

2.2 Domestic macro environment

2.2.1 Domestic economic and fiscal conditions

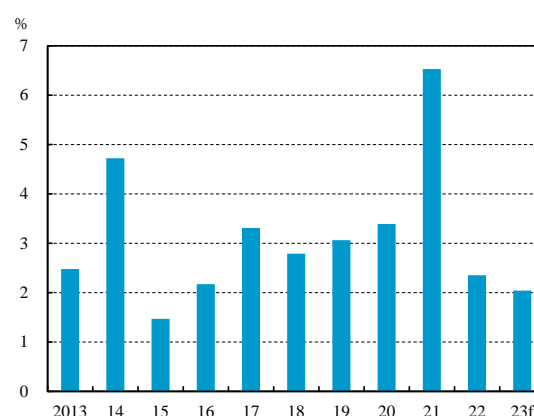
Export growth slowed down in 2022; however, benefiting from steady growth in private consumption and investment, domestic economic growth was still stable. Although domestic prices were high, inflation remained relatively moderate compared to other countries. External debt servicing capacity stayed robust on the back of a persistent surplus in the balance of payments and ample FX reserves. Moreover, fiscal surpluses and outstanding public debt within a manageable level were conducive to weathering uncertainties surrounding international political and economic conditions and maintaining economic growth momentum.

Taiwan's economy grew steadily

In 2022, as domestic epidemic prevention and control measures were gradually relaxed, domestic consumption returned to normal, and private consumption kept expanding. Coupled with steady investment growth, domestic demand continued to be the main driving force for economic growth. The annual economic growth rate reached 2.35% (Chart 2.10),¹⁷ indicating that Taiwan's economy grew steadily.

Looking ahead to 2023, economic growth is anticipated to slow in the first half of the year owing to weak exports and private investment. Although investment momentum is forecast to remain sluggish in the second half of the year, export momentum is expected to gradually recover thanks to reduced inventory levels in global supply chains. Besides this, steady private consumption and government initiatives to enhance “post-pandemic economic and social resilience and national sharing economy achievement” will likely be conducive to domestic demand. As a result, economic growth is expected to pick up. However, considering persistent weakness in global final demand, which could restrain Taiwan's international trade momentum, the DGBAS

Chart 2.10 Economic growth rate in Taiwan



Note: Figure for 2023 is a DGBAS forecast released on May 26, 2023.

Source: DGBAS.

¹⁷ See Note 2.

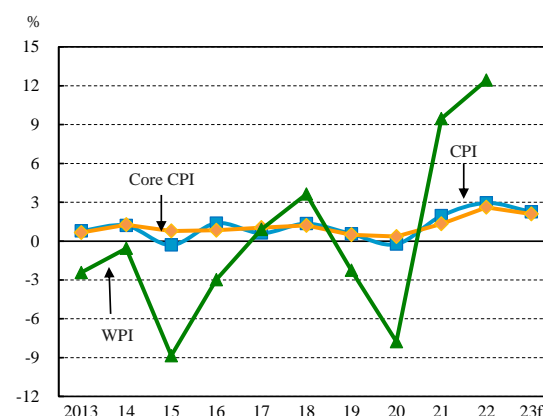
revised down the annual economic growth rate forecast to 2.04% (Chart 2.10).¹⁸

Although domestic prices were still-elevated, inflation remained relatively moderate compared to other countries

On account of hikes in international crude oil and raw material prices, annual wholesale price index (WPI) inflation ascended progressively to 12.43% in 2022, and annual producer price index (PPI)¹⁹ inflation registered 10.51%. Nevertheless, in April 2023, annual PPI inflation dropped to 1.98%. With regard to consumer prices, owing to the impact of energy and food prices, annual CPI inflation rose to 2.95% in 2022 from 1.97% a year earlier, and reached a 14-year high. Core CPI inflation, which excludes fruit, vegetables, and energy, also gradually increased to 2.61% (Chart 2.11). However, compared to major economies, inflation in Taiwan remained relatively moderate.²⁰ In April 2023, annual CPI inflation dropped to 2.35%, while annual core CPI inflation continued to increase to 2.72%.

Looking ahead to 2023, considering the ongoing effects of monetary policy tightening by major central banks worldwide and the decline in international energy prices, the Bank forecasted in March 2023 that the annual CPI and core CPI inflation rates in 2023 would both ease to 2.09%. Furthermore, taking into account the elevated prices of various domestic

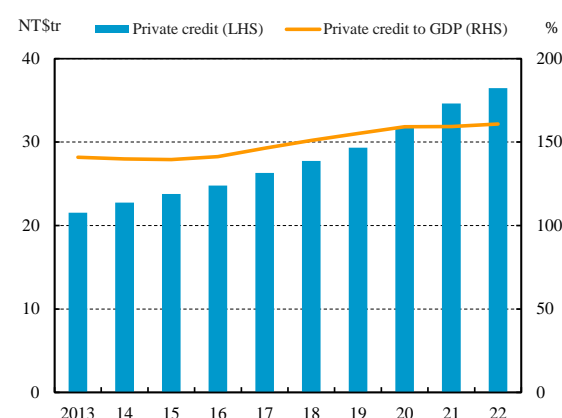
Chart 2.11 Consumer and wholesale price indices (% change, yoy)



Notes: 1. Figures for Core CPI in 2023 are CBC forecasts released on March 23, 2023; other figures are DGBAS statistical data and a forecast released on May 26, 2023.
2. From January 2023, DGBAS discontinued the calculation of the WPI to align with international practices.

Sources: DGBAS and CBC.

Chart 2.12 Private credit provided by financial institutions



Sources: DGBAS and CBC.

¹⁸ See Note 2.

¹⁹ Considering that the WPI is calculated as a weighted average of three price indices: domestic sales, exports, and imports, including both domestically produced and imported goods, as well as information on price changes in business output and input, it is acknowledged that the WPI lacks clear economic significance and can be prone to misuse. Therefore, starting from January 2023, the DGBAS discontinued the calculation of the WPI and introduced the PPI to align with international practices and facilitate cross-country comparisons for users.

²⁰ Compared to major economies, Taiwan's annual CPI inflation in 2022 was 2.95%, which was significantly lower than the United States (8.02%), the EU (8.36%), the United Kingdom (9.05%), South Korea (5.05%), and Singapore (6.07%). However, it was higher than Japan (2.37%) and China (1.96%).

services, the DGBAS revised the predicted CPI annual inflation rate of 2023 upward to 2.26% in May.

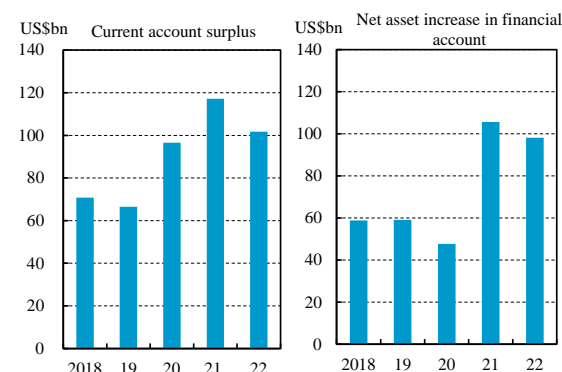
Credit to the private sector increased continually

Private credit²¹ to private enterprises and households provided by domestic financial institutions kept growing in 2022, reaching NT\$36.45 trillion at the end of the year, an increase of 5.25% year on year, which exceeded the economic growth rate of 2.35% in the same year. The ratio of credit to GDP registered 160.82%, slightly higher than 159.31% as compared to a year earlier (Chart 2.12). This showed that the credit provided by domestic financial institutions was sufficient to support economic activity.

Current account sustained a surplus and FX reserves stayed ample

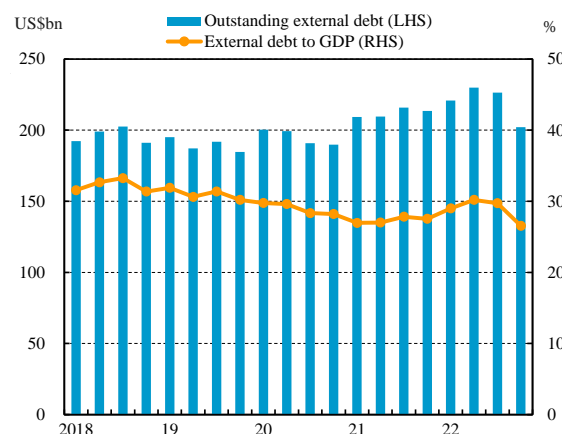
In 2022, owing to a decrease in the merchandise trade surplus caused by a smaller increase in exports than imports, the annual current account surplus contracted to US\$101.7 billion (Chart 2.13, left panel), or 13.36% of the year's GDP, a decrease of US\$15.4 billion, or 13.16% over the previous year.²² In terms of the financial account, as banks increased foreign securities investments which boosted foreign assets, along with a decrease in foreign liabilities owing to reduced holdings of Taiwanese stocks by foreign institutional investors, the financial account posted an increase of US\$98.1 billion throughout the year (Chart 2.13, right panel). Meanwhile, the Bank's reserve assets increased by US\$10.9 billion compared to the previous year.

Chart 2.13 Current account surplus and net asset increase in financial account



Source: CBC.

Chart 2.14 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.

²¹ 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.

²² 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.

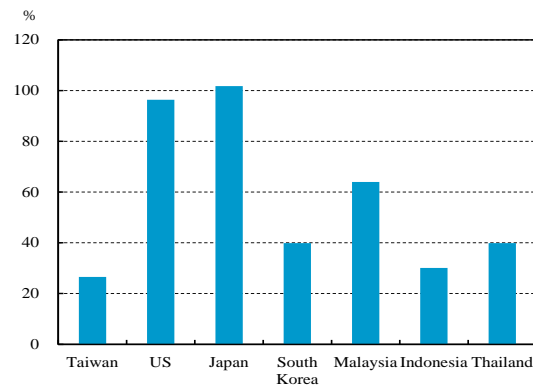
FX reserves amounted to US\$554.9 billion at the end of 2022, rising by 1.19% from a year earlier, mainly supported by the earnings from portfolio investment operations of FX reserve assets and the adjustment operations by the Bank to maintain an orderly foreign exchange market. At the end of April 2023, the FX reserves continuously increased to US\$561.1 billion.

External debt contracted, while debt servicing capacity remained satisfactory

Primarily because of a decrease in the short-term external debt of the domestic banking sector, Taiwan's external debt²³ declined to US\$202.1 billion at the end of 2022, decreasing by 5.36% compared to a year earlier (Chart 2.14). The largest share of external debt went for the private sector, registering US\$201.1 billion, while the public sector share only reached US\$1.0 billion. In addition, Taiwan's external debt to GDP stood at 26.55% at the end of 2022, declining from 27.53% at the end of the previous year. It was lower than those in the US and neighboring Asian countries (Chart 2.15), and far below the internationally recognized alert threshold.²⁴

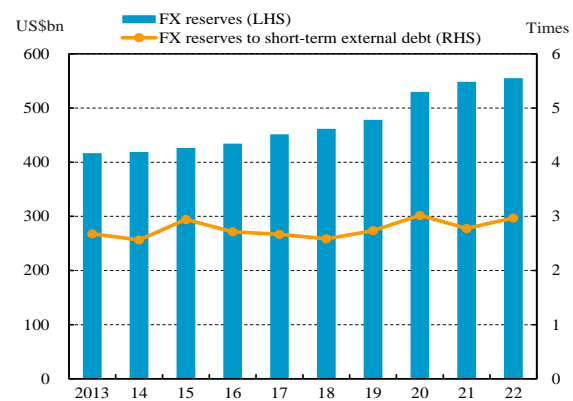
Furthermore, at the end of 2022, the ratio of FX reserves to short-term external debt went up to 2.97 times owing to an increase in FX reserves and a shrinkage in short-term external debt (Chart 2.16), and was still much higher than the internationally recognized alert threshold,²⁵ implying that Taiwan's FX reserves have a decent capacity to meet short-term external debt obligations.

Chart 2.15 External debt to GDP in selected countries



Note: Figures are as of the end of 2022.
Sources: CEIC and DGBAS.

Chart 2.16 Short-term external debt servicing capacity



Source: CBC.

²³ See Note 3.

²⁴ 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.

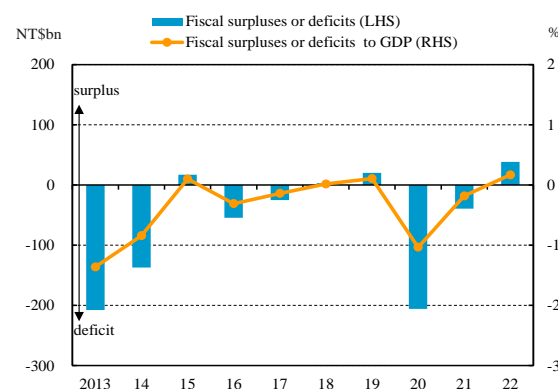
²⁵ The general international consensus is that a country with a ratio of FX reserves to short-term external debt higher than 100% is deemed to be relatively low risk.

Fiscal position registered surpluses and government debt stayed within a manageable level

In 2022, in order to address uncertainties in international political and economic conditions and sustain economic growth momentum, the government actively promoted the Three Major Programs for Investing in Taiwan.²⁶ However, as a result of a significant increase in profit-seeking enterprise income tax and the budget implementation of the government in conjunction with the principle of austerity, the government fiscal surplus stood at NT\$38.4 billion, equivalent to 0.17% of GDP for the year (Chart 2.17), which was better than those of major economies including the US, the euro area, the UK, and Japan (Chart 2.18), and also much higher than internationally recognized minimum levels.²⁷

The outstanding public debt at all levels of government²⁸ rose to NT\$6.7 trillion at the end of 2022, increasing by 2.73% year on year. Nevertheless, the ratio of total public debt to the year's GDP continued to drop to 29.69% (Chart 2.19), indicating that government debt stayed within a manageable level.²⁹

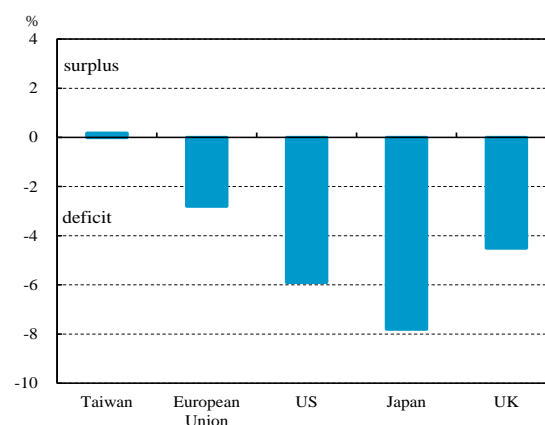
Chart 2.17 Fiscal surpluses or deficits



Notes: 1. Fiscal position data include those of central and local governments.
2. Figures for 2022 are final accounts for the central government and self-compiled final accounts for local governments.

Sources: MOF and DGBAS.

Chart 2.18 Fiscal surpluses or deficits to GDP in selected countries



Note: Figures are as of the end of 2022.

Sources: IMF and MOF.

²⁶ The Three Major Programs for Investing in Taiwan include the Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan, the Action Plan for Accelerated Investment by Domestic Corporations, and the Action Plan for Accelerated Investment by Small and Medium-sized Enterprises (SMEs). These programs will be implemented from July 1, 2019, to December 31, 2024.

²⁷ See Note 5.

²⁸ The term "outstanding 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.

²⁹ See Note 6.

2.2.2 Corporate sector

In 2022, the overall revenue of TWSE- and OTC-listed companies reached a new high with favorable profits. Their average financial leverage ratios decreased, and the short-term debt servicing capacity remained sound at the end of 2022. Although the foreign currency liabilities of listed companies contracted to a lower level at the end of September 2022, their exchange rate risks still warrant prudent management. The NPL ratio for corporate loans granted by financial institutions continued to hit a new low at the end of the year, and the credit quality for the corporate sector was satisfactory.

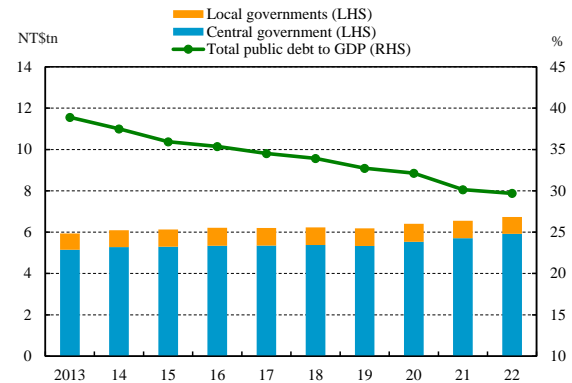
Revenue of both TWSE- and OTC-listed companies reached a record high with favorable profitability

The net operating revenue of TWSE- and OTC-listed companies in 2022 reached a historical high of NT\$37.85 trillion and NT\$2.71 trillion, respectively, benefiting from the continuous developments of emerging technology applications and digital transformation opportunities although global final demand showed signs of weakening. Their average ROEs registered 21.44% and 17.49%, slightly lower than the previous year's figures of 23.01% and 17.78%, respectively (Chart 2.20), but still reached the second-highest level on record. Overall, the profitability remained strong.

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

At the end of 2022, the average leverage ratios for both TWSE- and OTC-listed companies

Chart 2.19 Public debt

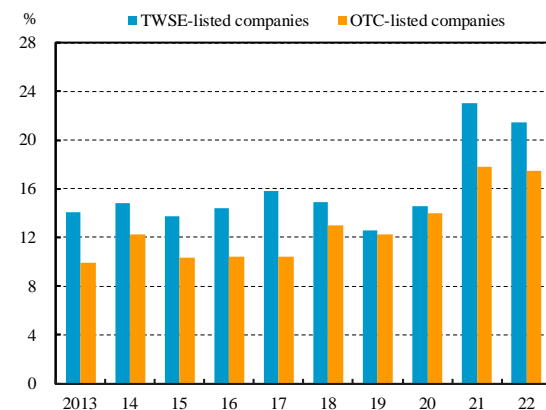


Notes: 1. Outstanding public debt refers to non-self-liquidating debt with a maturity of one year or longer, excluding external debt.

2. Figures for 2022 are preliminary final accounts for the central government and self-compiled final accounts for local governments.

Sources: MOF and DGBAS.

Chart 2.20 Return on equity in corporate sector



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

Source: TEJ.

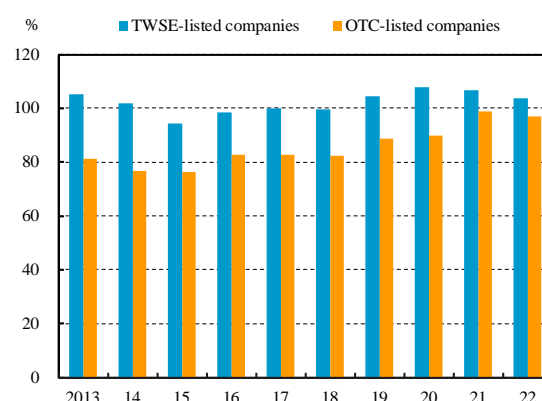
decreased from 106.85% and 98.81% at the end of the previous year to 103.65% and 96.79%, respectively (Chart 2.21), benefiting from the sustained profitability. This indicated a slight improvement in the overall financial leverage level of listed companies.

Moreover, the current ratios for TWSE- and OTC-listed companies continued to rise to 163.74% and 189.05% at the end of 2022 from 159.79% and 183.21%, respectively, a year earlier (Chart 2.22). Although the interest coverage ratios dropped to 23.17 times and 24.91 times from 34.58 times and 30.23 times, respectively (Chart 2.23), owing to a greater increase in interest expenses, the overall short-term debt servicing capacity for listed companies remained sound.

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

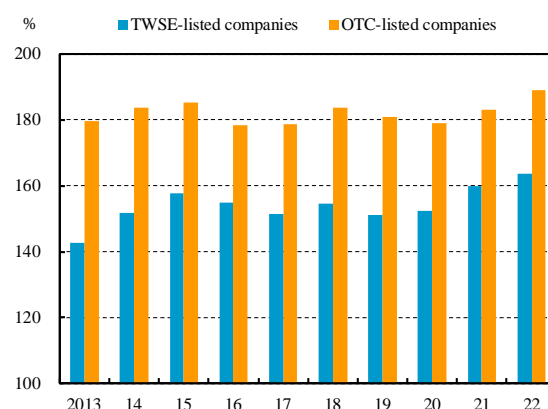
As foreign currency liabilities reduced and equity expanded, the foreign currency liability-to-equity ratios of listed companies decreased from 32.85% and 21.07% at the end of the previous year to 30.78% and 19.10%, respectively, as of end-September 2022 (Chart 2.24). Considering the recent amplified volatility in the international FX market, it is still advisable for listed companies to prudently manage exchange rate risks.

Chart 2.21 Leverage ratios in corporate sector



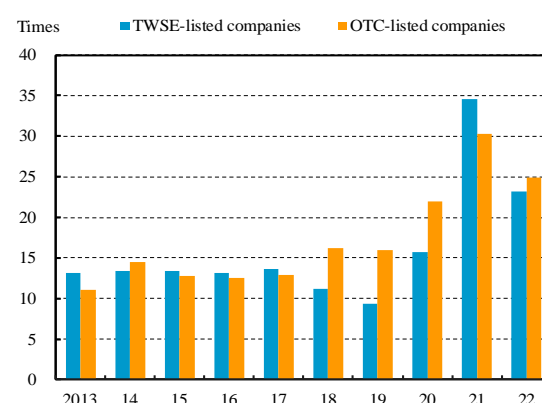
Note: Leverage ratio = total liabilities/total equity.
Source: TEJ.

Chart 2.22 Current ratios in corporate sector



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

Chart 2.23 Interest coverage ratios in corporate sector



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

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

The NPL ratio for corporate loans³⁰ from financial institutions dropped to a new low of 0.21% at the end of 2022 from 0.23% a year earlier (Chart 2.25). This showed that the overall credit quality for the corporate sector was satisfactory.

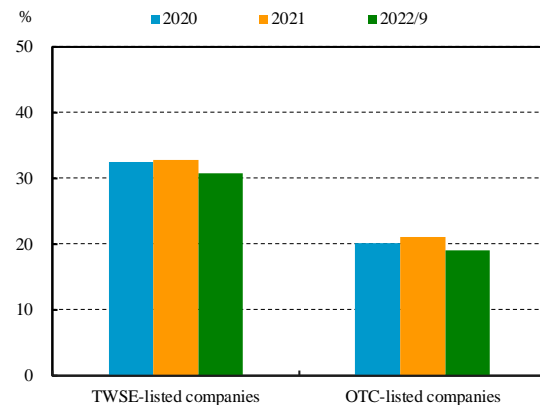
2.2.3 Household sector

Household borrowing expanded at a slower pace and household indebtedness slightly decreased in 2022, while the short-term household debt servicing pressure tightened marginally. However, the household sector held enormous net worth, reflecting that the debt servicing capacity of households remained sound. Moreover, the credit quality of household borrowing from financial institutions appeared to be satisfactory. 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.

Growth of household borrowing slowed

Household borrowing reached NT\$19.98 trillion at the end of 2022, equivalent to 88.15% of annual GDP for the year (Chart 2.26), higher

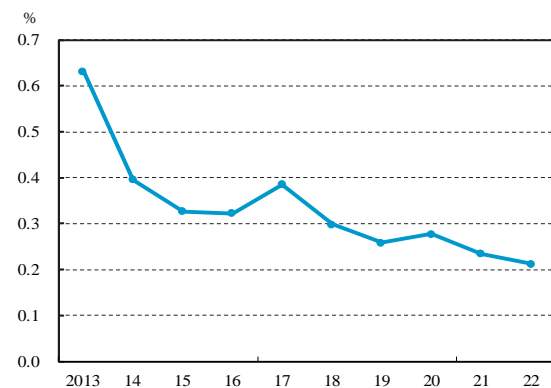
Chart 2.24 Foreign currency liability-to-equity ratios in corporate sector



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

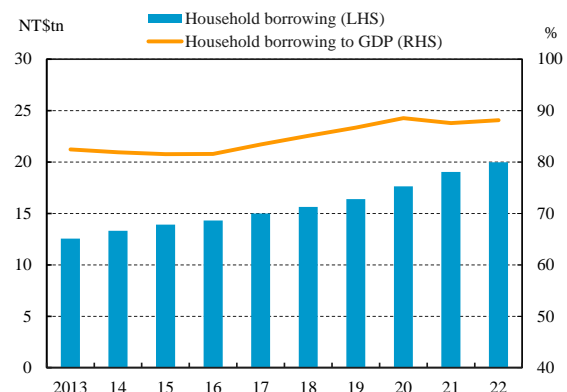
Source: TEJ.

Chart 2.25 NPL ratio of corporate loans



Source: JCIC.

Chart 2.26 Household borrowing to GDP



Sources: CBC, JCIC, and DGBAS.

³⁰ The data for the corporate sector herein are on the basis of listed and unlisted corporations provided by the Joint Credit Information Center (JCIC), excluding the data of overseas branches of domestic banks.

than the 87.57% of the previous year. The main purpose of household borrowing was to purchase real estate, accounting for 63.16%, followed by current operation loans,³¹ accounting for 34.62%, and the rest of the household borrowing took small proportions (Chart 2.27).

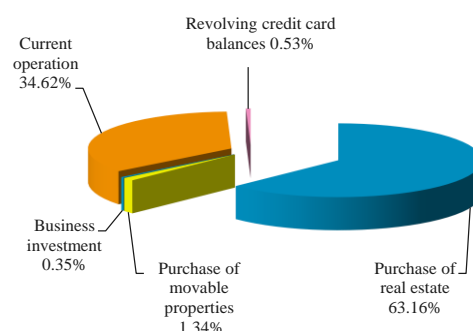
The annual growth rate of household borrowing rose at a slower pace of 4.95% in 2022, down from 7.99% in the previous year, mainly attributable to the purposes of real estate purchase and working capital needs. Compared to other countries, the growth rate of household borrowing in Taiwan was lower than those in the US and Australia, but higher than those in South Korea and Japan. As for household borrowing to GDP, Taiwan's ratio was lower than those in Australia and South Korea, but higher than those in the US and Japan (Chart 2.28).

Household indebtedness decreased slightly and net worth was high

The ratio of household borrowing to total disposable income³² slightly dropped to 1.51 in 2022, reflecting a slightly eased household debt burden. However, with the rise in interest rates on bank loans, the debt servicing ratio ascended marginally to 48.87% (Chart 2.29), indicating that short-term household debt servicing pressure tightened marginally.

Furthermore, household net worth³³ in Taiwan

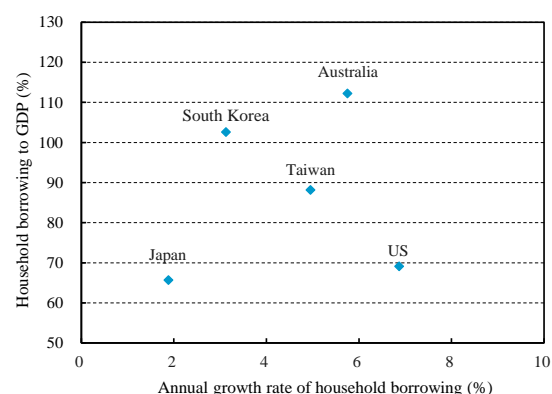
Chart 2.27 Household borrowing by purpose



Note: Figures are as of the end of 2022.

Sources: CBC and JCIC.

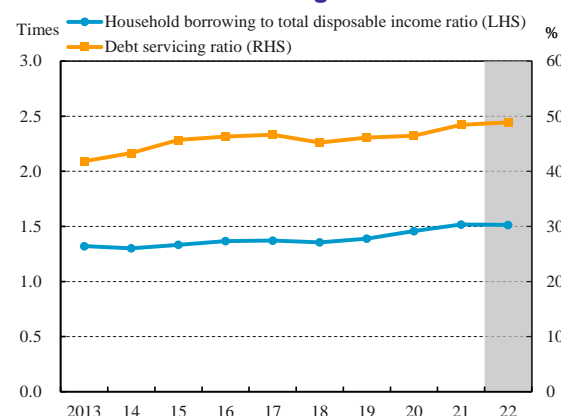
Chart 2.28 Household indebtedness in selected countries



Note: Figures are as of the end of 2022.

Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, JCIC, and CBC.

Chart 2.29 Household indebtedness and debt servicing ratio



Note: Total disposable income in shaded area is a CBC estimate.

Sources: CBC, JCIC, and DGBAS.

³¹ The term "current operation loans" includes outstanding cash card loans.

³² Total disposable income = disposable income + rental expenses + interest expenses.

³³ See Note 7.

has been remarkable over the past decades and has held at more than 7 times the GDP in recent years. 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 2.30), showing that the financial condition of households in Taiwan was sound.

The NPL ratios of household borrowing fell to a new low, reflecting satisfactory credit quality

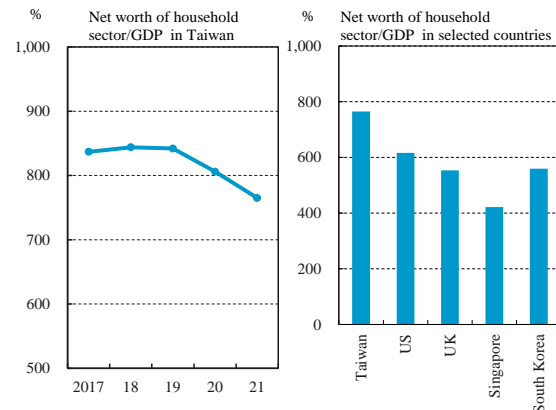
As the impact of COVID-19 on the household sector shrank noticeably, the NPL ratio of household borrowing fell to a new low of 0.12% at the end of 2022. Among the categories, the NPL ratio of loans for purchase of real estate declined to a historical low of 0.08% (Chart 2.31), reflecting satisfactory credit quality.

Although the minimum wage rose in recent years, real monthly regular earnings for employees in 2022 decreased slightly by 0.15% 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.

2.2.4 Real estate market

Transactions in the housing market cooled down remarkably as the uptrend in house prices decelerated and even showed signs of decline in some areas in the second half of 2022. The mortgage burden slightly decreased but still remained at a high level. The pressure from an overhang of unsold new residential houses is gradually increasing. As the Bank's tightening of monetary policy since March 2022 and continuous implementation of targeted macroprudential measures, coupled with relevant measures adopted by ministries and government agencies to

Chart 2.30 Household net worth to GDP

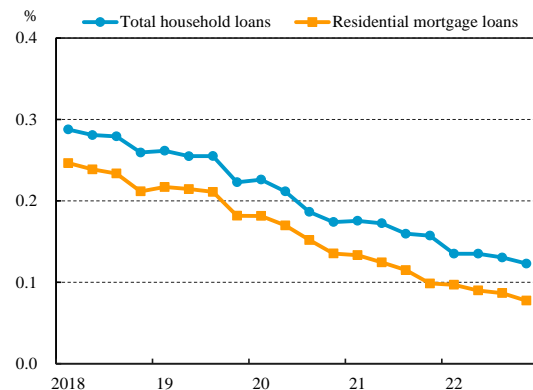


Notes: 1. The household sector herein includes households and non-profit organizations.

2. In the right panel, figures are as of the end of 2021.

Sources: DGBAS and official websites of selected countries.

Chart 2.31 NPL ratios of household borrowing



Source: JCIC.

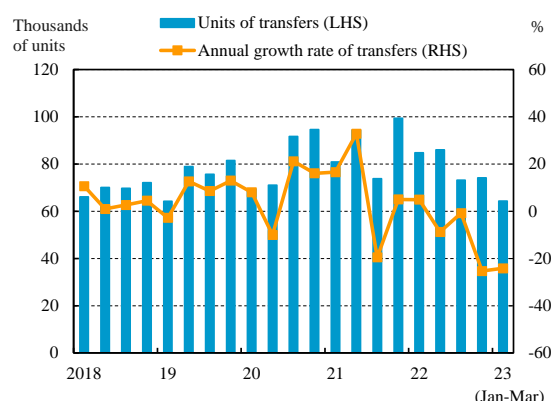
curb speculation in the housing market, achieved positive effects, the growth of construction loans and new housing loans extended by banks continued to slow down, and related credit risk management stayed satisfactory.

Transactions in the real estate market cooled down remarkably

Domestic housing transactions thrived in 2022 Q1. However, from Q2 onwards, as banks gradually raised the interest rates on real estate loans and the government continued to implement measures ensuring the soundness of the housing market, a wait-and-see sentiment to the demand for real estate emerged. These, coupled with a higher base period in the previous year, resulted in the annual growth rate of the total number of building ownership transfers turning negative and dropping to -25.32% in Q4. As a result, the total number of building ownership transfers decreased by 8.64% year on year from 348 thousand to 318 thousand units in 2022 (Chart 2.32). Entering 2023, owing to the wait-and-see atmosphere in the housing market, the total number of building ownership transfers declined to 64 thousand units in Q1, a record low since 2019 Q2 (Chart 2.32).

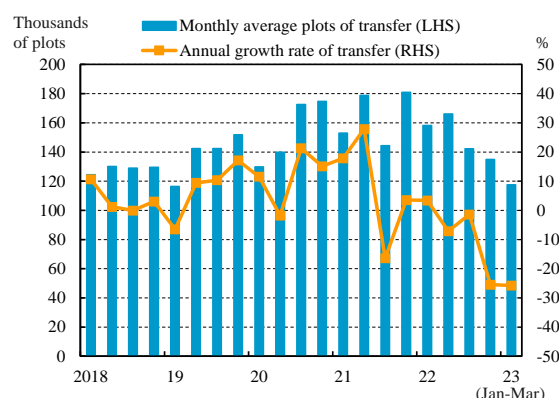
In terms of loans for land transactions extended since January 2022, the Bank stipulated that, in principle, the construction shall commence within 18 months. From then on, the real estate industry became more conservative in their purchase of vacant land. Coupled with the lessening land demand from manufacturers seeking to expand their factories, the total number of land ownership transfers fell by 8.45% compared to the previous year (Chart 2.33). From early 2023 onwards, as the real estate industry's prudent outlook of the housing market continued, the total number of land ownership transfers decreased by over 20% for two consecutive quarters, registering a drop of -25.74% in Q1 (Chart 2.33).

Chart 2.32 Number and growth of building transfers



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

Chart 2.33 Land transfers for transaction and annual growth rate



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

Real estate prices decelerated, showing signs of decline in some areas

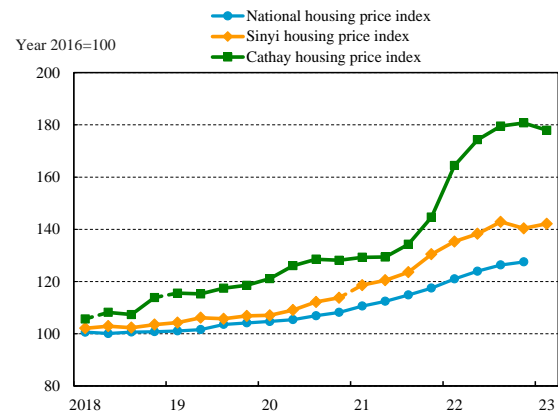
The national housing price index released by the MOI continued to rise gradually in 2022 and reached a new high of 127.51 in Q4 (Chart 2.34). However, the annual growth rate in Q4 fell to 8.52%, moderating for two consecutive quarters.

The Cathay housing price index (for newly built houses) elevated sharply in 2022, and hit a historical high of 180.74 in Q4, with double-digit growth for five consecutive quarters. Afterwards, influenced by hesitation among real estate buyers, the index dropped to 177.91 in 2023 Q1, while the annual growth rate shrank to 8.20%. The Sinyi housing price index (for existing houses) kept its upward trend in the first three quarters of 2022 and has slightly fluctuated at high levels since Q4. However, the index registered 142.12 in 2023 Q1 with the annual growth rate dwindling to 5.03%, indicating contractions for two successive quarters (Chart 2.34).

Mortgage burden went down mildly after reaching a peak

The debt servicing ratio for housing loans rose gradually quarter by quarter since 2022 Q1 and reached a peak of 40.55% in Q3, but mildly went down to 40.25% in Q4. Among the cities in Taiwan, Taipei City showed the heaviest mortgage burden with its ratio registering 66.06% (Chart 2.35, left panel). Similarly, Taiwan's house price to income ratio grew quarter by quarter and reached a peak of 9.80 times in 2022 Q3, then declined to 9.61 times in Q4 (Chart 2.35, right panel).

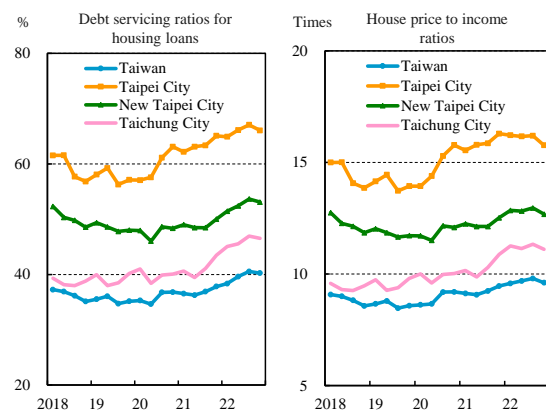
Chart 2.34 House price indices



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.

Chart 2.35 Debt servicing ratios for housing loans and house price to income ratios



Notes: 1. Debt servicing ratio for housing loans = median monthly housing loan payment/median monthly household disposable income.
2. House price to income ratio = median house price/median annual household disposable income.

Source: *Statistic on Housing Affordability*, MOI.

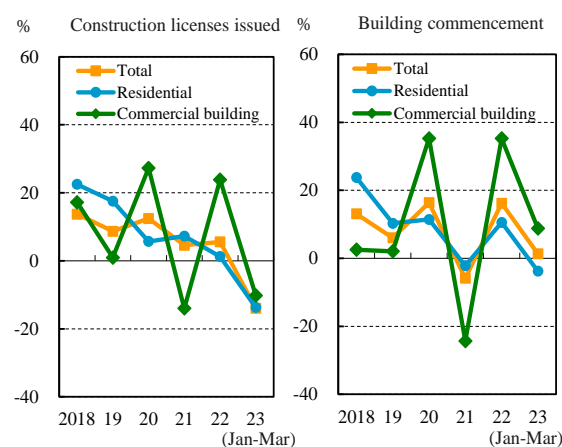
Construction licenses issued and building commencement soared, while pressure from the overhang of unsold newly built residential houses went up gradually

With an abundance of new residential housing projects open for pre-sale, the total floor space of construction licenses issued increased by 5.53% year on year in 2022. Meanwhile, the total floor space of construction commencement went up by 16.20%, mainly because part of residential building commencements of the previous year had been postponed to 2022, and the Bank required borrowers to start construction within 18 months after their land loans were approved. Along with construction companies being cautious about launching new projects in 2023 Q1, the total floor space of construction licenses issued reduced by 13.96% year on year, while the total floor space of construction commencement kept growing by 1.34% year on year (Chart 2.36).

Additionally, the total floor space of usage licenses issued increased by 2.47% year on year in 2022, resulting from successive completion and release of residential housing projects. The aforementioned total floor space increased by 9.64% in 2023 Q1, mainly because those industrial and commercial buildings had surged by 72.37%.

According to statistics from the MOI, the number of construction projects commenced for new residential buildings set a record high of 146.4 thousand units in 2022 (Chart 2.37), and then kept growing at an annual rate of 7.03% to reach 35.8 thousand units in 2023 Q1. With the

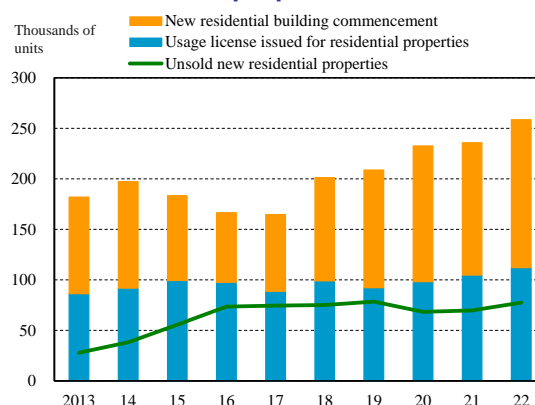
Chart 2.36 Annual growth rates of floor space of construction licenses issued and construction commencement



Note: Commercial building includes buildings for commerce, industry, storage, business and service.

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

Chart 2.37 New residential buildings and unsold properties



- Notes: 1. The MOI uses data from land registration, Taiwan Power Company, and house tax registration to classify residences that have been registered for the first time within the last 5 years and have an average electricity consumption of less than 60 kWh as unsold new residential properties.
2. Figures are yearly data, except for figure for 2022 of unsold new residential properties, which is as of the end of 2022 Q2.

Source: Real Estate Information Platform, MOI.

enormous supply, high prices, and low sales of new residential buildings, the pressure to sell unsold newly built residential houses went up gradually.

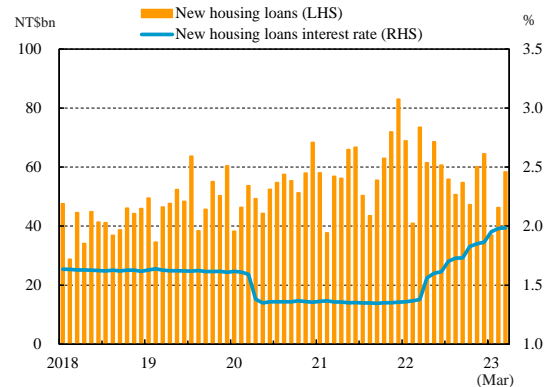
Real estate loans grew at a slower pace and mortgage interest rates rose

The transaction volume of the housing market shrank in 2022. However, because of the upward movement of housing prices and the considerable amount of bank loans issued in cooperation with construction companies for housing ownership transfers, the average monthly amount for new housing loans granted by the dominant five banks was about NT\$58.9 billion, only contracting by 0.23% over the previous year. The aforementioned average amount for 2023 Q1 declined to NT\$47.2 billion (Chart 2.38), with an expanding year-on-year decrease of 22.75%.

Regarding the interest rate of real estate loans, as the Bank urged banks to fulfill the risk pricing principle and had raised its policy rates five times from March 2022, the average interest rate for new housing loans granted by the dominant five banks rose month by month from early 2022 onwards, and elevated to 1.985% in March 2023 (Chart 2.38). Nevertheless, the degree of increase was still limited compared to other major economies.

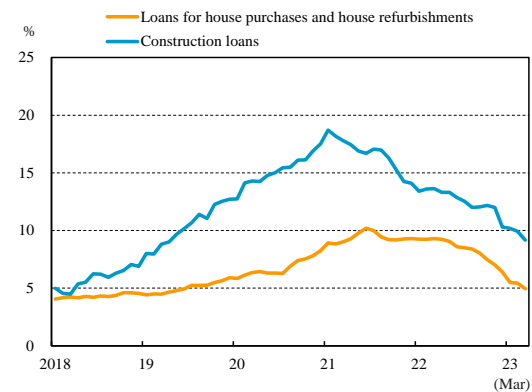
As the transactions of buildings and land became less active in 2022, the annual growth rate of outstanding construction loans granted by banks³⁴ plunged dramatically to 9.17% at the end of March 2023. Meanwhile, the annual growth rate of outstanding loans for house purchases and refurbishments also dropped to 4.96% (Chart 2.39). The aggregate amount of the aforementioned real estate loans accounted for 36.84% of total loans at the end of March 2023, which remained roughly unchanged compared to the end of 2022, yet lower than the peak at the end of 2021 (Chart 2.40).

Chart 2.38 New housing loans – amount and interest rate



Source: CBC.

Chart 2.39 Annual growth rates of real estate loans



Source: CBC.

³⁴ Refers to domestic banks and the local branches of foreign and China's banks.

Banks' risk management on real estate loans remained satisfactory

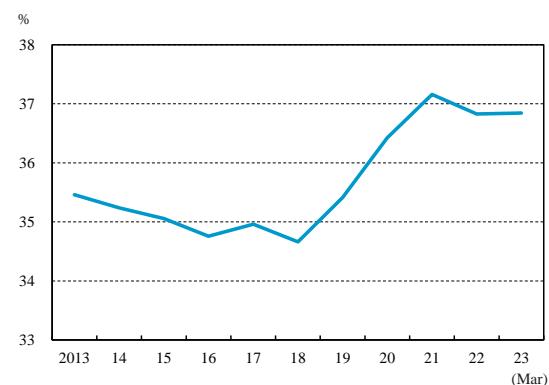
The weighted average loan-to-value (LTV) ratio for new housing loans decreased marginally and the annual average registered 72.41% in 2022. The average LTV ratio for the regulated loans newly granted by banks dropped significantly, while regulated housing loans extended to corporations registered the lowest level among the loan types, with a ratio of 35.93% in March 2023.

Furthermore, the NPL ratios of housing loans and construction loans granted by domestic banks both dropped to 0.07% at the end of March 2023, lower than the 0.15% NPL ratio of total loans (Chart 2.41). In addition, most of the 36 domestic banks passed the latest stress tests requested by the FSC. All of these revealed that the risk management of domestic banks on real estate loans remained satisfactory.

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

To implement the Healthy Real Estate Market Plan initiated by the government for effective allocation and rational application of credit, the Bank has adjusted its targeted macroprudential measures four times since December 2020. Additionally, the Bank continued to cooperate with the FSC to strengthen the risk management of real estate lending or guarantee business of banks and bills finance companies for the purpose of promoting financial stability. The Bank and the FSC also launched a targeted examination toward mortgage loans. Besides this, the FSC imposed fines on banks that failed to establish and implement anti-money laundering practices on housing loans to natural persons which involved groups of speculators. Moreover, the FSC

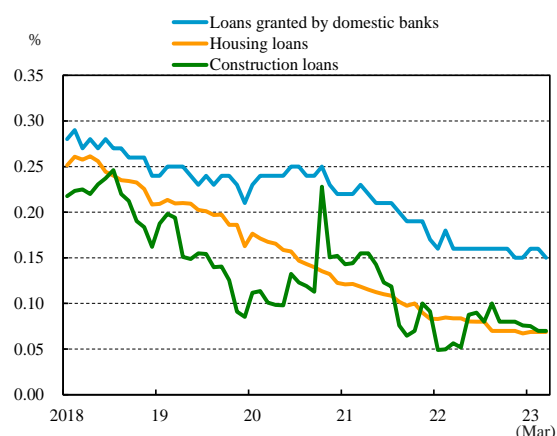
Chart 2.40 Real estate loans to total loans



Notes: 1. Real estate loans refer to the aggregate amount of loans for house purchases, house refurbishments, and construction loans.
2. Figures are end-of-year data, except for figure of 2023, which is end-March data.

Source: CBC.

Chart 2.41 NPL ratios of housing loans and construction loans



Note: NPLs herein exclude non-accrual loans.

Source: CBC.

raised risk weights on mortgage loans of banks in February 2022³⁵ to enhance their risk management.

In addition, the MOI, the Fair Trade Commission, the Consumer Protection Committee, and local governments have consecutively carried out joint audits targeting pre-sold houses and amended *The Equalization of Land Rights Act* in February 2023 to refine the property market mechanism. The Ministry of Finance (MOF) also amended regulations to prevent short-term speculation and tax evasion. All of the abovementioned efforts contributed to fostering a sound real estate market. Notwithstanding, with part of the authority and responsibility of real estate market management resting with local governments, a consummate system relies on cooperation between central and local governments to execute and improve relevant measures constantly to achieve the goals of sound development of the real estate market and fulfill housing justice.

2.3 General assessment of international and domestic macro environments

As for international economic and financial conditions, major central banks accelerated interest rate hikes to curb surging inflation in 2022, resulting in spillover effects that tightened global financial conditions and spurred a slowdown in global economic growth. Looking ahead to 2023, with a tighter financial environment and still-elevated geopolitical risks, global economic growth is likely to continue its downward path, while inflation pressures may ease but still remain high. In addition, the turbulence in global financial markets stemming from rapid interest rate hikes by major central banks, subsequent developments of the banking turmoil in the US and Europe, and the intensifying impact of climate change on the financial sector all exacerbate global financial vulnerabilities.

Regarding the domestic macro environment, Taiwan's economic growth remained stable in 2022. Although domestic prices were high, inflation was relatively moderate compared to other countries. Moreover, external debt servicing capacity stayed robust with ample FX reserves. Fiscal surpluses and outstanding public debt within a manageable level were conducive to weathering uncertainties surrounding international political and economic conditions, as well as maintaining economic growth momentum. With regard to the corporate sector, the overall revenue of TWSE- and OTC-listed companies reached a new high with favorable profits, coupled with a sustained short-term debt servicing capacity. However, their exchange rate risks still warrant prudent management. When it comes to the household sector, despite the fact that

³⁵ Applies to loan cases that were new, renewed or transferred since February 18, 2022.