V. Financial sector

5.1 Financial markets

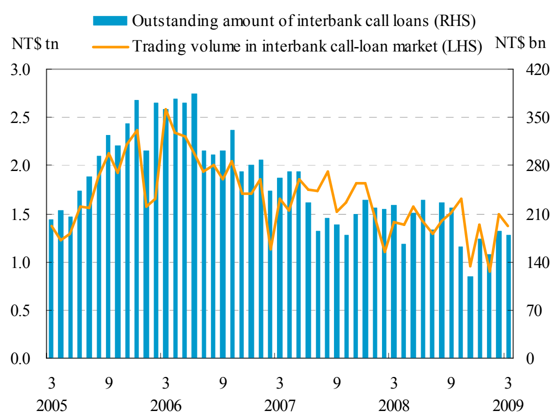
In the domestic money and bond markets, the trading volumes of short-term bills and bonds declined materially, while interbank call loans contracted on a smaller scale in the second half of 2008. The yield spreads between short-term bills and government bonds turned from negative to positive and widened appreciably. As for the domestic stock market, stock indices trended up after sharp falls and volatility dropped after a substantial earlier increase, but trading value contracted noticeably. In the foreign exchange market, the NT dollar exchange rate reversed its appreciating trend and depreciated in the second half of 2008, but then appreciated again in March 2009. Moreover, it experienced a significant drop in trading volume in 2008 Q4. The volatility of the NT dollar exchange rate rose but remained relatively stable when compared to other currencies.

5.1.1 Money and bond markets

Trading volume contracted in both the money market and the bond market

In the second half of 2008, the average monthly trading volume of interbank call loans slightly declined by 1.89% compared to the figure in the first half of the year. Notably, the trading volume fell significantly in November 2008 but then rebounded to some degree in December. Similarly, the average daily outstanding amount of interbank call loans in December 2008 recorded a substantial decrease of 24.17% against the month of June 2008. In 2009 Q1, the average trading volume and outstanding amount of interbank call loans remained at a low level (Chart 5.1).

Chart 5.1 Interbank call-loan market

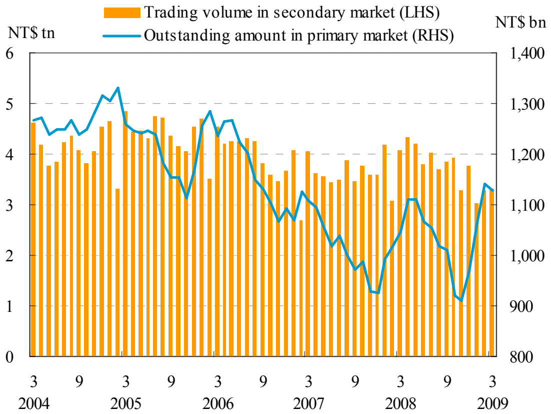


Note: Outstanding amount is the monthly average of daily data.
Source: CBC.

In the primary bill market, the outstanding amount of bills issuance shrank by 9.18% in the second half of 2008. Broken down by instruments: treasury bills decreased dramatically by 41.63% because of a drop off in issuances and some redemption of outstanding bills by the Ministry of Finance; certificates of deposit declined by 12.87% because of a reduction in issuances of certificates of deposit by banks owing to ample liquidity; and commercial paper dropped steeply in October 2008 due to the credit crunch induced by the global financial crisis, but gradually reversed its decline and grew by 0.78% at the end of 2008 over June of the same year. In early 2009, however, the outstanding amount of bills issuances increased, mainly driven by a sharp rise in the outstanding issuance of treasury bills [34] (Chart 5.2).

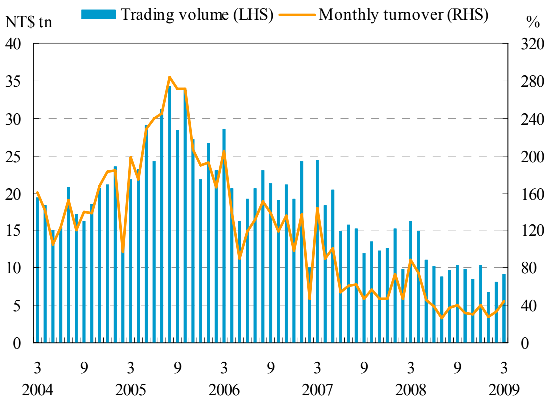
In the secondary bill market, the trading volume decreased by 4.75% in the second half of 2008, mainly due to the contraction of commercial paper transactions while bills finance companies reduced their underwriting of commercial paper and extended the period of outright and repo transactions for the sake of reducing liquidity risk. In 2009 Q1, the trading volume in the secondary market remained low[35] (Chart 5.2).

Chart 5.2 Primary and secondary bill markets



Note: Excludes asset-backed commercial paper (ABCP).
Source: CBC.

Chart 5.3 Bond market size and turnover



Notes: 1. Monthly turnover ratio = trading value in the month / average bonds issued outstanding.
2. Average bonds issued outstanding = (bonds issued outstanding at the end of this month + bonds issued outstanding at the end of the previous month) / 2
Sources: CBC and FSC.

In the bond market, the trading volume for the second half of 2008 decreased by 25.70% over the first half of 2008. Notably, outright transactions dropped significantly while repo transactions saw a moderate decline. The monthly turnover ratio of outright transactions in July 2008 fell to a trough of 25.75%, a five-year low, affected by the cooling of trading activities due to diminishing investment willingness of dealers. Although it rebounded slightly in August and September as investors redirected funds from the lackluster equities

[34] Outstanding issuance of treasury bills herein refers to issues minus redemptions.
[35] The trading value of treasury bills was less than 5% of the trading volume in the secondary market for bills. The effect of its change on the total trading volume is trivial.

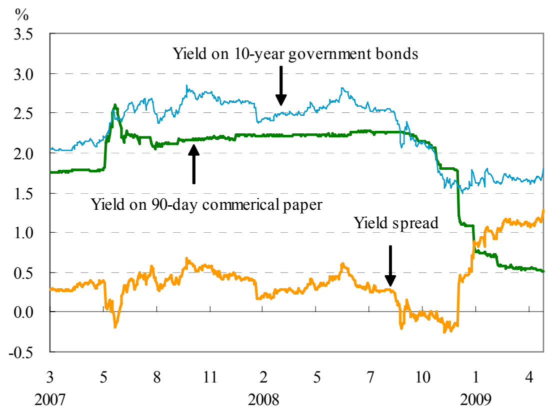
markets into the bond market, it still remained in a lull in 2008 Q4 due to less bonds being traded in the market as many financial institutions held large amounts of government bonds and were reluctant to sell them into the market for the sake of effectively managing their idle funds. In 2009 Q1, the turnover ratio of outright transactions and the trading volume of repo transactions in the bond market remained at a low level (Chart 5.3).

Yield spreads turned from negative to positive and expanded appreciably

In 2008 Q3, affected by the worsening financial crisis and slump in stock markets, investors sought a safe haven in bond markets. As a result, government bond yields trended down and short-term commercial paper rates fluctuated within a narrow range, causing the interest rate spread to shrink gradually and turn negative from mid-September to reach a low of negative 25 basis points in November 2008 (Chart 5.4).

From late September 2008, the CBC initiated interest rate cuts and expanded the scope of Repo facility operations, resulting in a significant drop in short-term interest rates. Bond yields also dipped, but to a lesser extent, as funds flowed into the bond market in response to unfavorable financial conditions. As a result, yield spreads between government bonds and commercial paper turned from negative to positive and expanded noticeably, hitting a peak of 129 basis points in April 2009 (Chart 5.4). Declining bond yields and a widening yield spread may generate capital gains for financial institutions holding long bond positions. However, if the trend of low interest rates is reversed, new bond holdings which financial institutions invested in during the period of low long-term interest rates will face higher interest rate risk.

Chart 5.4 Yield spread



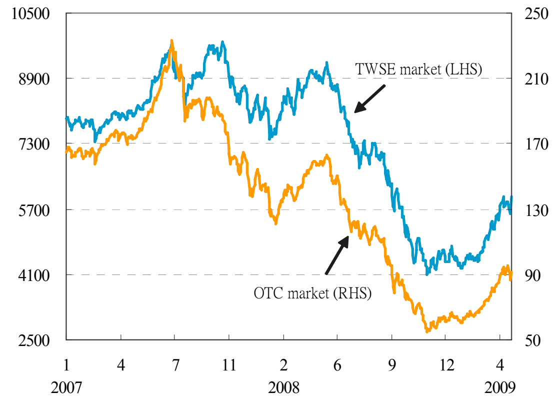
Note: Yield spread refers to yield on 10-year government bonds minus yield on 90-day commercial paper.
Source: Bloomberg.

5.1.2 Equity markets

Stock indices trended up after sharp falls, while volatility dropped after marked increases

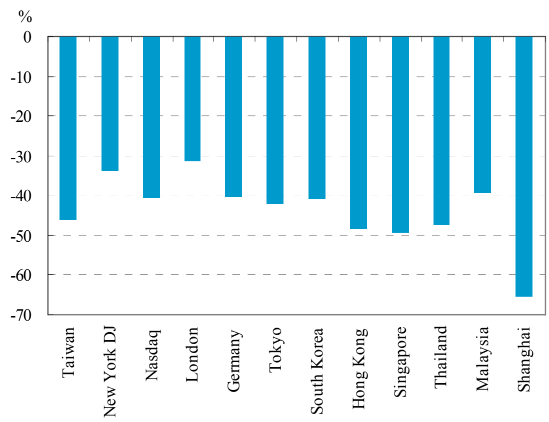
Amid the global financial turmoil and economic downturn, the world's major stock markets repeatedly registered new lows. Affected by the slump in global stock markets and the economic downturn in Taiwan, together with a massive sell-off from foreign investors, the Taiwan Stock Exchange Weighted Index (TAIEX) of the Taiwan stock Exchange (TWSE) market dropped to 4,090 in late November 2008, after reaching a high of 9,295 in mid-May of the same year. However, the TAIEX index stopped falling and fluctuated between 4,200 and 4,800 in early 2009 before gradually climbing to 5,993 at the end of April, a rise of 46.53% compared to the lowest point of last November. The main reasons behind this rebound were the net buying of foreign investors, inflows of residents' portfolio investments from abroad and the emerging effects of easing restrictions on cross-strait securities investment. Meanwhile, Taiwan's GreTai Securities Market Index (GTSM Index) of the over-the-counter (OTC) market closely tracked the movements of the TAIEX, falling sharply to a low of 55 in late November 2008 after hitting a peak of 163 in May of the same year, and then climbing to 91 at the end of April 2009, an increase of 65.45% from its lowest point in November 2008 (Chart 5.5).

Chart 5.5 Taiwan stock market indices



Sources: TWSE and GTSM.

Chart 5.6 Comparison of major stock market performances

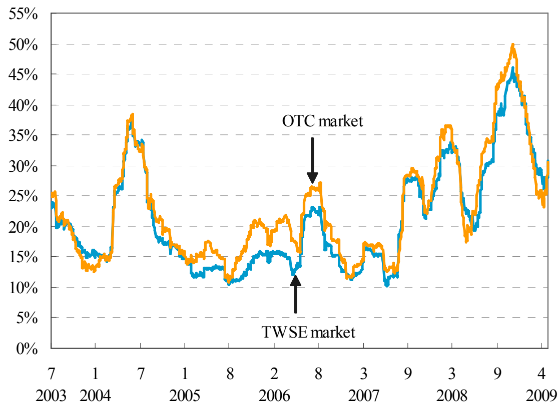


Notes: 1. Figures are for 2008.
2. Taiwan's data is for the TWSE market.
Source: TWSE.

Compared with major stock markets around the world, the Taiwan stock market dropped by 46.03% in 2008, only next to the markets in Hong Kong, Singapore, Thailand, and Shanghai (Chart 5.6).

Broken down by sectors, most indices were in bear territory in 2008 Q4. The indices for the optoelectronics sector and electronics-related sector performed the most poorly, dropping by 35.11% and 37.78%, respectively, whereas the index for the cement sector performed the best, increasing by 16.11% against the downward trend due to domestic demand stimulus projects and the needs for construction related to rebuilding disaster areas in China. The indices for the biotechnology & medical care sector, food sector, and glass and ceramic sector also trended up. In 2009 Q1, most indices entered bullish territory, while the indices for the electronic products distribution sector and optoelectronics sector performed the best, increasing by 29.54% and 28.74%, respectively, but the indices for the finance and insurance sector and glass and ceramic sector performed poorly[36], with drops of 6.78% and 1.35%, respectively.

Chart 5.7 Stock price volatility



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

Triggered by the global stock market slump from July 2008, the volatility in the TWSE and OTC markets trended up and hit a new 5-year high, reaching 46.00% and 49.95%, respectively, at the end of November 2008. Market volatility subsided from its peak and stood at 30.74% and 30.52% for the TWSE and OTC markets (Chart 5.7), respectively, at the end of April 2009. Although market volatility moderated somewhat, the risk in equity investments remained.

Trading value and turnover ratio decreased dramatically but saw significant rises in March 2009

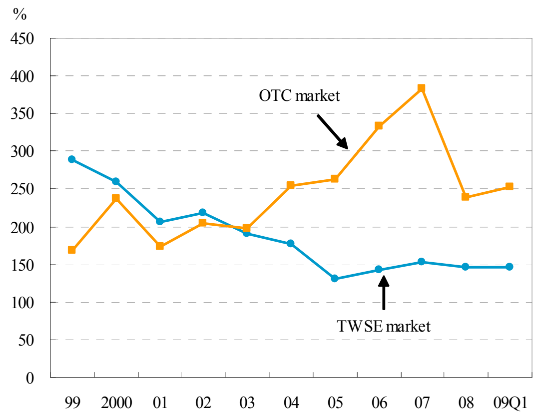
As a result of diminishing investor confidence and the retreat of foreign capital, the TWSE market was mostly sluggish and suffered from a dramatic decrease in total trading value in the second half of 2008. The average monthly trading value in this period was just NT$1.63 trillion, a significant decrease of 50.02% year on year. However, the turnover ratio in terms of trading value on the TWSE in 2008 dropped slightly and stood at 145.45% due to the corresponding trend in trading value and

[36] With the estimated benefits of the upcoming cross-strait financial MOU (memorandum of understanding), the indices for the finance and insurance sectors preformed better than the TAIEX in April 2009.

market value. In early 2009, the trading value in the TWSE market continued to shrink. Nevertheless, it began to expand from March and the monthly average number registered NT$2.31 trillion in the same month owing to foreign investors' net stock purchases. The monthly average turnover ratio also moved in an upward direction and maintained a level of 146.20% in 2009 Q1. The trading value in the OTC market also contracted markedly by 75.49% year on year in the second half of 2008, resulting in a significant decrease in the turnover ratio to 238.71% in 2008. However, the ratio increased modestly to 252.28% in 2009 Q1 (Chart 5.8).

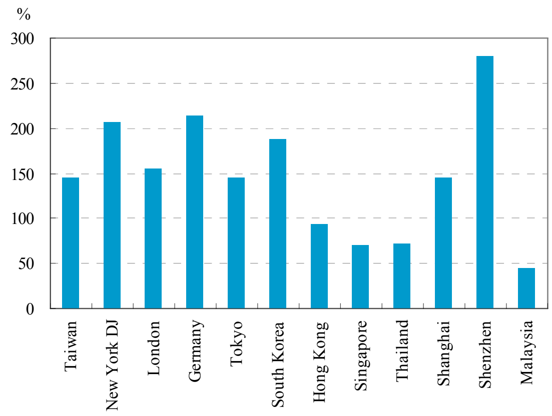
Compared to major stock markets around the world, the annual turnover ratio on the TWSE in 2008 was lower than those on New York's Dow Jones, and the stock markets in London, Germany, South Korea, and Shenzhen, while approximately equal to those in Tokyo and Shanghai, but higher than those in the neighboring markets of Hong Kong, Singapore, Thailand, and Kuala Lumpur (Chart 5.9).

Chart 5.8 Annual turnover ratio in Taiwan's stock markets



Note: 2009 Q1 figures are annualized results of the accumulated monthly turnover ratios.
Sources: TWSE and GTSM.

Chart 5.9 Comparison of turnover ratios in major stock markets



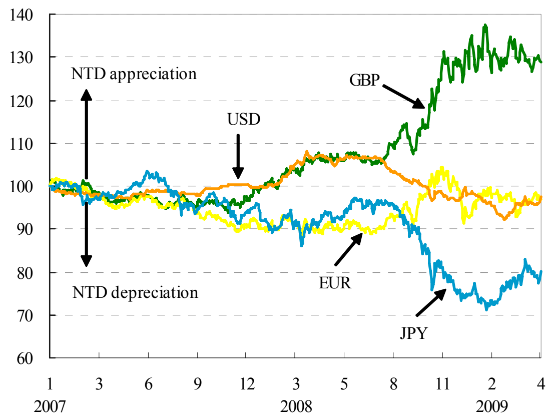
Note: Figures refer to accumulated turnover ratios in 2008 . Taiwan's data is for the TWSE market.
Source: TWSE.

5.1.3 Foreign exchange market

The NT dollar exchange rate reversed from depreciation to appreciation and trading volume shrank considerably in 2008 Q4

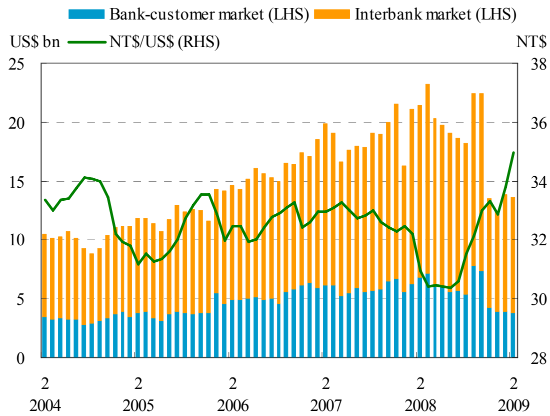
After continuous appreciation in the first half of 2008, the NT dollar exchange rate turned to enter a period of depreciation in the second half of 2008, mainly due to the increasing hedging needs for US dollars caused by the global financial crisis and the recession, together with foreign capital outflows from the Taiwan stock market. The NT dollar exchange rate stood at 32.86 against the US dollar at the end of 2008, depreciating by only 1.27% year on year. From early 2009, due to shrinking exports and increasing US dollar demand, the NT dollar depreciated to 34.95 at the end of February. In March, it reversed from depreciating to appreciating owing to capital inflows and a weak US dollar and appreciated to 33.23 against the US dollar at the end of April, showing a slight depreciation of 1.12% compared to the end of 2008 (Chart 5.10). As for other key international currencies, the value of the yen went up significantly from 2008 Q3 as a result of the repatriation of yen carry trade funds back to Japan, which led the NT dollar to depreciate against the yen by 19.78% in 2008. Furthermore, the NT dollar appreciated against the pound and the euro by 33.99% and 3.02%, respectively, over the same period (Chart 5.10).

Chart 5.10 Movements of NT dollar exchange rates against key international currencies



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

Chart 5.11 NT$/US$ exchange rate and foreign exchange market trading volume



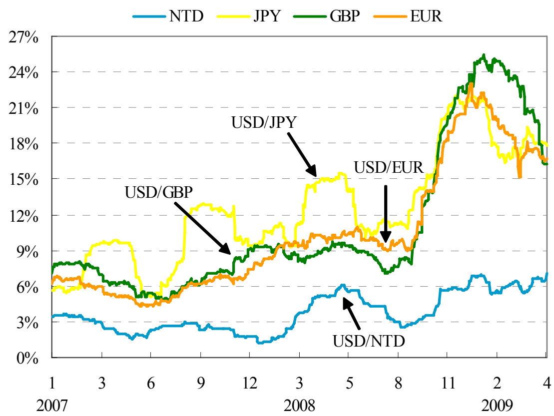
Note: Trading volume is the monthly average of daily data, while exchange rate is end-of-period data.
Source: CBC.

Affected by shrinking financial transactions caused by the global financial crisis and decreasing exports and imports caused by the global recession, the average foreign exchange daily trading volume in 2008 Q4 fell to US$16.1 billion, a decrease of 16.39% year on year. Notably, the daily trading volume in December 2008 fell to US$12.3 billion, a new record low since 2006, but saw a slight increase in early 2009 (Chart 5.11).

A breakdown by counterparty trades shows that the average daily trading volume in the interbank market accounted for 67.85% of the total in 2008 Q4, while the bank-customer market made up a 32.15% share. As for types of transactions, spot trading accounted for 49.54% of the total, followed by foreign exchange swaps with 35.37%.

NT dollar exchange rate volatility against the US dollar increased but was relatively stable compared to other currencies

Chart 5.12 Exchange rate volatility of various currencies against US dollar



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

In the second half of 2008, volatility in the NT dollar exchange rate against the US dollar increased dramatically and the average volatility over Q4 reached up to 5%. In early 2009, the NT dollar exchange rate depreciated hastily and the average volatility accordingly stood at a high of 6.92% in January. Although the volatility declined for a short time after a peak in January, the appreciation of the NT dollar exchange rate in March caused it to rise again and reach 7.04% at the end of April. Notwithstanding the increase in the volatility in the NT dollar exchange rate against the US dollar, the NT dollar exchange rate was relatively stable compared to the volatility in the exchange rates of major currencies such as the pound, euro and yen against the US dollar (Chart 5.12).

5.2 Financial institutions

This section analyses the relatively important financial institutions including domestic banks, life insurance companies and bills finance companies.

5.2.1 Domestic banks

The growth in loans extended by domestic banks slowed down and credit risk in real estate-related loans and corporate loans increased modestly in the second half of 2008. Asset quality remained sound but showed signs of potential deterioration. Market risk relating to stock prices increased substantially; however, its impact on capital adequacy ratios was limited. Liquidity risk remained low as the banking system benefited from holding ample liquidity. The profitability of domestic banks declined substantially in 2008 as their profit sources were continuously eroded. Despite the fact that domestic banks as a whole remained adequately capitalized, closer monitoring of their increasing credit and market risks is warranted.