

## III. Financial system assessment

### 3.1 Financial markets

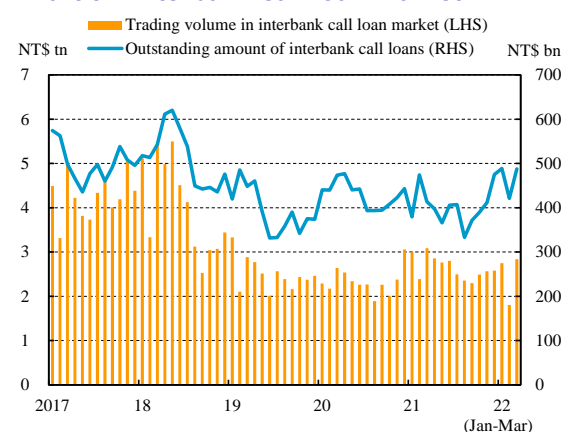
In 2021, the outstanding amount of interbank call loans declined, while their trading volume expanded. On the other hand, the outstanding amount of bill issuance reached another historical high mainly because of a greater increase in CP, and the trading volume amplified. Meanwhile, the outstanding amount of bond issuance continued to expand, with the greatest increase in international bonds, but the trading volume in the secondary market decreased substantially and the turnover rate of outright bond transactions declined. Short-term market rates stabilized at a low level, while long-term interest rates fluctuated upwards after the Bank raised the policy rates in March 2022, resulting in higher interest rate risks in bond investments. As for stock markets, in 2021, stock indices hit historical highs and then fell back with increasing volatility. Meanwhile, the NT dollar oscillated and appreciated against the US dollar. Nevertheless, in the beginning of 2022, propelled by a stronger US dollar, the NT dollar depreciated, while the volatility remained relatively stable.

#### 3.1.1 Money and bond markets

##### *Outstanding amount of interbank call loans declined, while their trading volume expanded*

In 2021, owing to the resurgence of domestic pandemic cases, financial institutions became more conservative in extending interbank lending. As a result, the average daily outstanding amount of interbank call loans decreased by 6.68% and registered NT\$402.1 billion. However, the trading volume of

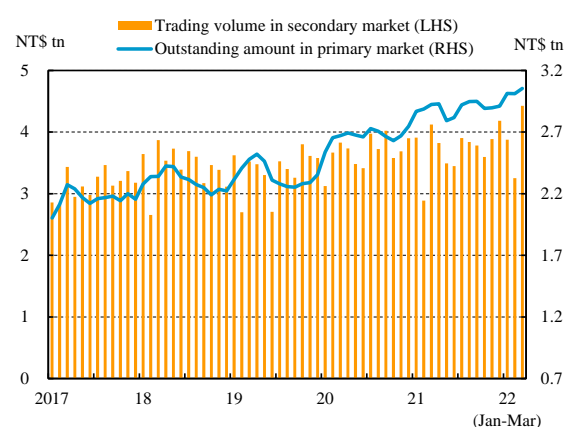
**Chart 3.1 Interbank call loan market**



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

interbank call loans increased by 12.78% year on year in 2021, given that the proportion of interbank overnight call loans in the market expanded and financial institutions increased the frequency with which they rolled over their interbank borrowing. In 2022 Q1, the average daily outstanding amount of interbank call loans expanded year on year, but their trading volume decreased over the same period (Chart 3.1).

**Chart 3.2 Primary and secondary bill markets**



**Outstanding amount of bill issuance hit a new high, propelling the bill trading volume in the secondary market to increase accordingly**

The outstanding amount of bill issuance in the primary market reached a record high of NT\$2.91 trillion at the end of 2021, increasing by 5.97% year on year. The main reason was that interest rates in the primary market stayed at low levels and attracted corporates to increase CP issuance for fund raising. In 2022 Q1, the outstanding amount of bill issuance continued to grow because of the increase in the issuance of treasury bills and CP (Chart 3.2).

Impelled by the expansion in the primary market, the bill trading volume in the secondary market also increased in 2021. The trading volume increased by 1.66% year on year and amounted to NT\$44.87 trillion with CP constituting the largest share of 95.81%. In 2022 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 substantially, and the turnover rate of outright bond transactions dropped to a record low**

The outstanding amount of bond issuance increased by 7.58% and reached a new high of NT\$15.45 trillion at the end of 2021 because interest rates stayed at low levels and attracted corporates and financial institutions to increase bond issuance so as to lock in long term funding costs. Major bonds all saw increasing issuance. Among them, the outstanding amount of international bond issuance increased the most by value and registered an annual growth rate of 9.26%, followed by corporate bonds and government bonds, which increased by 15.35%

and 3.82%, respectively, year on year (Chart 3.3).

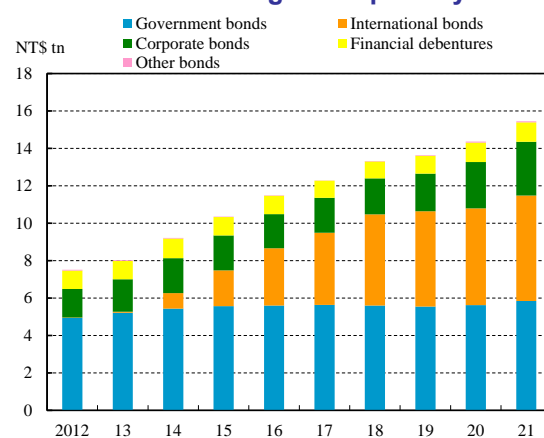
However, the trading volume in the secondary bond market dropped to NT\$36.14 trillion in 2021, substantially decreasing by 31.17% year on year (Chart 3.4). This was mainly owing to the fact that major bond market traders such as bills finance companies and securities firms reduced their bond holdings considering that bond yields might rise. Analyzed by trading types, repo transaction volume shrank by 30.01% year on year, and outright transaction volume decreased by 35.52%. As a result, the average monthly outright turnover rate of major bonds decreased continually in 2021 and dropped to a recent low of 2.45%. In 2022 Q1, it declined further to a record low of 2.43%.

**Long-term market rates rose markedly, leading to higher interest rate risks on bond investments**

In terms of short-term market rates, the interbank overnight call loan rate stabilized at a low level in 2021 and ascended gradually after the Bank raised the policy interest rates and the interest rate on the Bank's certificates of deposit (CDs) in March 2022 (Chart 3.5). However, liquidity in financial markets remained ample.

As for long-term market rates, 10-year government bond yields trended upwards in 2021 alongside the movement of US government bond yields. In 2022, the yields rose further and reached a 4-year high of 1.07% on March 28 (Chart 3.5) given that the

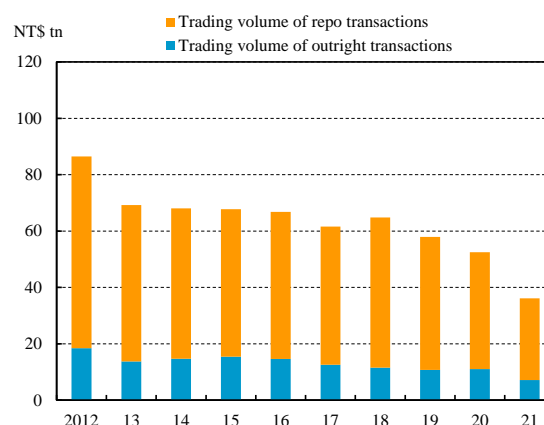
**Chart 3.3 Total amount of bonds outstanding in the primary market**



Note: Other bonds include beneficiary securities and foreign bonds.

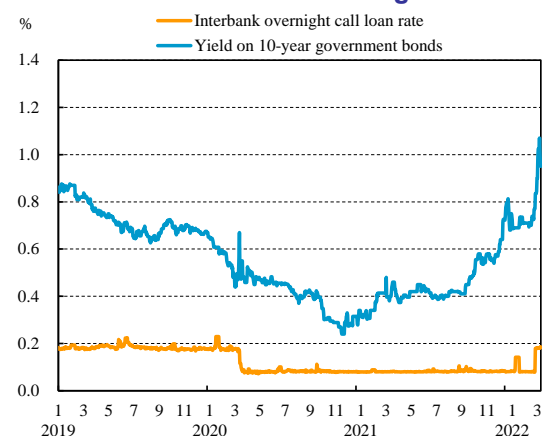
Source: FSC.

**Chart 3.4 Outright and repo transactions in the bond market**



Source: CBC.

**Chart 3.5 10-year government bond yield and interbank overnight rate**



Source: Bloomberg.

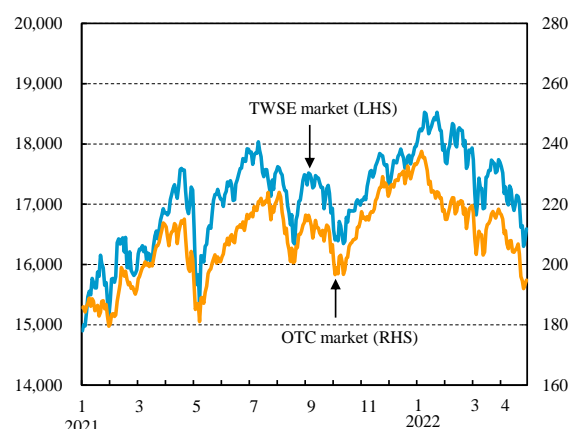
Bank raised policy interest rates in mid-March and US government bond yields saw a sharp rise. Considering that recent tightening of monetary policies in major economies to curb inflation might put upward pressure on bond yields globally and, in turn, propel 10-year government bond yields to increase further, interest rate risks related to bond investments might elevate and warrant close attention.

### 3.1.2 Equity markets

#### *Stock indices reached historical highs before slumping*

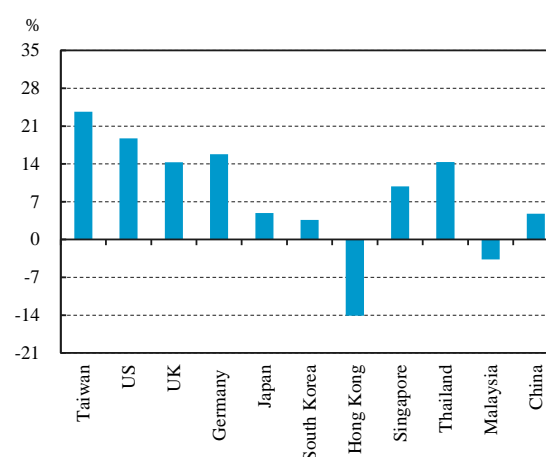
In the beginning of 2021, benefiting from strong exports and better-than-expected economic performance in Taiwan, as well as US stock indices repeatedly reaching new highs, the TAIEX of the TWSE market went up steadily. Owing to recurring outbreaks of the pandemic, the TAIEX saw a sudden drop in May. However, affected by sequences of positive/negative messages, the TAIEX fluctuated with an upward trend (Chart 3.6), posting an increase of 23.66% year on year and surging higher than the major indices in international stock markets (Chart 3.7). The Taipei Exchange Capitalization Weighted Stock Index (TPEX) of the OTC market closely tracked the movements of the TAIEX, posting an increase of 29.03% year on year in 2021. In 2022 Q1, affected by US policy interest rate hikes, the Russia-Ukraine war, and the resurgence of the pandemic in China, the volatility in international stock markets increased dramatically. Therefore, the TAIEX dropped from its high level, and the TPEX also followed the same trend (Chart 3.6).

**Chart 3.6 Taiwan's stock market indices**



Sources: TWSE and TPEX.

**Chart 3.7 Major stock market performance**



- Notes: 1. Changes are figures at the end of 2021 compared to those at the end of 2020.  
2. Market performance is based on TWSE Weighted Index for Taiwan, DJIA Index for the US, FTSE-100 Index for the UK, DAX Index for Germany, NK-225 Index for Japan, KOSPI Index for South Korea, Hang Seng Index for Hong Kong, Straits Times Index for Singapore, SET Index for Thailand, Kuala Lumpur Composite Index for Malaysia, and SSE Composite Index for China.

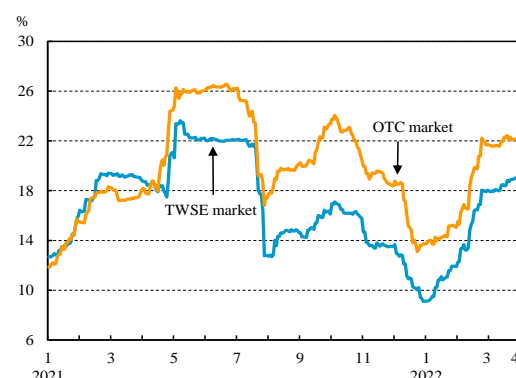
Source: TWSE.

### **Volatility in the stock markets increased sharply and annual turnover rates rose dramatically**

Since May 2021, the spread of intensified panic sentiment in financial markets caused by the domestic COVID-19 resurgence drove the volatility of Taiwan's stock prices to surge sharply. However, the volatility of the TWSE and the OTC markets dropped and stabilized in the second half of the year, registering 10.27% and 13.81%, respectively, at the end of the year. From the beginning of 2022, affected by the intensifying fluctuations in global stock markets, the volatility of Taiwan's stock prices expanded again (Chart 3.8).

Owing to the booming trading volume of Taiwan's stock markets, the monthly average trading value in both the TWSE and the OTC markets increased to NT\$7.69 trillion and NT\$1.69 trillion in 2021, respectively, posting increases of 102.15% and 67.75% year on year. Among them, the monthly average trading value of domestic individuals accounted for 69.77% of the total and showed an increase for two consecutive years. Affected by the above factors, the annual turnover rates in terms of trading value also rose to 176.60% and 397.00% in the TWSE and the OTC markets (Chart 3.9), respectively, higher than those in most major international stock markets (Chart 3.10), indicating that Taiwan's stock markets were prosperous and liquidity remained sufficient.

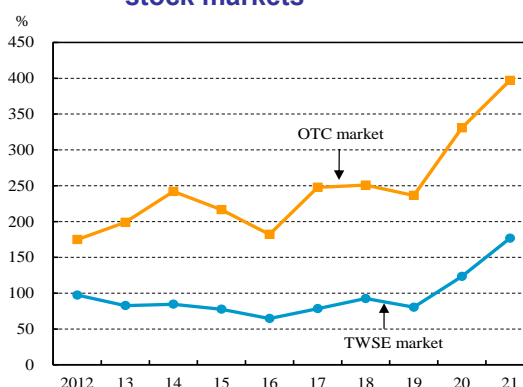
**Chart 3.8 Stock price volatility in Taiwan's markets**



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

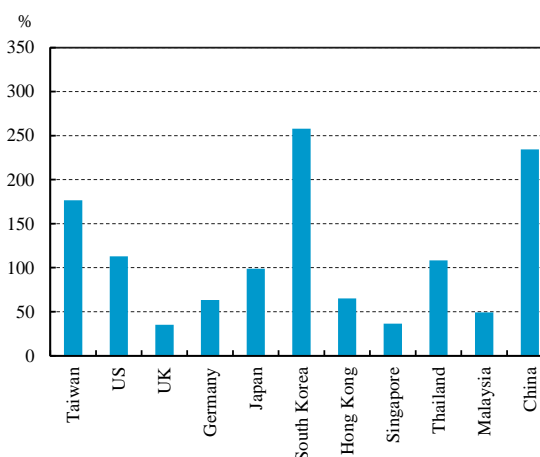
Sources: TWSE, TPEx, and CBC.

**Chart 3.9 Annual turnover rates in Taiwan's stock markets**



Sources: TWSE and TPEx.

**Chart 3.10 Turnover rates in major stock markets**



Note: Figures refer to accumulated turnover rates in 2021.

Source: TWSE.

Domestic stock markets were supported by sound economic fundamentals. However, an escalation of the COVID-19 pandemic, along with global geopolitical risks and uncertainties surrounding monetary policies in major economies, may affect the global economy and international stock markets, which could in turn impact domestic stock markets. The developments of the above issues warrant close attention.

### 3.1.3 FX market

*The NT dollar turned to depreciate after appreciating against the US dollar, while the trading volume of the FX market decreased moderately*

In 2021, Taiwan's economy performed remarkably well and its exports repeatedly hit new highs. Strong demand for US dollars by exporters, coupled with inflows of foreign capital to invest in domestic stock markets, led the NT dollar to appreciate against the US dollar. Following this upward trend, the NT dollar stood at 27.690 at the end of 2021, rising by 2.95% over the end of the previous year. Nevertheless, in the beginning of 2022, the US dollar began an uptrend caused by US policy interest rate hikes and uncertainties stemming from rising geopolitical tensions. As a consequence, the NT dollar turned to depreciate against the US dollar (Chart 3.11), depreciating by 6.07% at the end of April compared to the end of 2021.

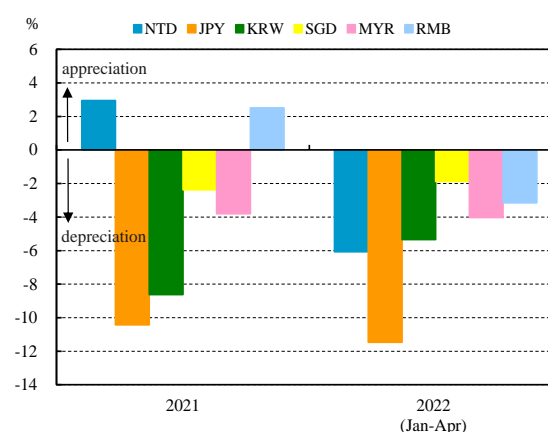
In 2021, owing to appropriate domestic pandemic control and sound economic fundamentals, the extent of NT dollar appreciation against the US dollar was slightly more than the RMB; meanwhile, most other major Asian currencies depreciated against the US dollar. However, from January to April 2022, the rising trend of the US dollar caused the depreciation of most major Asian currencies including the NT dollar (Chart 3.12).

Chart 3.11 NTD/USD exchange rate



Source: CBC.

Chart 3.12 Exchange rate changes of major Asian currencies against the US dollar



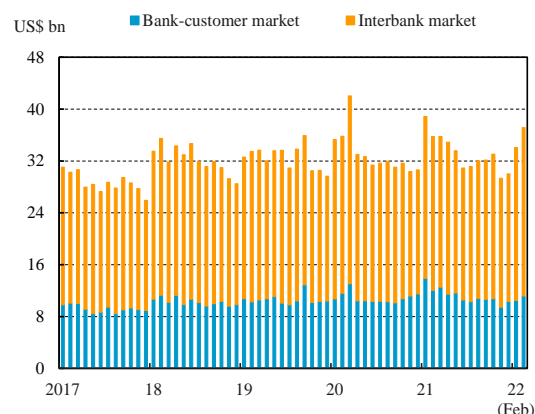
Source: CBC.

The scale of trading in Taiwan's FX market slightly decreased in 2021, with average daily trading volume amounting to US\$33 billion from US\$33.1 billion a year earlier, or declining by 0.30%, primarily because of a decrease in interbank transactions (Chart 3.13).

### **NT dollar exchange rate volatility remained relatively stable**

The volatility of the NT dollar exchange rate against the US dollar fluctuated between 1.17% and 3.93% in 2021 and registered an annual average of 2.55%, which was relatively lower than those in other major currencies. From January to April 2022, the volatility of the NT dollar exchange rate rose and registered between 1.34% and 5.56%. 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 3.14).

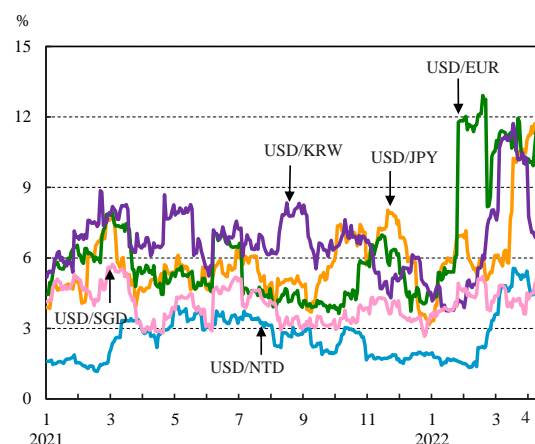
**Chart 3.13 FX market trading volume**



Notes: 1. Trading volume is the monthly average of daily data.  
2. The latest data for trading volume are as of February 2022.

Source: CBC.

**Chart 3.14 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.