

## III. Financial system assessment

### 3.1 Financial markets

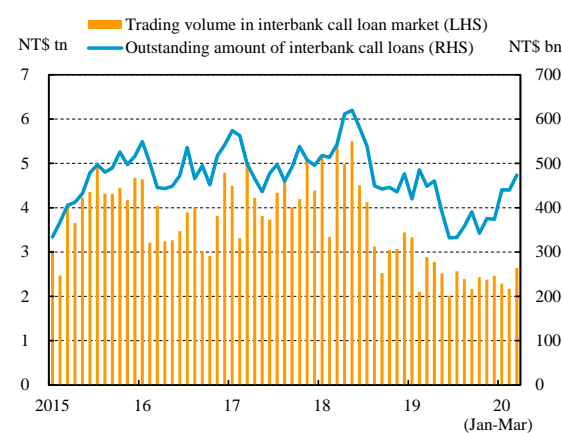
With respect to money and bond markets from 2019 onwards, the interbank call loan market contracted, while the primary bill market expanded and the bill trading volume in the secondary market decreased moderately. The outstanding amount of bond issuance also increased, while the turnover rate of outright transactions in the secondary bond market hit a new low in 2019 before it began to rebound in early 2020. Short-term market rates decreased marginally after the Bank cut the policy rates in March 2020, while long-term interest rates became volatile owing to the COVID-19 pandemic. As for stock markets, stock prices oscillated and trended upwards in 2019, but they slumped and fluctuated dramatically following the spread of the global COVID-19 pandemic in 2020. In the FX market, the NT dollar appreciated slightly against the US dollar in 2019 and remained on an appreciating path from January to April 2020. However, the volatility was relatively low.

#### 3.1.1 Money and bond markets

##### *Interbank call loan market contracted*

The average daily outstanding amount of interbank call loans registered NT\$392.5 billion in 2019, decreasing by 23.71% year on year. The main reasons were that higher demand by Taiwanese enterprises for loans decreased banks' willingness to provide call loans and bills finance companies reduced interbank borrowing. These, together with a decreasing turnover rate of call loans reflecting longer loan tenors, led the trading volume of interbank call loans to decrease markedly by 37.74% year on year. In 2020 Q1, the outstanding amount of interbank call loans rebounded, while their trading volume continued to stay at a low level (Chart 3.1).

**Chart 3.1 Interbank call loan market**



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

### **Outstanding amount of bill issuance increased, while the bill trading volume in the secondary market decreased**

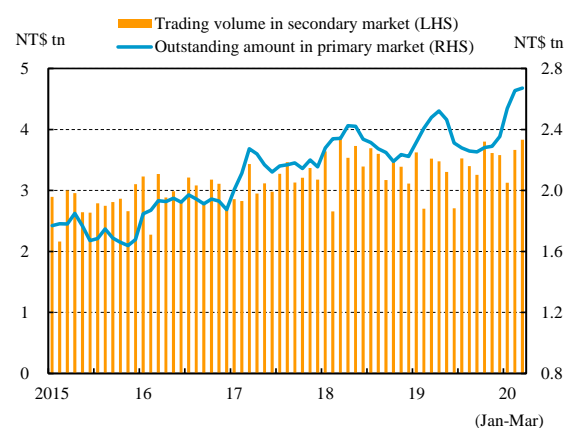
The outstanding amount of bill issuance in the primary market reached NT\$2.35 trillion at the end of 2019, increasing by 5.85% year on year, owing to the expansion in treasury bill and CP issuance. In 2020 Q1, the outstanding amount of bill issuance continued to grow because of the increase in the issuance of treasury bills and CP (Chart 3.2).

Regarding the secondary bill market, the trading volume decreased marginally by 1.82% year on year and amounted to NT\$40.51 trillion in 2019 because the trading volume of negotiable certificates of deposit (NCD) contracted with their shrinking issuance. However, the bill trading volume rebounded slightly in 2020 Q1 (Chart 3.2).

### **Bond issuance expanded marginally, while the turnover rates of outright transactions rebounded after hitting a new low**

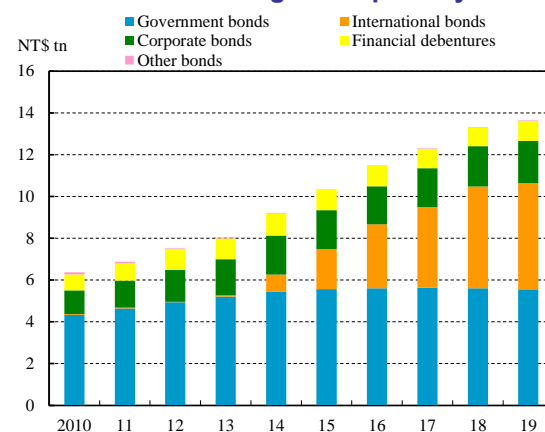
At the end of 2019, the outstanding amount of bond issuance stood at NT\$13.64 trillion and increased slightly by 2.35% year on year. Analyzed by categories, the annual growth rate of international bond issuance<sup>48</sup> dropped significantly to 4.41% from 26.23% a year earlier, owing to reasons that the FSC imposed a

**Chart 3.2 Primary and secondary bill markets**



Source: CBC.

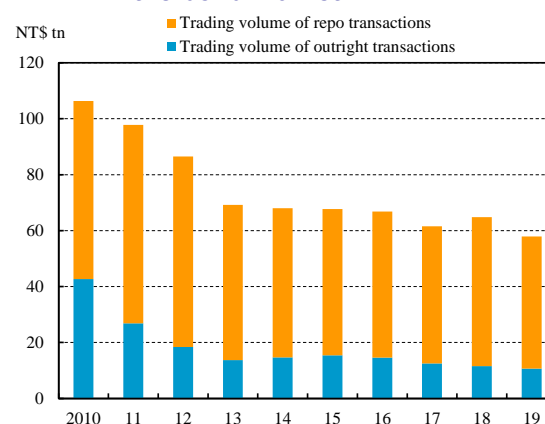
**Chart 3.3 Total amount of bonds outstanding in the primary market**



Note: Other bonds include beneficiary securities and foreign bonds.

Source: FSC.

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



Source: CBC.

<sup>48</sup> International bonds refer to bonds denominated in foreign currencies and issued in Taiwan by domestic and overseas issuers.

limit on the amount of international bond investments by insurance companies and massive amounts of international bonds were called back by their issuers following the Fed's rate cuts. Meanwhile, the outstanding amount of corporate bond issuance increased by 4.69% year on year because low interest rates attracted corporates to increase bond issuance for fund raising. In addition, the outstanding amount of government bond issuance decreased by 0.92% year on year as the government implemented a policy of regular and moderate bond issuance and maintained fiscal discipline (Chart 3.3).

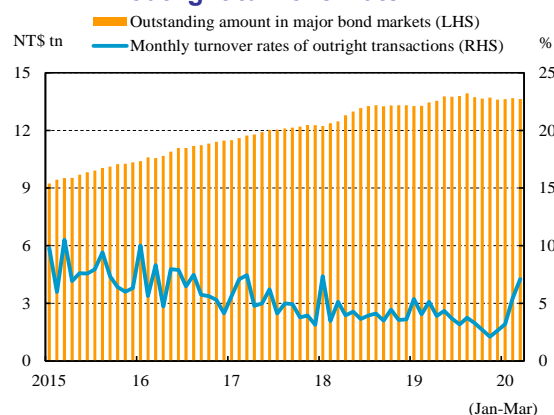
In the secondary bond market, trading volume decreased by 10.70% year on year to NT\$57.89 trillion in 2019 (Chart 3.4), as repo transactions and outright transactions both saw diminishing trading. The average monthly outright turnover rate of major bonds in the secondary market declined further in 2019 to a record low of 3.68%, but rebounded in 2020 Q1 (Chart 3.5).

### **Short-term market rates descended marginally, while volatility of long-term market rates exacerbated**

In 2019, the interbank overnight call loan rate stabilized at a low level, reflecting ample liquidity in financial markets. After the Bank cut interest rates in March 2020, the interbank overnight call loan rate also trended downwards gradually and fluctuated at a low level after hitting a recent low of 0.074% on April 9 (Chart 3.6).

As for long-term market rates, 10-year government bond yields, following the downward trend of US government bond yields, fluctuated downwards in 2019. From 2020 onwards, the yields declined consecutively and dropped to a historical low level of 0.44% on March 9, driven by the facts that US government bond yields fell significantly amid the COVID-19 pandemic outbreak and the life insurance industry was under increasing pressure to replenish bond

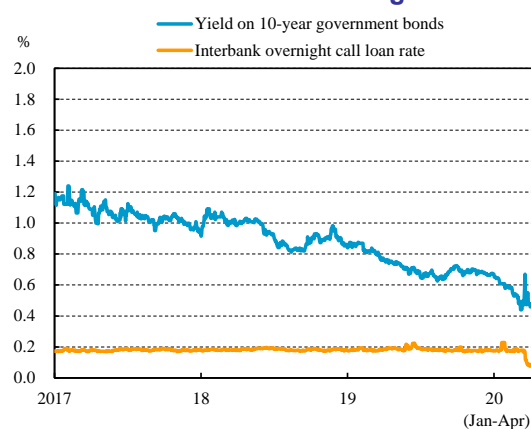
**Chart 3.5 Outstanding amount in major bond markets and monthly outright turnover rate**



Notes: 1. Major bonds include government bonds, international bonds, corporate bonds, and financial debentures.  
2. Monthly turnover rate = trading value in the month/ average outstanding amount of bonds issued.  
Average outstanding amount of bonds issued = (outstanding amount at the end of the month + outstanding amount at the end of last month)/2.

Source: FSC.

**Chart 3.6 10-year government bond yield and interbank overnight rate**



Source: Bloomberg.

investments. Although the yields, propelled by worsened market sentiment, saw an abrupt jump to 0.67% on March 19, they fell back following the Bank's rate cut (Chart 3.6). Considering that volatility in the bond market exacerbated amid the pandemic, interest rate risks related to bond investments are still high and warrant close attention.

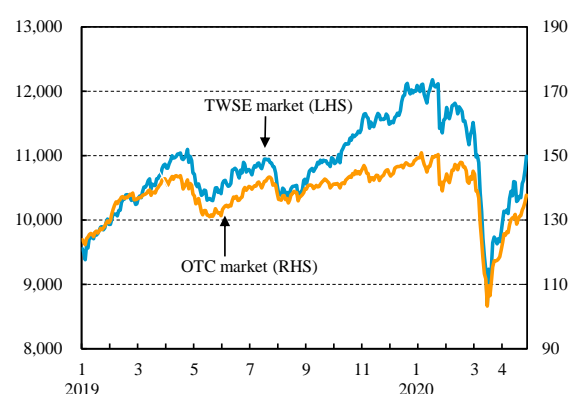
### 3.1.2 Equity markets

**Stock indices fluctuated with an upward trend in 2019; but volatility increased dramatically since the beginning of 2020 as global stock markets plunged**

In the first three quarters of 2019, the TAIEX of the TWSE market fluctuated above 10,000 most of the time. Thereafter, induced by Fed interest rate cuts and quantitative monetary easing policies implemented by central banks of major countries, the TAIEX surged above 12,000 in Q4, before dropping slightly to 11,997 at the end of the year, posting an increase of 23.33% year on year. The Taipei Exchange Capitalization Weighted Stock Index (TPEX) of the OTC market closely tracked the movements of the TAIEX (Chart 3.7).

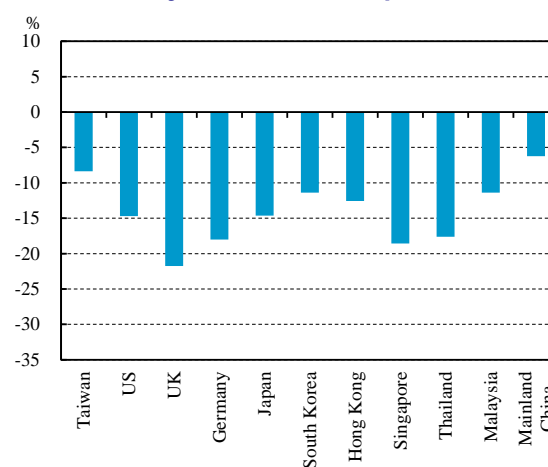
In the beginning of 2020, the TAIEX continued fluctuating at a high level. Nevertheless, in late January, the COVID-19 pandemic led to a huge decline in the TWSE market. Coupled with a collapse in crude oil prices and the US stock crash in March, the TWSE market plunged. Afterwards, the TAIEX rebounded and reached 10,992 at the end of April. In the same period, the TPEX also closely tracked the movements of the TAIEX (Chart 3.7).

Chart 3.7 Taiwan's stock market indices



Sources: TWSE and TPEX.

Chart 3.8 Major stock market performance



Notes: 1. Changes are figures at the end of April 2020 compared to those at the end of 2019.

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 Mainland China.

Source: Bloomberg.

For the first four months of 2020, owing to the measures implemented by the FSC to maintain market stability and the support from the National Financial Stabilization Fund, together with the advantage of high yields of Taiwanese stocks, the domestic stock markets tended to be more resilient than those in other countries. The TAIEX dropped by 8.38% for the first four months in 2020, falling less than the major indices in the US and European stock markets (Chart 3.8).

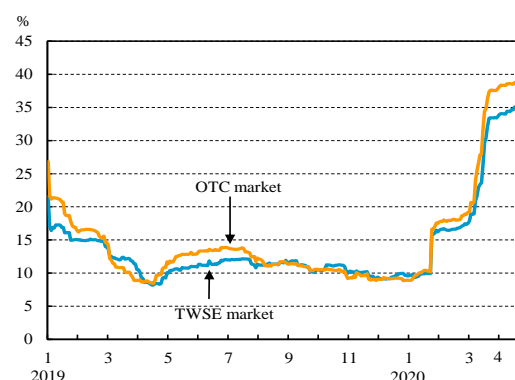
### **The COVID-19 pandemic caused volatility in the stock markets to increase sharply**

Excluding 2019 Q1, volatility in the TWSE and the OTC markets in 2019 moved around 10%, registering 9.71% and 8.91% at the end of December. At the beginning of 2020, owing to the plunge in local stock indices, volatility surged sharply and registered 33.54% and 36.60%, respectively, at the end of April (Chart 3.9).

### **Annual turnover rates decreased in 2019, but reversed to trend upwards in early 2020**

The annual turnover rates in terms of trading value in both the TWSE and the OTC markets fell to 80.36% and 236.49%, respectively (Chart 3.10), still higher than many major stock markets around the world. This showed that Taiwan's stock market liquidity remained high (Chart 3.11). The annual turnover rates in both markets rose to 12.51% and 29.79%, respectively, in March 2020, owing to surging volatility.

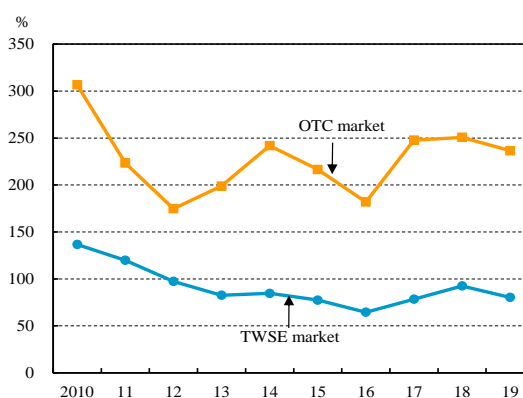
**Chart 3.9 Stock price volatility in Taiwan's markets**



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

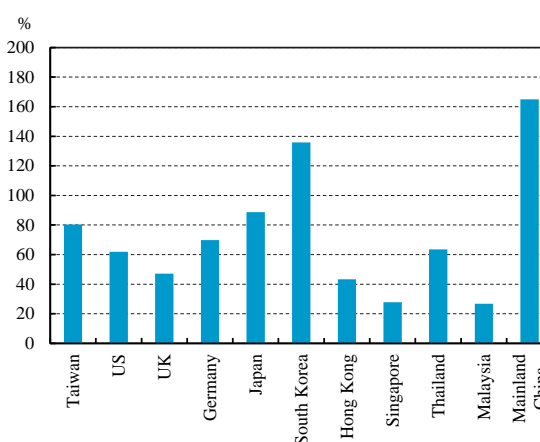
Sources: TWSE, TPEX and CBC.

**Chart 3.10 Annual turnover rates in Taiwan's stock markets**



Sources: TWSE and TPEX.

**Chart 3.11 Turnover rates in major stock markets**



Note: Figures refer to accumulated turnover rates in 2019.

Sources: TWSE and WFE.

### 3.1.3 FX market

#### *The NT dollar strengthened against the US dollar, while the trading volume of the FX market increased moderately*

In the first four months in 2019, the NT dollar exchange rate against the US dollar fluctuated within a narrow range. From May onwards, owing to the intensified US-China trade dispute, the NT dollar depreciated. However, the NT dollar turned to appreciate against the US dollar from September and stood at 30.106 at the end of 2019, appreciating by 2.08% for the year. The NT dollar turned to depreciate against the US dollar in 2020 Q1. The reasons behind this were the COVID-19 pandemic, the Fed's rate cuts, and massive outflow of foreign capital in March. The NT dollar exchange rate stood at 29.802 at the end of April (Chart 3.12) owing to inbound remittances of overseas investments by onshore funds and the selling of US dollars by exporters, representing an appreciation of 1.02% compared to the end of 2019.

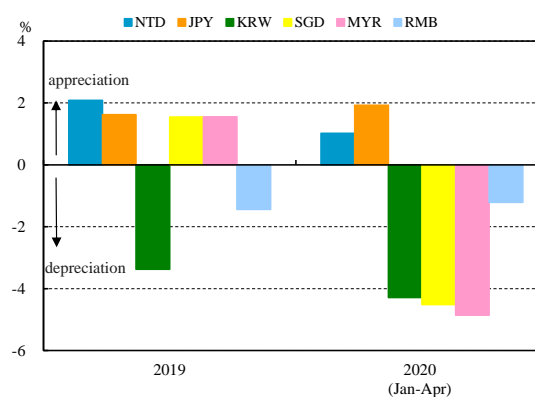
Compared to major Asian currencies, the NT dollar appreciation against the US dollar was more than the Japanese yen, the Singapore dollar and the Malaysian ringgit in 2019. From January to April in 2020, the NT dollar appreciated moderately against the US dollar and was relatively stable compared to other currencies (Chart 3.13). In the same period, the NT dollar appreciated by 6.47%, 5.54%, and 4.05% against the British pound, the Korean won and the euro, respectively, but depreciated by 0.89% against the Japanese yen (Chart 3.14).

Chart 3.12 NTD/USD exchange rate



Source: CBC.

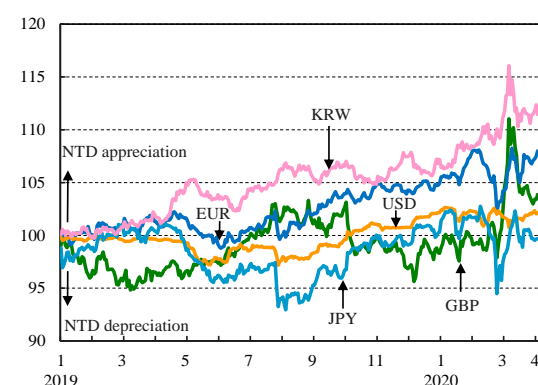
Chart 3.13 Exchange rate changes of major Asian currencies against the US dollar



Note: Changes in "2019" are figures at the end of 2019 compared to those at the end of 2018; and changes in "Jan-Apr 2020" are figures at the end of April 2020 compared to those at the end of 2019.

Source: CBC.

Chart 3.14 Movements of NT dollar exchange rate against key international currencies



Note: December 28, 2018 = 100.

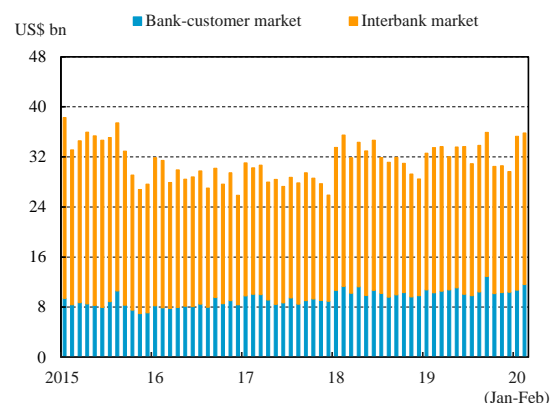
Source: CBC.

In 2019, the average daily trading volume in Taiwan's FX market expanded slightly by 1.14% and rose to US\$32.5 billion from US\$32.1 billion a year earlier, primarily because of an increase in the bank-customer market (Chart 3.15).

**NT dollar exchange rate volatility remained relatively stable, while the COVID-19 pandemic had less impact on the FX market**

Volatility in the NT dollar exchange rate against the US dollar shifted between 0.70% and 4.94% and registered an annual average of 2.39% in 2019. However, global financial markets fluctuated dramatically during January to April 2020 because of the huge impacts of COVID-19, with surging volatility in the NT dollar exchange rate registering between 1.50% and 5.66%. Compared to major currencies such as the Japanese yen, the euro, and the Korean won, the NT dollar exchange rate has been relatively stable against the US dollar, owing to a lower impact of the COVID-19 pandemic on Taiwan (Chart 3.16).

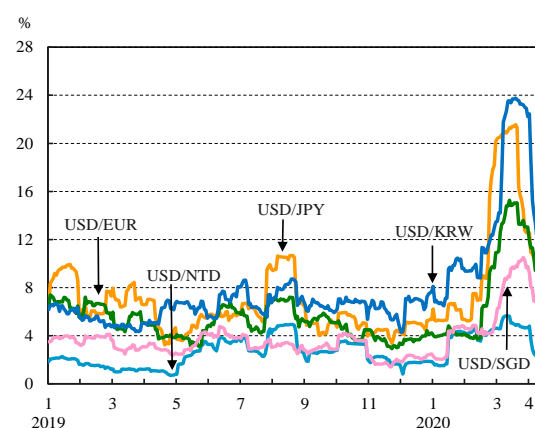
**Chart 3.15 FX market trading volume**



Notes: 1. Trading volume is the monthly average of daily data.  
2. The latest data for trading volume are as of February 2020.

Source: CBC.

**Chart 3.16 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.