

III. Financial system assessment

3.1 Financial markets

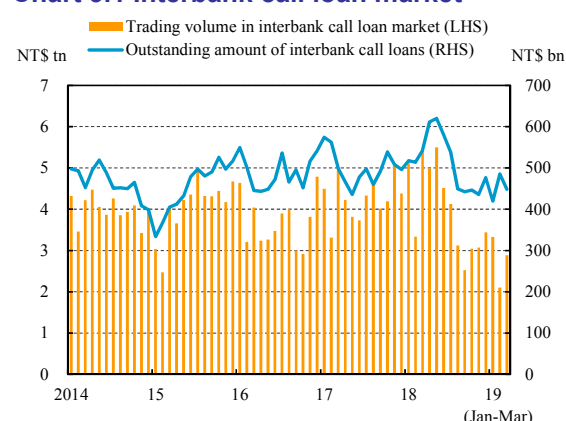
With respect to money and bond markets in 2018, the interbank call loan market and the primary bill market contracted after expanding. The outstanding amount of bond issuance continued escalating, while the turnover rate of outright transactions in the secondary bond market decreased and hit a new low. In the same period, short-term market rates remained at a low level, while long-term rates fluctuated with a downward trend. As for stock markets, stock prices remained high and fluctuated before trending downward; however, they rebounded markedly in 2019 Q1. In the FX market, the NT dollar exchange rate against the US dollar fluctuated with a downward trend, and its volatility remained relatively stable.

3.1.1 Money and bond markets

Interbank call loan market contracted after expanding

In the first half of 2018, the average daily outstanding amount and the trading volume of interbank call loans increased by 12.33% and 17.59% year on year, respectively. The main reason was that the proceeds from net selling of domestic securities by foreign investors weren't remitted outwards promptly and instead those funds were provided as interbank call loans by the custodian banks. Nevertheless, in the second half of 2018, money markets tightened marginally, which decreased banks' willingness to provide call loans. This, together with a decreasing turnover rate of call loans reflecting longer loan tenor, led the trading volume of interbank call loans to decrease markedly by 27.22% year on year. In 2019 Q1, the outstanding amount and the trading volume of interbank call loans 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 secondary bill market remained on an upward growth path

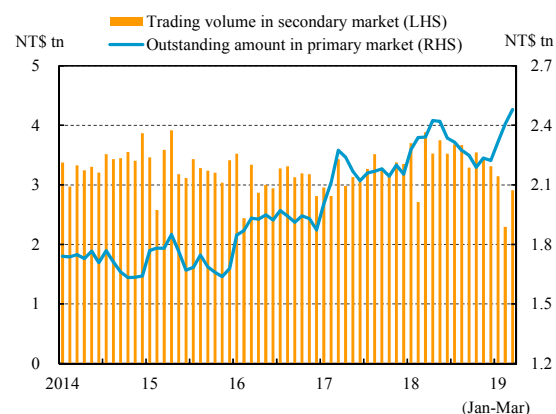
In 2018, although the outstanding amount of bill issuance in the primary market decreased after increasing, it reached NT\$2.22 trillion at the end of the year, increasing by 3.18% year on year, owing to the expansion of CP issuance. In 2019 Q1, the outstanding amount of bill issuance rebounded because of increases in CP and treasury bill issuance (Chart 3.2).

Regarding the secondary bill market, the trading volume increased by 9.68% year on year and amounted to NT\$42.04 trillion in 2018 owing to the expanded issuance of CP. The trading volume reversed to decrease in 2019 Q1 (Chart 3.2).

Bond issuance expanded continually, but the turnover rates of outright transactions hit a new low

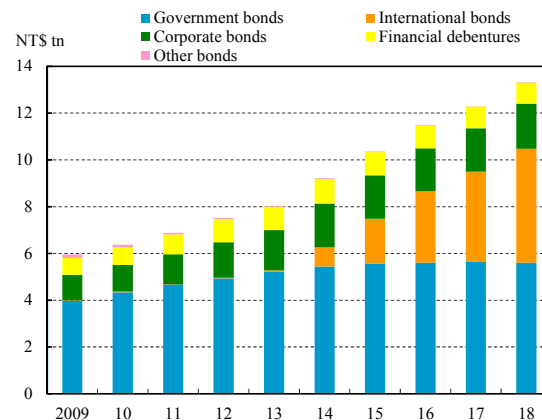
At the end of 2018, the outstanding amount of bond issuance stood at NT\$13.33 trillion and increased by 8.41% year on year, mainly driven by significant growth of international bond issuance.³⁶ However, owing to the fact that the Legislative Yuan passed the amendment of *Insurance Act* that authorized FSC to impose a limit on the amount of international bond investments by insurance companies, the momentum of their issuance has cooled down from April 2018 onwards. In addition, the

Chart 3.2 Primary and secondary bill markets



Sources: CBC and FSC.

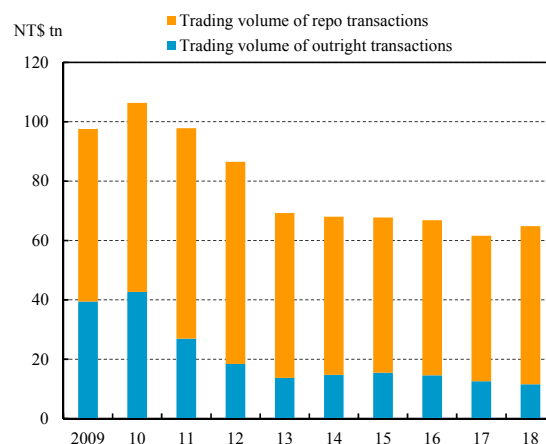
Chart 3.3 Total amount of bonds outstanding in the primary market



Note: Other bonds include beneficiary securities and foreign bonds.

Source: FSC.

Chart 3.4 Outright and repo transactions in the bond market



Source: CBC.

³⁶ International bonds refer to bonds denominated in foreign currencies and issued in Taiwan by domestic and overseas issuers.

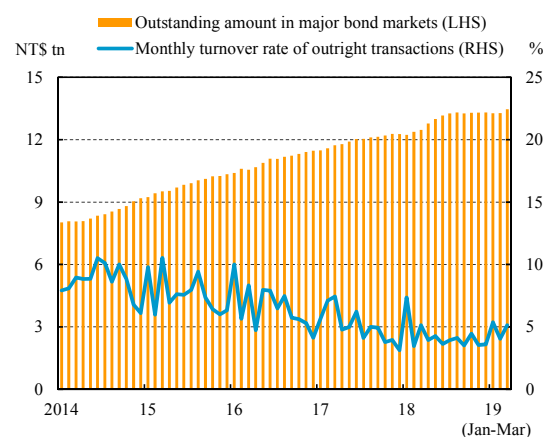
outstanding amount of corporate bond issuance increased by 3.68% year on year because interest rates stabilized at a low level, and this attracted corporates to increase bond issuance for the purpose of fund raising. In the meantime, the outstanding amount of government bond issuance decreased by 0.6% year on year because of the implementation of regular issuance and debt management by the government (Chart 3.3).

In the secondary bond market, trading volume increased by 5.26% year on year to NT\$64.82 trillion (Chart 3.4), among which the trading volume of repo transactions increased, while that of outright transactions diminished further. The monthly turnover rate of major bonds in the secondary market also declined in 2018 to a record low of 4.25%, but slightly rebounded in 2019 Q1 (Chart 3.5).

Short-term market rates remained at a low level, while long-term market rates fluctuated with a downward trend

In 2018, owing to sustained ample funds in financial markets, the interbank overnight call loan rate remained at a low level (Chart 3.6). As for long-term market rates, 10-year government bond yields, driven by greater demand for hedging, dipped consecutively from June and reached a two-year low of 0.8115% on August 15 before rebounding marginally. However, from mid-December, the yields followed the downward trend of US government bond yields and fell again (Chart 3.6). Considering that 10-year government bond yields have dropped to a relatively low level recently and the possibility for them to rebound in the future increased, interest rate risks related to bond investments are still high and warrant close attention.

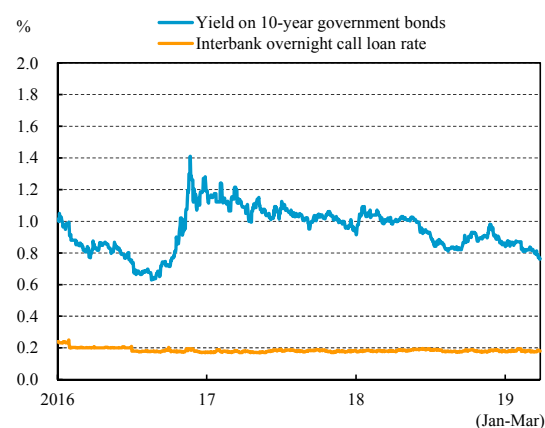
Chart 3.5 Outstanding amount in major bond markets and monthly turnover rate



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.

3.1.2 Equity markets

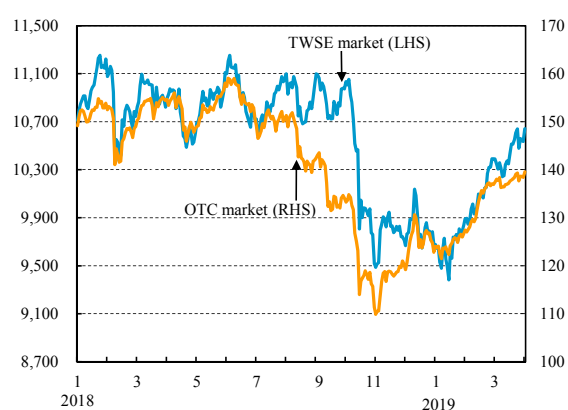
Stock indices slumped after experiencing fluctuations at a high level in 2018, but rebounded strongly in 2019 Q1

The TAIEX of the TWSE market fluctuated at a high level around 10,000 in the first three quarters of 2018. However, induced by a slump in international stocks and massive net selling by foreign investors in Asian emerging markets, the TAIEX plunged below 10,000 from October onwards, and registered 9,727 at the end of the year, posting a decrease of 8.60% year on year (Chart 3.7). In 2019 Q1, the stock index rebounded and reached 10,641 at the end of March. Nevertheless, affected by intensified US-China trade tensions, international stock markets tumbled and led to a fall in the TWSE market in early May. The Taipei Exchange Capitalization Weighted Stock Index (TPEX) of the OTC market closely tracked the movements of the TAIEX, but with amplified volatility (Chart 3.7).

As for major stock markets around the world, all of them experienced drops in 2018, with the TAIEX falling slightly more than the major indices in the US and Malaysia (Chart 3.8).

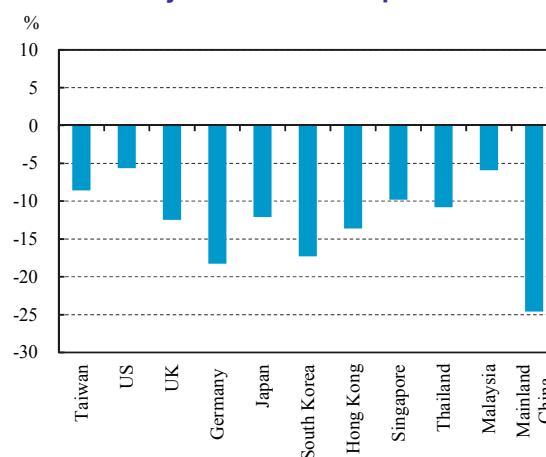
In the first half of 2018, volatility in the TWSE and the OTC markets rose sharply and then dropped. However, affected by the significant fall in international stock markets in October, volatility of the two markets surged and registered 21.29% and 27.05%, respectively, at the end of 2018. In 2019 Q1, the TWSE and the OTC markets

Chart 3.7 Taiwan's stock market indices



Sources: TWSE and TPEX.

Chart 3.8 Major stock market performance



Notes: 1. Figures are for 2018.

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: TWSE.

stabilized and their volatility decreased to 12.21% and 10.12%, respectively, at the end of March (Chart 3.9).

Annual turnover rates increased

Trading volumes in both the TWSE and the OTC markets were boosted in 2018, induced by the day trading transaction tax being cut by half. The annual turnover rates in terms of trading value in both markets rose to 92.55% and 250.78%, respectively (Chart 3.10). However, the annual turnover rates in the TWSE and the OTC markets declined to 67.52% and 220.18%, respectively, in 2019 Q1, owing to less trading days.

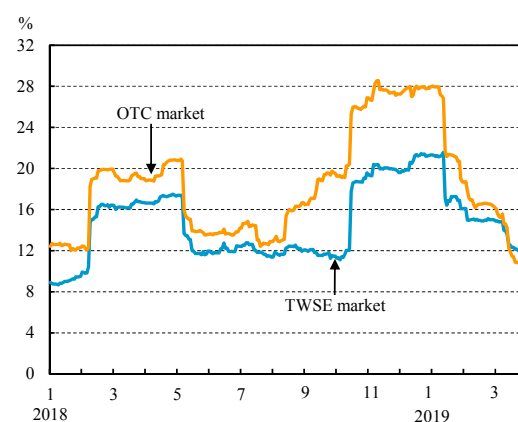
Compared to major stock markets around the world, the annual turnover rate of the TWSE market was still higher than those in the UK, Hong Kong, Singapore, and Malaysia (Chart 3.11).

3.1.3 FX market

The NT dollar exchange rate oscillated along a depreciating path, while the trading volume of the FX market increased

In 2018 Q1, the NT dollar exchange rate appreciated against the US dollar and later on fluctuated within a narrow range. From April onwards, owing to the US-China trade dispute and interest rate hikes by the Fed, the NT dollar exchange rate reversed to depreciate and stood at 30.733 at the end of

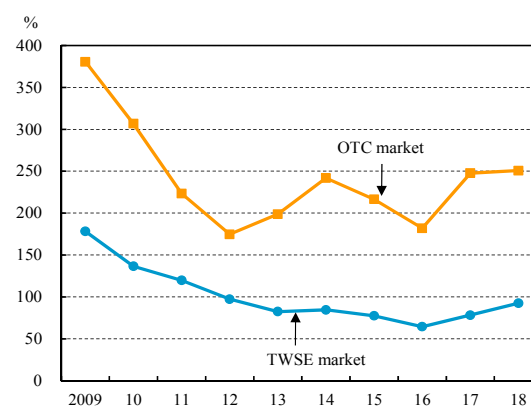
Chart 3.9 Stock price volatility in Taiwan's markets



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

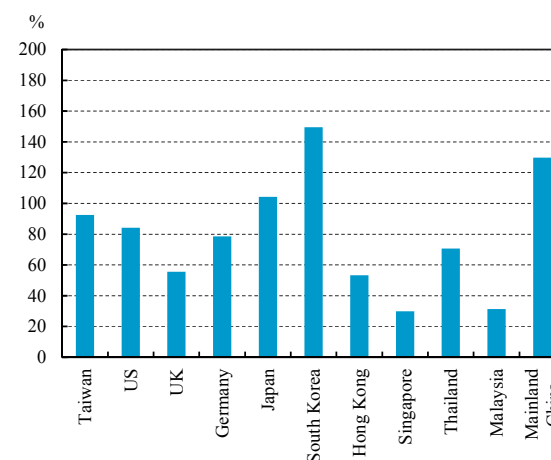
Sources: TWSE, TPEx and CBC.

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 2018.

Source: TWSE.

2018, an annual depreciation of 2.88%. In the beginning of 2019, owing to market expectations of the Fed suspending interest rate rises, the NT dollar exchange rate was relatively stable against the US dollar and stood at 30.825 at the end of March (Chart 3.12). However, intensified US-China trade tensions in early May led to the depreciation of most emerging Asian currencies including the NT dollar, which turned to depreciate against the US dollar and weakened through 31.

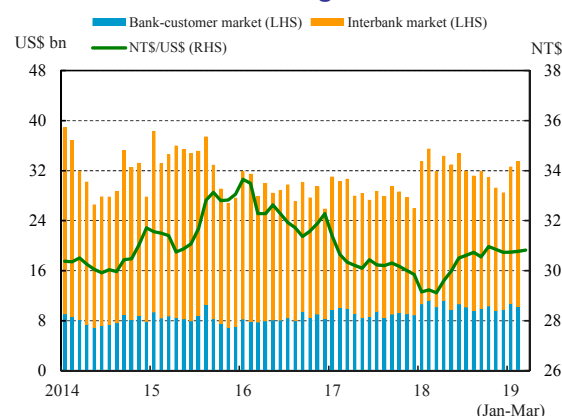
The NT dollar against the US dollar depreciated by 2.88% in 2018, lower than the renminbi and the Korean won, and continued to depreciate by 0.30% in 2019 Q1 (Chart 3.13). However, it still appreciated by 3.36%, 1.34%, and 1.22% against the British pound, the euro, and the Korean won, respectively, but depreciated by 4.83% against the Japanese yen in 2018 (Chart 3.14).

In 2018, the average daily trading volume in Taiwan's FX market rose by 12.37% to US\$32.2 billion, compared to US\$28.7 billion a year earlier, primarily because of an increase in the interbank market (Chart 3.12).

NT dollar exchange rate volatility remained relatively stable

Volatility in the NT dollar exchange rate against the US dollar shifted between 1.43% and 4.97% and registered an annual average of 3.16% in 2018, before moving

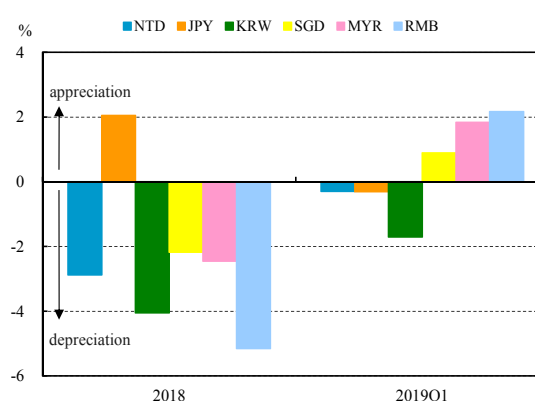
Chart 3.12 NTD/USD exchange rate and FX market trading volume



Notes: 1. Trading volume is the monthly average of daily data, while exchange rate is end-of-period data.
2. The latest data for trading volume are as of February 2019.

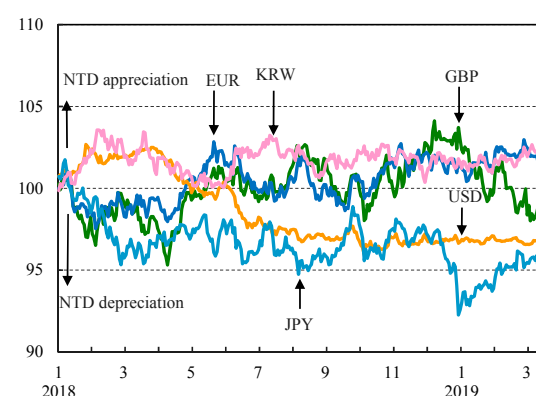
Source: CBC.

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



Source: CBC.

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



Note: December 29, 2017 = 100.

Source: CBC.

between 0.99% and 2.26% during 2019 Q1. Compared to major currencies such as the Japanese yen, the euro, the Korean won, and the Singapore dollar, the NT dollar exchange rate has been relatively stable against the US dollar (Chart 3.15).

3.2 Financial institutions

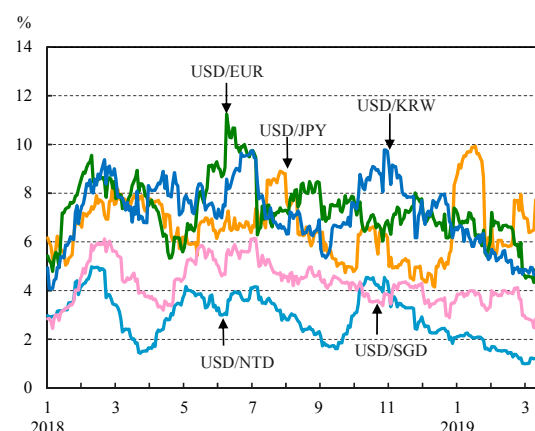
3.2.1 Domestic banks

The total assets of Taiwan's 38 domestic banks³⁷ continually expanded in 2018, owing to growth in loans. Asset quality improved, and concentration in corporate loans as well as credit exposures to real estate loans slightly decreased. However, considering the conservative outlook for the real estate market, banks should prudently monitor and control related credit risks. Moreover, the estimated value at risk (VaR) of market risk exposures ascended, but liquidity risk remained moderate thanks to ample funds in the banking system. While domestic banks posted considerably higher profits in 2018 than the previous year, the average capital adequacy ratio remained the same and revealed satisfactory capacity to bear losses.

Total assets kept growing

The total assets of domestic banks kept growing and reached NT\$49.79 trillion at the end of 2018, equivalent to 279.84% of annual GDP (Chart 3.16). The annual growth rate of the total assets also rose to 4.50% due to the substantial increase in loans. Broken down by sector, the asset growth rates of domestic banking units (DBUs), offshore banking units (OBUs), and overseas branches all showed rising trends, with the growth

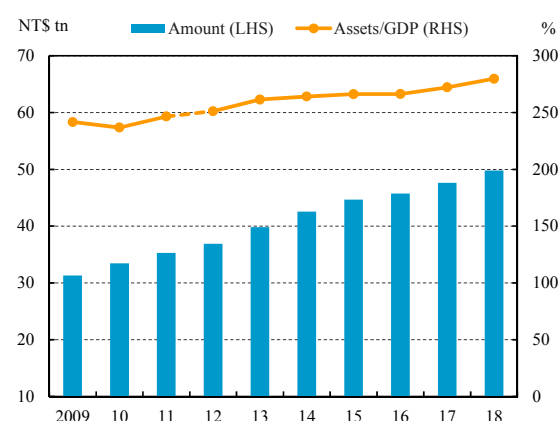
Chart 3.15 Exchange rate volatility of various currencies versus the US dollar



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

Source: CBC.

Chart 3.16 Total assets of domestic banks



Note: Figures from 2012 forward are on the TIFRSs basis, while those of prior years are on the ROC GAAP basis.

Sources: CBC and DGBAS.

³⁷ Includes Agricultural Bank of Taiwan.