III. Financial sectors

3. Financial markets

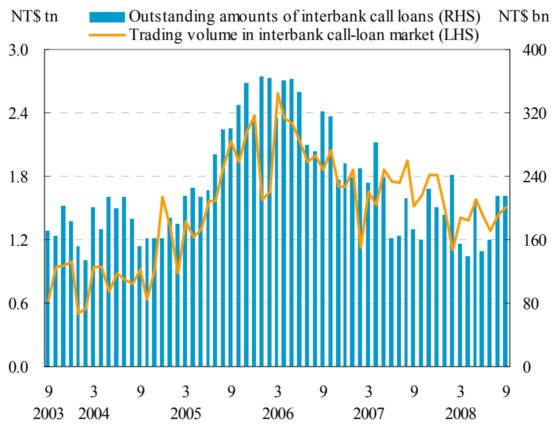
The trading volume in Taiwan's bond market continued to shrink, along with the once-negative yield spreads registered in 2008 Q3. This situation is unfavorable to financial institutions which use short-term financing to fund long-term bond positions. Local equity prices slumped and volatility increased amid the global stock market crash, resulting in higher risks in stock investments. Large cross-border capital flows caused the NT dollar exchange rate against the US dollar to shift from appreciation to depreciation, with volatility gradually stabilizing after experiencing large fluctuations. The depreciation of the NT dollar helped reduce the pressure of foreign exchange losses on financial institutions while strengthening the competitiveness of export enterprises.

3.1 Money and bond markets

Trading volume picked up in bill market but contracted notably in bond market

The average monthly trading volume of interbank call loans was off 15.84% year on year from January through September of 2008, but both the trading volume and outstanding amount of interbank call loans trended upwards from August 2008 onwards (Chart 3.1), indicating that allocation of funding resources was somewhat uneven along with a rise in demand for interbank call loans. The average monthly trading volume of interbank call loans from January through September of 2008 consisted mainly of overnight call loans, accounting for 54.19% of average interbank call-loan transactions over the same period, a slight increase compared to the same period last year, followed by one-week call loans, with a declining share of 26.80%.

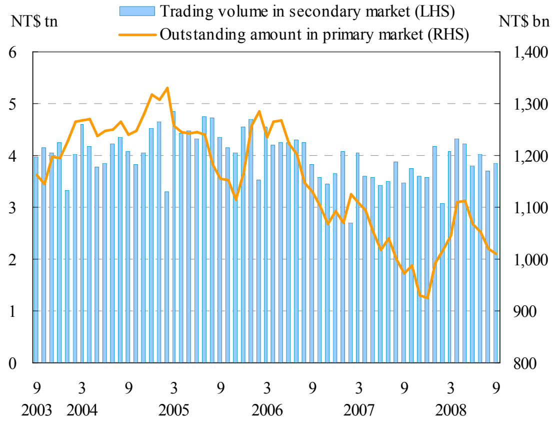
Chart 3.1 Interbank call-loan market



Source: CBC.

The outstanding amount of bills issuance ascended in early 2008 but turned to contraction in June. In September, the figure declined by 9.14% compared to the previous year end, primarily because of a marked reduction in the outstanding issuance of treasury bills, while that of commercial paper rose by 6.40%. Affected by a rise in the issuance of commercial paper, the secondary market saw an expansion in trading volume in the first half of 2008. The average monthly trading volume rose by 9.27% year on year from January through September (Chart 3.2).

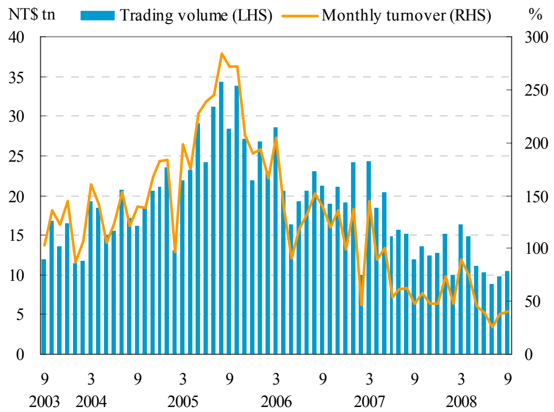
Chart 3.2 Primary and secondary bill markets



Source: CBC.

In the bond market, both trading value and monthly turnover rate expanded in 2008 Q1 due to sizable capital inflows. However, trading activities cooled from 2008 Q2 onwards as financial institutions sought to reduce their spare funds through purchases of bonds, causing bond yields to decrease, which in turn discouraged bond trading. The monthly turnover rate fell notably to a trough of 25.75% in July, a five-year low. In August, both bond trading value and monthly turnover rate rebounded slightly as investors redirected funds from the lackluster equity markets into the bond market, but they still remained in low gear (Chart 3.3).

Chart 3.3 Bond market size and turnover



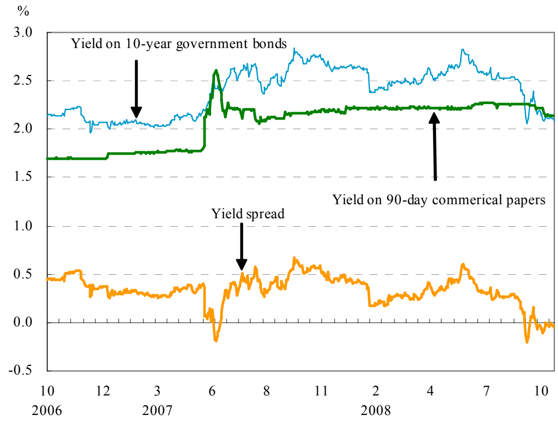
Note: Monthly turnover ratio = trading value in the month / average bonds issued outstanding.
Sources: CBC and FSC.

Bond yields fell markedly along with narrowed and once-negative yield spreads

In 2008, the average overnight interbank call-loan rate increased steadily in response to rate hikes by the CBC, peaking at 2.166% in July, and then fell back to 2.092% in September as the CBC shrank the issuance of certificates of deposit to maintain market liquidity at an appropriate level against the backdrop of unfavorable financial conditions domestically and overseas. Interest rates on bills first rose and then fell, with the average rate on 1-30 day commercial paper in the secondary market falling to 2.01% in September after rising slightly to 2.03% in July. As for long-term interest rates, the yield on 10-year government bonds began a gradual rise in 2008 Q2, peaking at 2.82% in mid-June on the back of a rebound in equity prices, rate hikes by the CBC, and heightened inflation expectations. The bond yield dipped appreciably afterwards and registered 2.15% in September. This was led by increasing inflows of funds into the bond market supported by the CBC's rate cuts and expanded Repo facility operations (Chart 3.4).

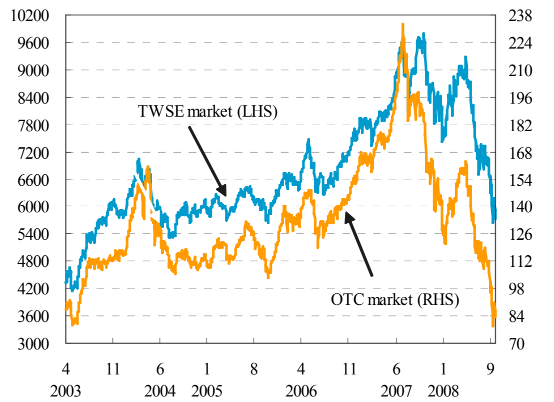
The spread between the yields of 10-year government bonds and 90-day commercial papers began to widen in 2008 Q2 as bond yields trended upwards. Bond yields dropped noticeably afterward, resulting in a convergence of yield spreads between 10-year government bonds and 90-day commercial papers. The yield spreads even became negative in mid-September and troughed at -20 basis points (Chart 3.4). Declining bond yields are unfavorable to financial institutions which use short-term financing to fund long-term bond positions, despite the fact that they generate capital gains for financial institutions holding long bond positions.

Chart 3.4 Yield spreads



Note: Yield spread refers to yield on 10-year government bonds minus yield on 90-day commercial papers.
Source: Bloomberg.

Chart 3.5 Taiwan stock market indices



Sources: TWSE and GTSM.

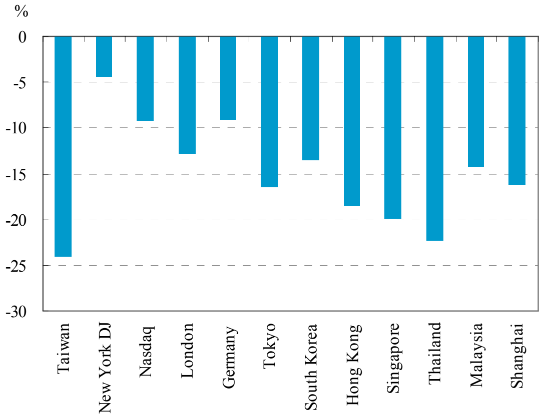
3.2 Equity markets

Stock indices continued to fall with record high volatility

Motivated by the developments of cross-strait economic and trade issues after the presidential election in March 2008, the Taiwan Stock Exchange Weighted Index (TAIEX) of the Taiwan Stock Exchange (TWSE) market trended upward and reached a high of 9,295 in mid-May 2008. Afterward, two gigantic US mortgage lenders (Fannie Mae and Freddie Mac), Lehman Brothers, and AIG faced difficult financial conditions, and the consequent blow to market confidence prompted major stock markets around the world to slump, setting new record one-day percentage declines. Due to the global stock market crash and foreign investors' net selling,[19] the TAIEX then fell back to 5,719 at the end of September, down 38.47% compared to its highest closing level in 2008. Meanwhile, Taiwan's GTSM Index (the over-the-counter or OTC index) basically tracked the movements of the TAIEX, falling sharply after hitting a peak of 163 in May 2008, and then declining to 83 at the end of September, a decrease of 49.08% from its highest closing level in 2008 (Chart 3.5).

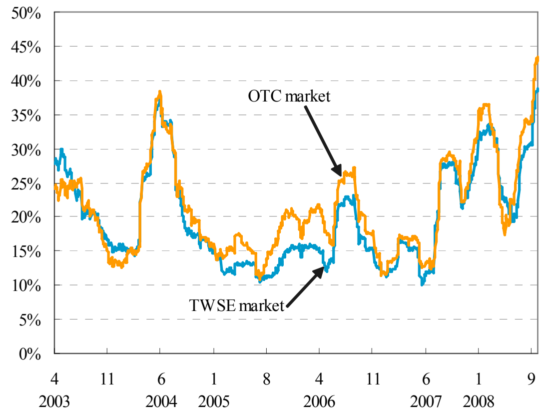
Broken down by sector, all indices were in bear territory in 2008 Q3, while the indices for the building material and construction sector and the cement sector performed the most poorly, dropping by 52.33% and 43.00%, respectively. Indices for communication and networking sectors and the oil, electricity, and gas sectors fell by less than 9%, resisting a slump, while all major stock markets around the world declined considerably in 2008 Q3, the TAIEX posted deeper fall of 23.98% (Chart 3.6).

Chart 3.6 Comparison of major stock market performances



Notes: 1. Figures are for 2008 Q3.
2. Taiwan's data is for the TWSE market.
Source: TWSE.

Chart 3.7 Stock price volatility



Note: Volatility refers to the annualized standard deviation of 60-day daily index returns.
Sources: TWSE, GTSM, and CBC.

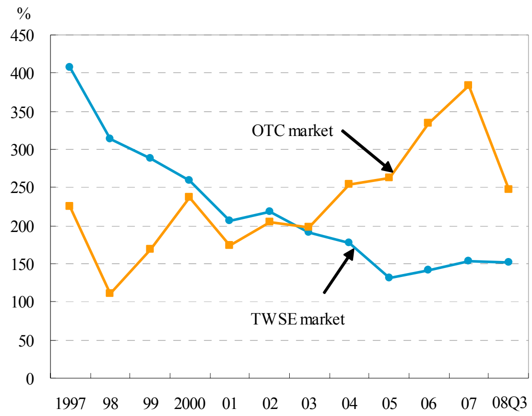
TAIEX volatility began to come down after hitting a peak of 33.67% in mid-March, dropping below 20% in mid-June 2008, but it climbed again in July owing to the global stock market crash. With the volatility on the TWSE market and the OTC market in September 2008 reaching a record five-year high of 38.85% and 43.35% (Chart 3.7), respectively, the risks in stock investments have risen significantly.

[19] During the period January to September 2008, foreign investors (foreign institutional investors, overseas Chinese, and foreign individual investors) were net sellers of NT$315.9 billion worth of securities in Taiwan, while net accumulated inward remittances of foreign investors decreased by US$3.7 billion.

Dramatic decrease in trading value and turnover in exchange-listed shares

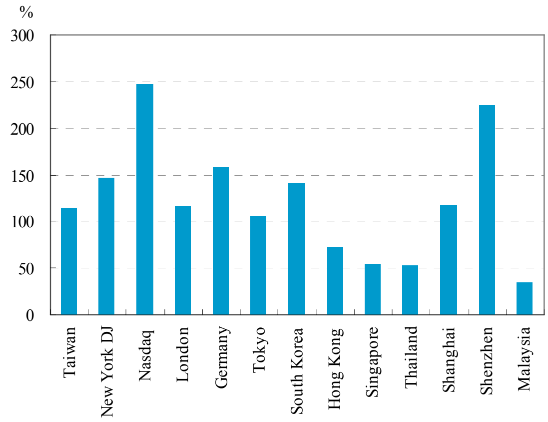
As the global stock market turned bearish, the TWSE market cooled down during the first three quarters of 2008, with a dramatic decrease in trading value. However, as the result of market value tracking the movements of trading value, turnover ratio in terms of trading value on the TWSE still posted 152.25%, down slightly from 153.28% in 2007. After reaching a peak of 382.81% in 2007, the turnover ratio in the OTC market plummeted to 247.53%, with a dramatic decrease in trading value during the first three quarters of 2008 (Chart 3.8). In order to mitigate the impact of the extreme volatility in international stock markets from late September, the FSC temporarily suspended all short selling and narrowed the daily percentage fall limit from the existing 7% to 3.5%.[20] Consequently, the trading value of all TWSE- and OTC-listed stocks contracted markedly, leading to a lower turnover ratio and weakened market liquidity. Trading value started to increase slowly after the FSC resumed the 7% down-limit, effective from 27 October 2008.

Chart 3.8 Annual turnover ratio in Taiwan's stock markets



Note: 2008 Q3 figures are annualized results of the accumulated monthly turnover ratios.
Sources: TWSE and GTSM.

Chart 3.9 Comparison of turnover ratio in major stock markets



Note: Figures refer to accumulated turnover ratios in 2008 Q3. Taiwan's data is for the TWSE market.
Source: TWSE.

Compared to major stock markets around the world, the accumulated turnover ratio of the TWSE between January and September 2008 was lower than those on New York's Dow Jones and NASDAQ, and the stock markets in Germany, South Korea, and Shenzhen, while approximately equal to those in London and Shanghai, but still higher than those in

[20] On 12 October 2008, the FSC halved the existing 7% down-limit to 3.5%, while the up-limit remained unchanged at 7%. (The FSC resumed the 7% down-limit effective from 27 October 2008.) On 21 September 2008, the FSC announced the temporary reinstatement of the ban on short sales at prices at or below the previous day's closing prices for the 150 component stocks of the Taiwan 50 Index. At a later time, the FSC decided to temporarily suspend all short selling until 31 December 2008. That ban, however, did not apply to put warrants issued by securities firms before 30 September 2008, for which short selling is necessary for hedging needs.

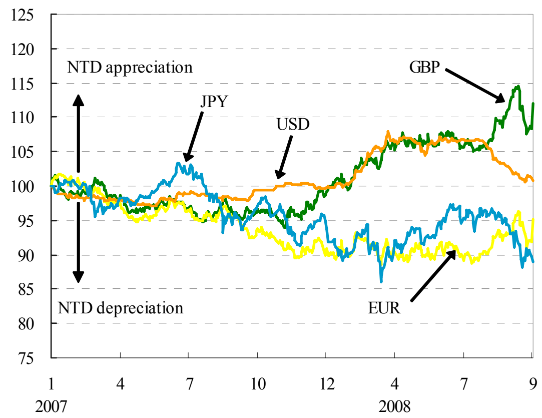
neighboring markets of Tokyo, Hong Kong, Singapore, Thailand, and Kuala Lumpur (Chart 3.9).

3.3 Foreign exchange markets

The NT dollar exchange rate reversed from appreciation to depreciation and trading volume shrank from Q2

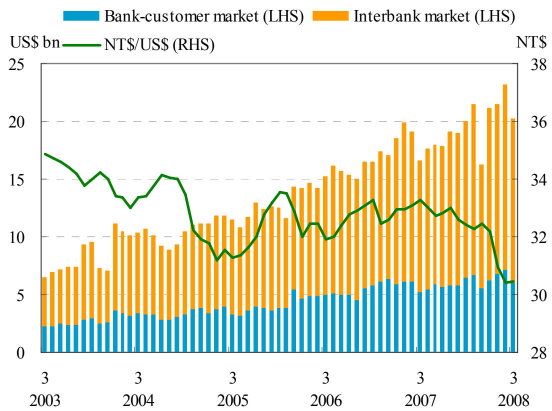
After the dramatic appreciation in 2008 Q1, the NT dollar exchange rate generally moved in a narrow range between 30 and 31 against the US dollar in Q2, but then depreciated to 32.13 at the end of September, a 5.53% drop compared to the end of June, or a rise of 0.97% compared to the end of 2007. The NT dollar exchange rate turned into depreciation due mainly to continued foreign capital outflows from the Taiwan stock market and the rebound of the US dollar caused by sizable international capital inflows into the US to address a worsening financial crisis (Chart 3.10). As for other key international currencies, the NT dollar trended downward against the yen in the first three quarters of 2008, depreciating by 5.13%, while the NT dollar appreciated against the pound and the euro by 12.78% and 4.67%, respectively, over the same period (Chart 3.10). The recent depreciation of the NT dollar against the US dollar not only relieved the pressure of significant exchange losses on those financial institutions with large foreign currency assets in the first half of 2008, but it would also enhance the competitiveness of export industries.

Chart 3.10 Movements of NT dollar exchange rate against key international currencies



Note: 2 January 2007 = 100.
Source: CBC.

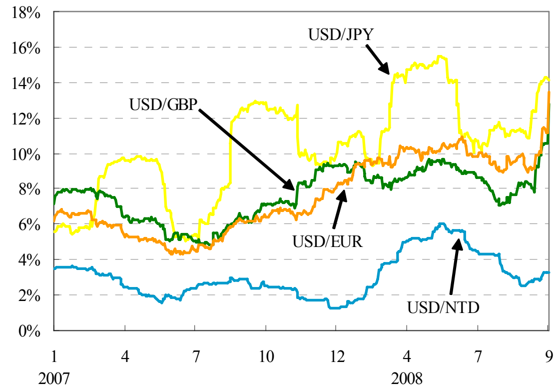
Chart 3.11 NT$/US$ exchange rate and foreign exchange market trading volume



Note: Trading volume is the monthly average of daily data, while exchange rate is end-of-period data.
Source: CBC.

The trading volume on Taiwan's foreign exchange market has gradually decreased due to the stockpiling of US dollars in the market, while the average daily trading volume in the first eight months of 2008 reached US$20.2 billion, an increase of 10.16% compared to the US$18.3 billion recorded during the same period of the previous year. The interbank market accounted for a relatively large portion of the growth. A breakdown by counterparty showed that the average daily trading volume in the interbank market accounted for 69.69% of total volume, the largest share in the first eight months of 2008, while the bank-customer market made up a 30.31% share (Chart 3.11). As for types of transactions, spot trading accounted for 50.56% of total volume, followed by foreign exchange swaps with 31.27%.

Chart 3.12 Exchange rate volatility of various currencies against US dollar



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

NT dollar volatility against US dollar soared before gradually stabilizing

In 2008 Q1, volatility in the NT dollar exchange rate against the US dollar increased dramatically, hitting a peak of 6.00% in late May, and then decreased steadily to around 3.00%, before settling at 3.25% at the end of September. Compared to the volatility in the exchange rates of major currencies (e.g. GBP, EUR, and JPY) against the US dollar, however, the NT dollar exchange rate was relatively stable (Chart 3.12).