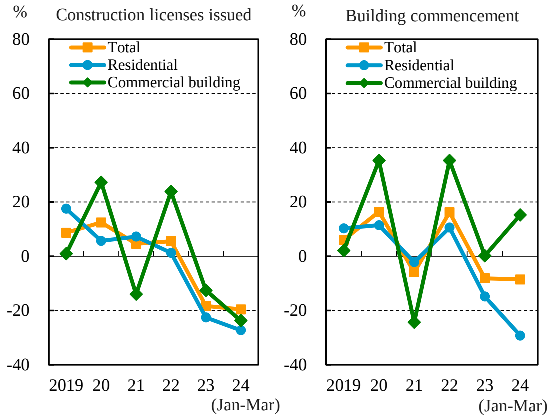
Mortgage burden increased

The debt servicing ratio for housing loans rose gradually quarter by quarter in 2023. Despite a slight decrease in interest rates on housing loans in Q4, the median housing price continued to rise, pushing the debt servicing ratio for housing to a record high of 42.66%. Among the cities in Taiwan, Taipei City showed the heaviest mortgage burden with its ratio registering 67.22% (Chart 2.34, left panel). Similarly, Taiwan's house price to income ratio grew quarter by quarter and reached a peak of 9.97 times in 2023 Q4 (Chart 2.34, right panel).

Construction licenses issued reduced significantly, and building commencement also kept shrinking, while the newly built surplus housing (for sale) expanded

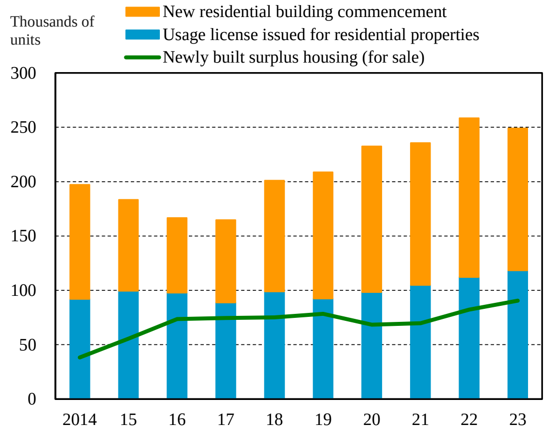
Owing to the sluggish transactions in the housing market, real estate developers conservatively launched new residential housing projects for pre-sale in the first half of 2023. Coupled with the fallen demand for expanding factories and a higher base period in the previous year, the total floor space of construction licenses issued significantly diminished by 18.30% year on year in 2023. This trend continued with a 19.58% year on year shrinkage in 2024 Q1. Meanwhile, the total floor space of construction commencement also decreased by 8.10% year on year in 2023, and by 8.54% year on year in 2024 Q1 (Chart 2.35).

Chart 2.35 Annual growth rates of floor space of construction licenses issued and construction commencement



Note: Commercial building includes buildings for commerce, industry, storage, business and service.
Source: *Monthly Bulletin of Interior Statistics*, MOI.

Chart 2.36 New residential buildings and newly built surplus housing (for sale)



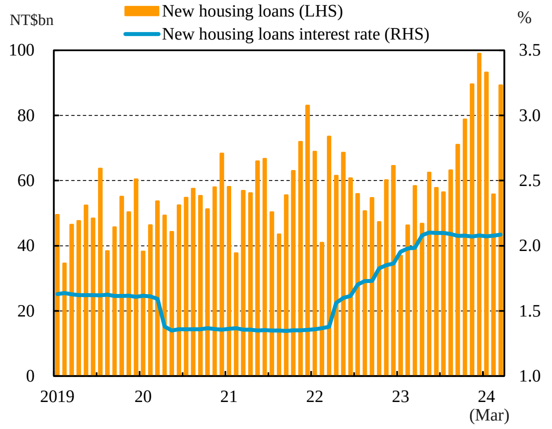
Note: Figures are yearly data, except for figure for 2023 of newly built surplus housing (for sale), which is as of the end of 2023 Q2.
Source: Real Estate Information Platform, MOI.

The total floor space of usage licenses issued consecutively increased by 11.29% year on year in 2023, resulting from successive completion of construction projects in recent years. The aforementioned total floor space increased by 11.51% in 2024 Q1, mainly because completion of those residential buildings surged by 38.44%.

According to statistics from the MOI, the number of newly built surplus housing (for sale) units has steadily expanded since 2022 Q1. In addition, the number of construction projects commenced for new residential buildings has exceeded 100 thousand units every year since 2008 (Chart 2.36). With the enormous supply, high prices, and no notable improvement in the sales transaction rate of new residential buildings, the inventory of newly built surplus housing (for sale) might continue to accumulate in the future.

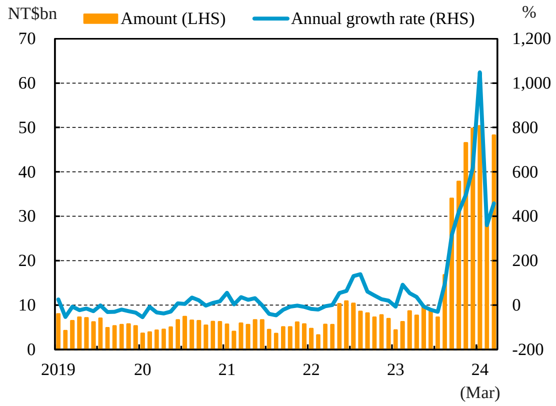
Growth in construction loans slowed, whereas growth in loans for house purchases and house refurbishments rebounded after a decline, while mortgage interest rates slightly rose along with the Bank's interest rate hikes

Chart 2.37 New housing loans by the dominant five banks – amount and interest rate



Source: CBC.

Chart 2.38 Preferential Housing Loans for the Youth from state-owned banks – amount and annual growth rate



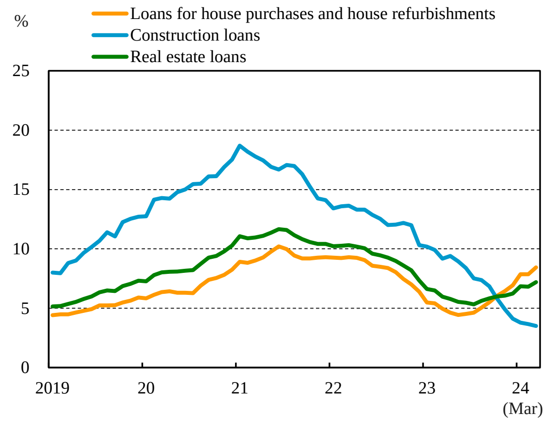
Source: *Statistics on Preferential Housing Loans for the Youth*, MOF.

The implementation of the new Preferential Housing Loans for the Youth has boosted public confidence in the housing market since August 2023. Accordingly, the dominant five banks remarkably extended their provision of new housing loans, with a monthly average amounting to approximately NT$63.9 billion, an increase of 8.4% compared to the previous year. The amount of these loans continued to rise by NT$238.2 billion in 2024 Q1 (Chart 2.37), and with a lower base period in the previous year, the annual growth rate expanded to 68.25%. In the same quarter, state-owned banks offered NT$127.4 billion in the Preferential Housing Loans for the Youth, reflecting an annual growth rate of 560.64% (Chart 2.38).

Regarding the interest rate of real estate loans, as the Bank raised its policy rates in March 2023, the average interest rate for new housing loans granted by the dominant five banks elevated to a new high of 2.101% in May. Afterwards, as the appropriated amounts in the Preferential Housing Loans for the Youth by the dominant five banks increased sharply, the interest rate mildly declined. However, it demonstrated a slight rebound to 2.086% after the Bank raised its policy rates again in March 2024 (Chart 2.37).

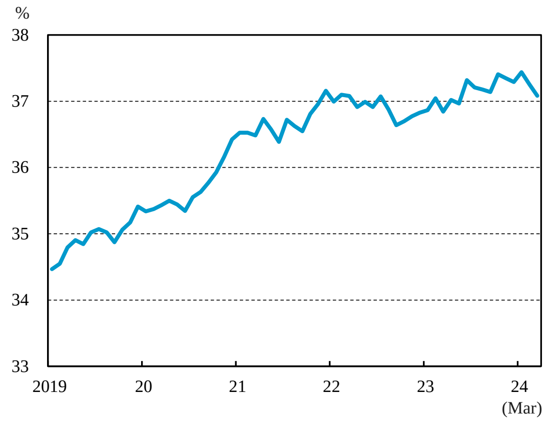
As the transactions in the housing market cooled down in the first half of 2023, the annual growth rate of outstanding real estate loans (including loans for house purchases, house refurbishments, and construction loans) granted by banks[28] generally slid month by month. Since the second half of 2023, the annual growth rate of outstanding loans for house purchases and refurbishments has bounced back with the expanding Preferential Housing Loans for the Youth (Chart 2.38). In contrast, the annual growth rate of outstanding construction loans has kept dropping owing to the reduced funding demand from construction companies. The annual growth rate of outstanding real estate loans and construction loans granted by banks were 7.21% and 3.52%, respectively, at the end of March 2024. These figures both stood below the level before the Bank adjusted its targeted macroprudential measures in December 2020. Nevertheless, the aggregate amount of loans for house purchases and house refurbishments grew by 8.44% year on year, higher than the 7.82% at the end of November 2020 (Chart 2.39).

Chart 2.39 Annual growth rates of real estate loans



Note: Real estate loans refer to the aggregate amount of loans for house purchases, house refurbishments, and construction loans.
Source: CBC.

Chart 2.40 Real estate loans to total loans



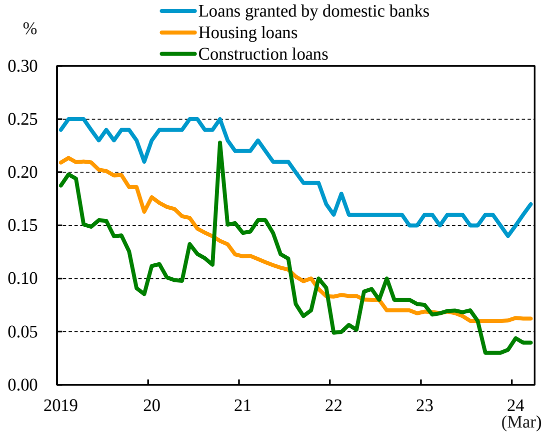
Note: Real estate loans refer to the aggregate amount of loans for house purchases, house refurbishments, and construction loans.
Source: CBC.

The outstanding real estate loans rose to NT$13.52 trillion, accounting for 37.08% of total loans at the end of March 2024. Although this ratio had decreased moderately, it was still higher than the low point at the end of 2022 (Chart 2.40). This was mainly due to Taiwan's declining exports, which resulted in slower growth of bank loans to the manufacturing sector, thereby easing the increment of total loans in 2023. However, the demand from the public for loans to purchase residential houses and properties persisted. Combined with the successive completion and release of new houses, this led to an increase in bank loans issued in cooperation with construction companies for housing ownership transfers. Along with the

[28] Refers to domestic banks and the local branches of foreign and China's banks.

implementation of the new Preferential Housing Loans for the Youth since August 2023, these resulted in the escalation of the outstanding of real estate loans.

Chart 2.41 NPL ratios of housing loans and construction loans



Note: NPLs herein exclude non-accrual loans.
Source: CBC.

Banks' risk management on real estate loans remained satisfactory, with appropriate adjustments to the regulations regarding real estate loans

As a result of the Bank's continuous implemention of targeted macroprudential measures, [29] the annual average of the weighted average loan-to-value (LTV) ratio for new housing loans registered 71.86% in 2023. The average LTV ratio for the regulated loans newly granted by banks dropped significantly, while high-priced housing loans extended to natural persons registered the lowest level among the loan types, with a ratio of 36.14% 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, both lower than the 0.17% NPL ratio of total loans (Chart 2.41).

The Bank and the relevant ministries and agencies persistently endeavored to implement and improve the relevant measures of the Healthy Real Estate Market Plan to foster a sound real estate market

The Bank and the relevant ministries and agencies have successively enhanced the measures pertinent to the Healthy Real Estate Market Plan since its initiation by the government in December 2020. From then on, the Bank has adjusted its targeted macroprudential measures five times. Additionally, in order to strengthen the risk management of real estate loans, the Bank has actively cooperated with the FSC to launch targeted examinations toward mortgage loans. However, as the new Preferential Housing Loans for the Youth offer easier lending conditions, along with related loans mostly based on floating interest rates, the borrowers will therefore bear the risk of future interest rate fluctuations. Furthermore, the expiration of the grace period for repayment will exacerbate borrowers' debt servicing pressures. If borrowers are unable to repay, the asset quality of financial institutions may be compromised. The Bank

[29] See the "IV. Measures to promote financial stability" in the *Financial Stability Report*, May 2024.

will closely monitor the future developments and proactively remind borrowers to be aware of associated risks.

In addition, the MOI has carried out partial amendments of *The Equalization of Land Rights Act* since the second half of 2023. The MOF also continues to amend regulations to prevent short-term speculation and non-self-use house hoarding, while urging local governments to adjust the housing tax base, as well as intensifying detection of tax evasion. All of the abovementioned efforts have contributed to fostering a sound real estate market. Notwithstanding, owing to the fact that most measures ensuring the soundness of the housing market involve institutional reforms, the effectiveness of those policies may take time to materialize. Moreover, with part of the authority and responsibility resting with local governments, in the future, a consummate system relies on cooperation between central and local governments to execute relevant measures constantly to achieve the goal of sound development of the real estate market.

2.3 General assessment of international and domestic macro environments

As for international economic and financial conditions, the economic growth rate merely saw a slight decline and remained resilient during the period of global disinflation in 2023. However, economic growth showed divergent paths across countries. In the meantime, financial conditions turned to ease amid market optimism about future interest rate cuts. Looking ahead to 2024, in spite of the fact that global manufacturing and services sectors are expected to recover gradually, with geopolitical tensions, still-high funding costs, and uncertainties about the monetary policies of the US and European central banks, global economic growth is anticipated to remain unchanged, with inflation moderating but staying at elevated levels. In addition, several factors could pose challenges to global financial stability. These include the trajectory of major central banks' monetary policies, the deterioration of credit quality in US CRE loans, and ongoing developments in China's housing and stock markets. Additionally, China's substantial levels of local government debt and elevating geopolitical risks also contribute to these challenges.

Regarding the domestic macro environment, Taiwan's economic growth decelerated in 2023 and the inflation rate maintained a gradual downward trend. Moreover, FX reserves stayed ample with strong external debt servicing capacity. Although the fiscal position registered a deficit, government debt decreased and remained well below internationally recognized minimum levels, which was conducive to weathering uncertainties surrounding international political and economic situations and maintaining economic growth momentum. On the other hand, the overall revenue of TWSE- and OTC-listed companies has declined and profitability in major industries mostly weakened. On the plus side, their leverage ratios kept improving and the short-term debt servicing capacity remained sound. As for households, their borrowing continued to grow, and their short-term debt burden trended upwards mildly. However, the financial health of households was steady, underpinned by their enormous net worth. Even so, close attention should be paid to changes in debt servicing capacity of some households with higher debt burdens. Lastly, the housing market has seen a resurgence in transactions and higher prices, which pushed up the burden on homebuyers. In contrast, the NPL ratios of housing loans remained low, indicating that risk management was still effective. Notwithstanding, it is necessary to monitor the ability of borrowers who applied for the new Preferential Housing Loans for the Youth to withstand future interest rate fluctuations, as well as its impact on financial institutions' asset quality after the grace period expires.

In sum, with the uncertainty surrounding major central banks' monetary policies and heightened geopolitical risks, global economic downturn risks and financial market volatility have intensified. These factors could affect Taiwan’s corporate sector outlook, household debt servicing capacity, and real estate market performance, thereby adding risks to the financial sector, which warrant close attention.