

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).

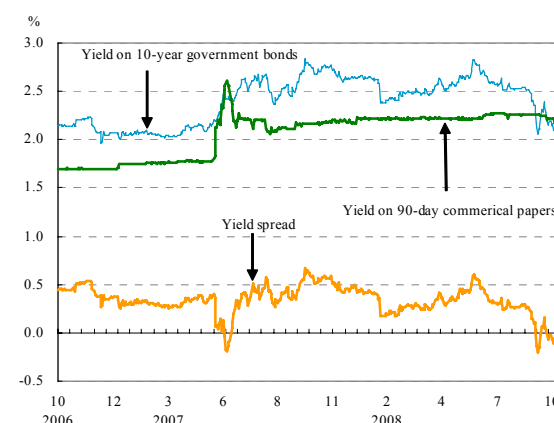
The spread between the yields of 10-year government bonds and 90-day commercial papers began to widen in 2008 Q2 as bond yields trended upwards. Bond yields dropped noticeably afterward, resulting in a convergence of yield spreads between 10-year government bonds and 90-day commercial papers. The yield 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.

### 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

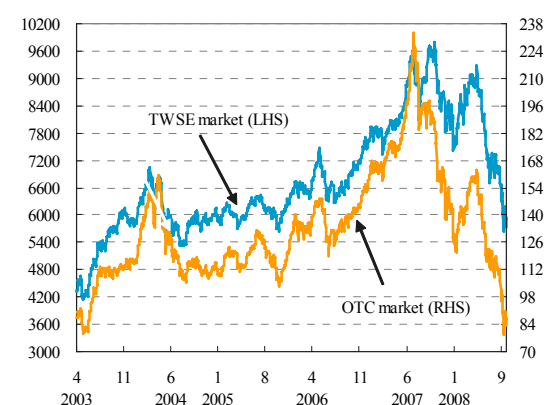
**Chart 3.4 Yield spreads**



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**



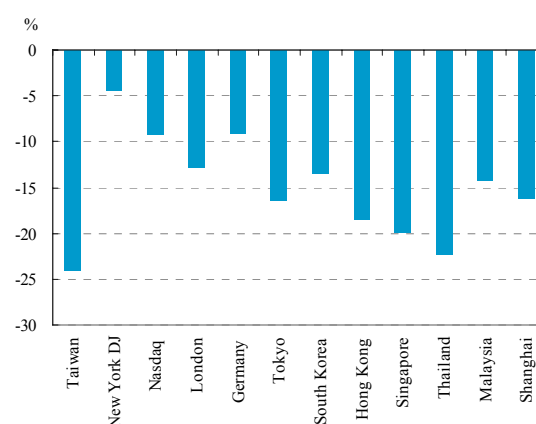
Sources: TWSE and GTSM.

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,<sup>19</sup> 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).

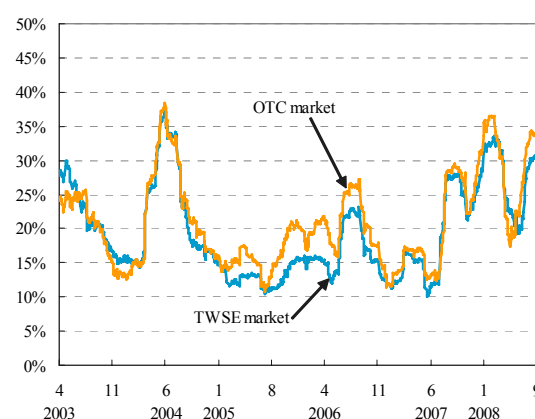
TAIEX volatility began to come down after hitting a peak of 33.67% in mid-March, dropping below 20% in mid-June 2008, but it climbed again in July owing to the global stock market crash. With the volatility on the TWSE market and the OTC market in September 2008 reaching a record five-year high of 38.85%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

**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**



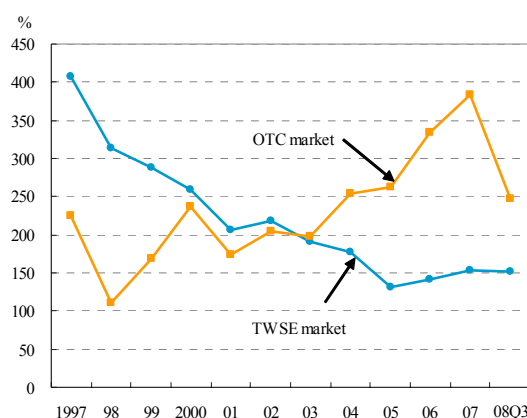
Note: Volatility refers to the annualized standard deviation of 60-day daily index returns.  
Sources: TWSE, GTSM, and CBC.

<sup>19</sup> 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%.<sup>20</sup> 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.

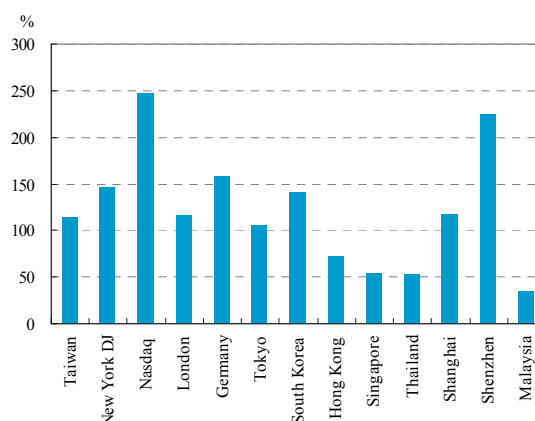
**Chart 3.8 Annual turnover ratio in Taiwan's stock markets**



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

<sup>20</sup> 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).

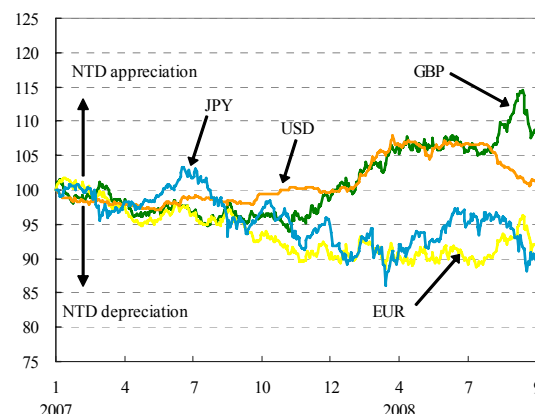
### 3.3 Foreign exchange markets

#### *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.

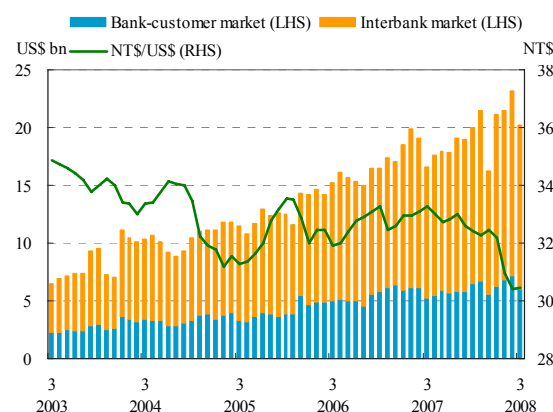
The trading volume on Taiwan's foreign exchange market has gradually decreased due to the stockpiling of US dollars in the market, while the average daily trading volume in the first eight months of 2008 reached US\$20.2 billion, an increase of 10.16% compared to the US\$18.3 billion recorded during the same period of the previous year. The interbank market

**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.