

III. Financial system assessment

3.1 Financial markets

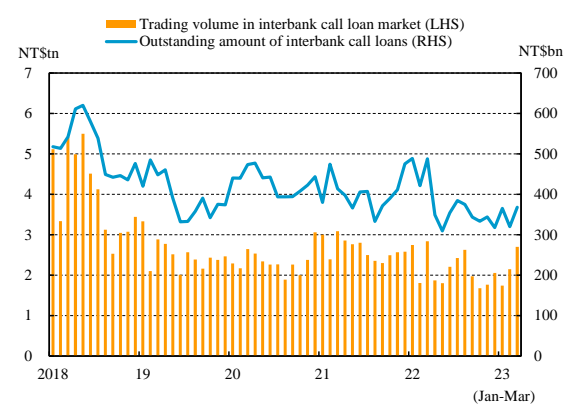
In 2022, the outstanding amount and trading volume in interbank call loans both declined, while the markets remained stable. The outstanding amount of bill issuance slightly edged down mainly because of the reduction in the issuance of treasury bills. However, the bill trading volume in the secondary market continued to expand, with CP constituting the largest share, which facilitated short-term financing for businesses. Meanwhile, the outstanding amount of bond issuance kept growing, with international bonds increasing the most, but the trading volume decreased mildly owing to reduced positions of major traders. Moreover, in 2022, domestic stock indices rebounded from previous slumps and gradually stabilized. The NT dollar appreciated after depreciating against the US dollar, but with low volatility. Overall, domestic financial markets have remained stable since 2022; however, international circumstances such as global interest rate hikes, future developments of the US banking turmoil, and geopolitical factors could impact Taiwan's financial market and their developments and implications warrant close attention.

3.1.1 Money and bond markets

Both outstanding amount and trading volume of interbank call loans declined

In 2022, the average daily outstanding amount of interbank call loans registered NT\$375.7 billion and dropped by 6.58% year on year, mainly owing to a decrease in interbank lending. Given the fact that financial institutions became more conservative in fund allocation and the lengthening of interbank lending periods led to a lower incidence of rolling over such loans, the trading volume of interbank call loans decreased by 18.60% year on year in 2022. In 2023 Q1, the average daily outstanding

Chart 3.1 Interbank call loan market



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

amount and trading volume of interbank call loans both decreased year on year (Chart 3.1).

Outstanding amount of bill issuance edged down, while the bill trading volume in the secondary market continued to increase

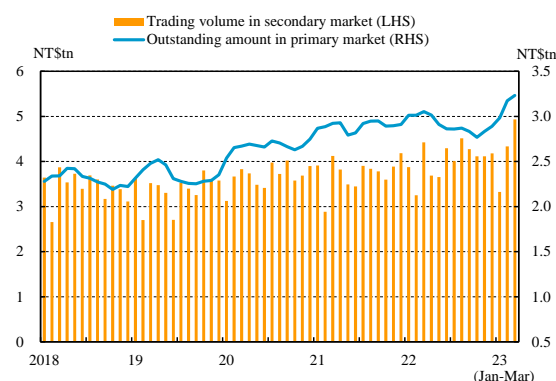
The outstanding amount of bill issuance in the primary market registered NT\$2.89 trillion at the end of 2022 and dropped by 0.69% year on year, which was mostly attributed to the reduction in the issuance of treasury bills due to ample tax revenue. In 2023 Q1, the outstanding amount of bill issuance began to climb again as the issuance of treasury bills and CP increased (Chart 3.2).

Although the outstanding amount of bill issuance edged down in 2022, the trading volume in the secondary market increased by 7.86% year on year to NT\$48.40 trillion thanks to factors such as strong demand for CP investment by corporates. Among them, CP constituted the largest share of 96.81%, slightly expanding from a year earlier. In 2023 Q1, the bill trading volume continued its upward trend over the same period of the previous year (Chart 3.2).

Bond issuance continued to expand, while the trading volume decreased marginally, and the turnover rate of outright bond transactions continued to drop to a record low

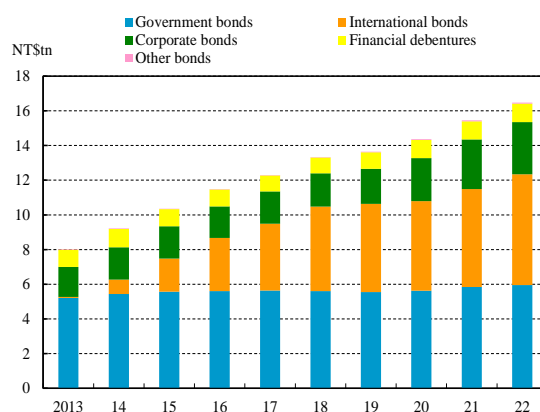
The outstanding amount of bond issuance reached a new high of NT\$16.48 trillion at the end of 2022 and increased by 6.63% over the end of the previous year, mainly attributed to the 13.14% increase of international bond issuance as foreign institutions issued bonds ahead of schedule or reduced early redemption owing to the expectation of the Fed's rates hike. At the end of 2022, the outstanding amount of corporate bonds and government bonds issuance

Chart 3.2 Primary and secondary bill markets



Source: CBC.

Chart 3.3 Bonds outstanding in the primary market



Note: Other bonds include beneficiary securities and foreign bonds.

Source: FSC.

increased by NT\$0.14 trillion and NT\$0.11 trillion, respectively, compared to the end of the previous year (Chart 3.3).

On the other hand, the trading volume in the secondary bond market registered NT\$35.40 trillion in 2022, slightly decreasing by 2.03% year on year (Chart 3.4). This was mainly owing to the fact that major bond market traders such as bills finance companies and securities firms reduced their bond holdings after considering the increasing risks of rising bond yields and a narrowing yield spread between their long-term bonds and short-term reverse repos. By trading type, outright transaction volume significantly shrank by 27.72%, while repo transaction volume increased by 4.26% year on year. Nevertheless, the overall trading volume remained at a relatively low level in recent years. As a result, the average monthly outright turnover rate of major bonds decreased continually in 2022 to a recent low of 1.65% and declined further to a record low of 1.55% in 2023 Q1.

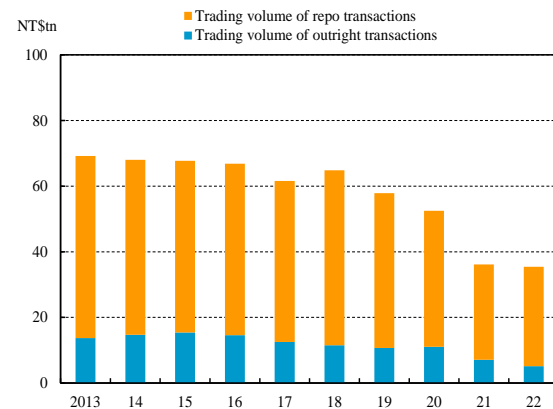
Short-term market rates increased

gradually, while long-term market rates surged to a new 14-year high before trending downwards

In terms of short-term market rates, the interbank overnight call loan rate trended upwards after the Bank raised the policy interest rates and the interest rate on the Bank's certificates of deposit (CDs) four times in 2022 (Chart 3.5). Still, liquidity in financial markets remained ample.

As for long-term market rates, influenced by sharp rises in US government bond yields following the Fed's rate hikes, domestic 10-year government bond yields fluctuated and trended upwards during the first three quarters of 2022 and hit a new 14-year high of 1.93% on October 24, 2022 (Chart 3.5). Afterwards, following the decline in US bond yields, domestic

Chart 3.4 Outright and repo transactions in the bond market



Source: CBC.

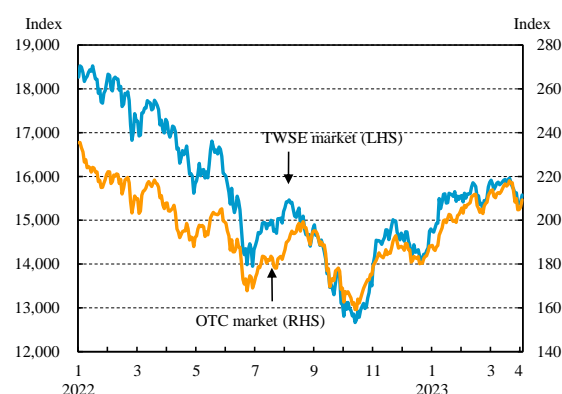
Chart 3.5 Interbank overnight rate and 10-year government bond yield



Source: Bloomberg.

10-year government bond yields also descended gradually but still stood higher than the yields at the end of 2021 (Chart 3.5). Considering that the upward pressure on bond yields globally still exists while inflation in major economies persists and many uncertainties surrounding the future inflation outlook remain, domestic 10-year government bond yields are likely to increase again. The interest rate risk related to bond investments of domestic financial institutions is still high and warrants close attention.

Chart 3.6 Taiwan's stock market indices



Sources: TWSE and TPEX.

3.1.2 Equity markets

Stock indices rebounded after falling from record highs and were not significantly affected by the turmoil in the US and European banking sectors

In 2022, owing to the compound impacts of both negative and positive developments, such as the prolonged pandemic, the outbreak of the Russia-Ukraine war, the Fed's accelerated interest rate hikes, and the measures taken by the FSC to stabilize the domestic stock market, the TAIEX (index of the TWSE market) rebounded to 14,138 at year end after trending down from the historical high of 18,526 at the beginning of the year (Chart 3.6), posting a decrease of 22.40% year on year. Major indices in international stock markets fell sharply in the same period. The TPEX of the OTC market closely tracked the movements of the TAIEX, dropping to 180 at the end of 2022, showing a yearly decrease of 24.08%.

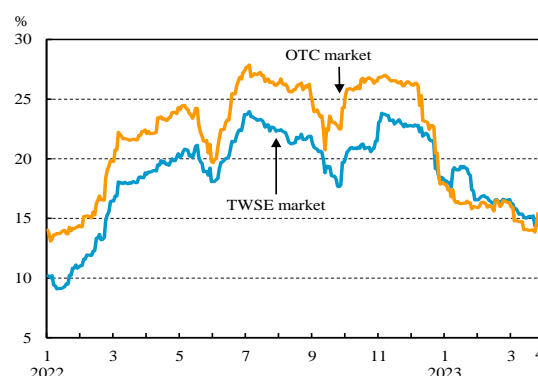
Entering 2023, benefitting from loosened domestic COVID-19 prevention measures and border control, economic activity gradually returned to normal and consumer confidence stabilized. In addition, Taiwan's stock markets were only modestly affected by the recent turmoil in the US and European banking sectors. As a result, the TAIEX fluctuated with an uptrend in the first four months of the year, and the TPEX also followed the same trend (Chart 3.6).

Volatility in the stock markets increased, while annual turnover rates declined

In 2022, rising uncertainty surrounding the international political and economic situation riled global stock markets and, in turn, increased volatility in Taiwan's stock markets. Thanks to the support from the National Financial Stabilization Fund in July, volatility in the TWSE and the OTC markets gradually dropped to 21.33% and 22.71%, respectively, at the end of the year and declined further as of the end of April 2023 (Chart 3.7).

Owing to the notably declining trading volume of Taiwan's stock markets, the monthly average trading value in both the TWSE and the OTC markets significantly dropped by 39.23% and 26.62% year on year to NT\$4.67 trillion and NT\$1.24 trillion in 2022, respectively. Among market participants, domestic individual investors accounted for 58.30% of the total, lower than the previous year's 69.77%. Affected by the above factors, the annual turnover rates in terms of trading value fell sharply to 115.44% and 315.73% in the TWSE and the OTC markets (Chart 3.8), respectively. This was still higher than in most major international stock markets and only lower than in the US, South Korea, and China (Chart 3.9), indicating that trading in Taiwan's stock markets was still quite active and liquidity remained ample.

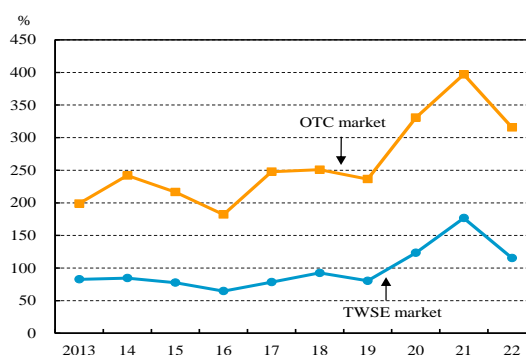
Chart 3.7 Stock price volatility in Taiwan's markets



Note: Volatility refers to the annualized standard deviation of 60-day daily index returns.

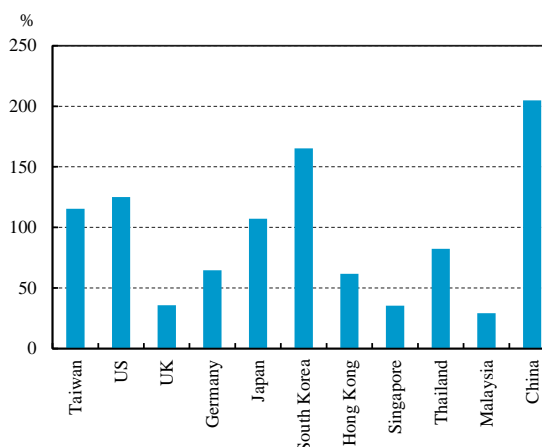
Sources: TWSE, TPEX, and CBC.

Chart 3.8 Annual turnover rates in Taiwan's stock markets



Sources: TWSE and TPEX.

Chart 3.9 Turnover rates in major stock markets



Note: Figures refer to accumulated turnover rates in 2022.

Source: TWSE.

Overall, domestic stock markets were supported by sound economic fundamentals. However, factors including increased uncertainties over the economic prospects and inflation trends in major economies and lingering fear among investors over the repercussions of the banking turmoil in the US and Europe may continue to affect the global economy and international stock markets and, in turn, impact the domestic stock markets. It is necessary to pay close attention to these developments.

3.1.3 FX market

The NT dollar turned to appreciate after depreciating against the US dollar, while the trading volume of the FX market increased

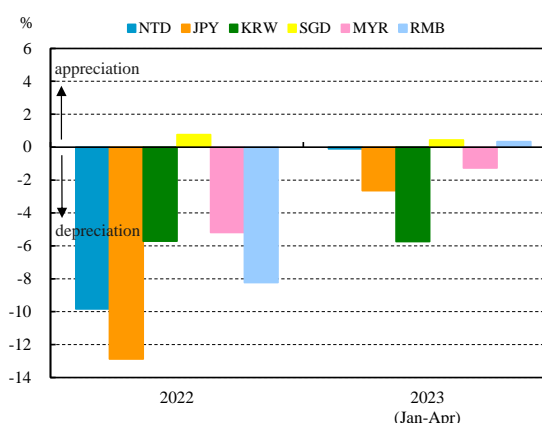
In 2022, in view of high and persistent inflation, the Fed implemented an aggressive series of interest rate hikes, resulting in a strong US dollar. This, coupled with continued outflows driven by a reduction of investments by foreign institutional investors in Taiwan's stock markets, led to NT dollar depreciation against the US dollar towards a level below 32 in October. Subsequently, as the US headline and core inflation rates both showed signs of easing, along with the expectation of the Fed slowing its pace of rate hikes, the NT dollar exchange rate rebounded to 30.708 against the US dollar at the end of 2022, depreciating by 9.83% from the end of the previous year. Then, at the beginning of 2023, as an easing in US inflation reinforced market expectation of slower Fed rate hikes, the NT dollar uptrend thus continued before reversing a while later to end April at 30.740 (Chart 3.10), depreciating by 0.10% compared to the end of 2022.

Chart 3.10 NTD/USD exchange rate



Source: CBC.

Chart 3.11 Exchange rate changes of major Asian currencies against the US dollar



Note: Changes in 2022 are figures at the end of the year compared to those at the end of 2021; changes in the period of Jan-Apr 2023 are figures at the end of April 2023 compared to those at the end of 2022.

Source: CBC.

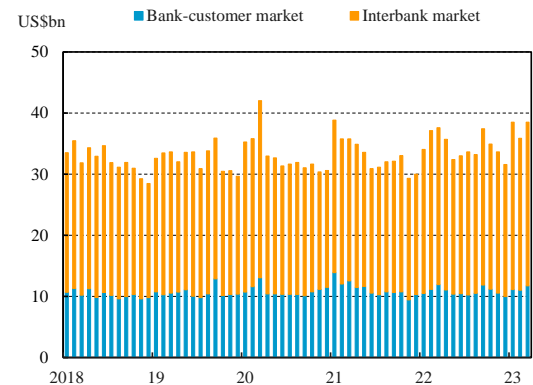
In 2022, most major Asian currencies depreciated against a strong US dollar. However, as the US dollar weakened between January and April 2023, the downward pressure on most major Asian currencies eased, with the SGD and RMB even appreciating against the US dollar. In the meantime, the NT dollar depreciated relatively slightly against the US dollar; most of the other major Asian currencies continued to depreciate against the US dollar, albeit to a smaller degree than earlier (Chart 3.11).

Trading in Taiwan's FX market expanded in 2022 and the average daily trading volume amounted to US\$34.5 billion, rising by 4.40% from US\$33.0 billion a year earlier primarily because of an increase in interbank transactions (Chart 3.12). The daily trading volume in March 2023 amounted to US\$38.5 billion, higher than the US\$37.6 billion registered in the same period of the previous year.

NT dollar exchange rate volatility remained relatively stable

The volatility of the NT dollar exchange rate against the US dollar fluctuated between 1.33% and 8.18% in 2022 and registered an annual average of 3.89%, which was relatively lower than those of other major currencies. From January to April 2023, the volatility of the NT dollar exchange rate declined and registered between 1.81% and 6.04%. Compared to major currencies such as the Japanese yen, the euro, the Singapore dollar, and the Korean won, the NT dollar exchange rate remained relatively steady against the US dollar (Chart 3.13).

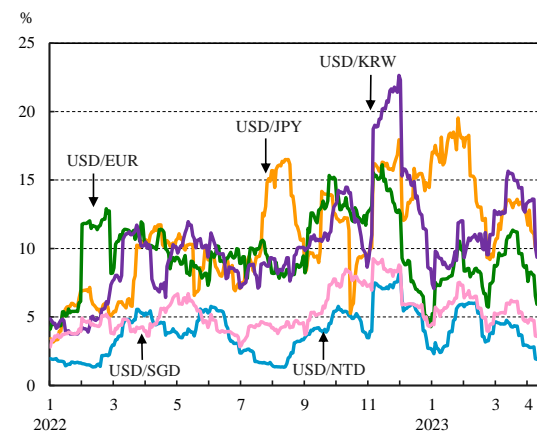
Chart 3.12 FX market trading volume



Notes: 1. Trading volume is the monthly average of daily data.
2. The latest data for trading volume are as of March 2023.

Source: CBC.

Chart 3.13 Exchange rate volatility of various currencies versus the US dollar



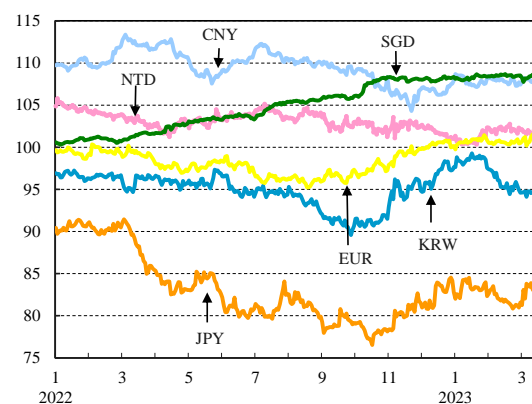
Note: Volatility refers to the annualized standard deviation of 20-day daily returns.

Source: CBC.

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

In 2022, the NEER of the NT dollar weakened with narrow fluctuations throughout the year and registered 100.88 at year end, a decrease of 3.43% compared to 104.46 at the end of 2021. The main reasons were poor export growth in the second half of the year owing to a slowdown in the global economy, and continued capital outflows driven by a reduction of investments by foreign institutional investors in Taiwan's stock markets. However, the NEER of the NT dollar rebounded to 101.47 at the end of March 2023, a slight increase of 0.58% compared to the end of the previous year (Chart 3.14). During the same period, the real effective exchange rate (REER) index of the NT dollar also fluctuated within a limited range and stood at 99.16 in December 2022, dropping by 4.58% compared to 103.92 registered in December 2021. In March 2023, the NT dollar's REER continued to decline to 98.62, a slight decrease of 0.54% compared to December 2022. The volatility of the NT dollar's REER remained relatively stable compared to other major Asian currencies.

Chart 3.14 NT dollar nominal effective exchange rate index



Source: BIS.