

## III. Financial sectors

### 3. Financial markets

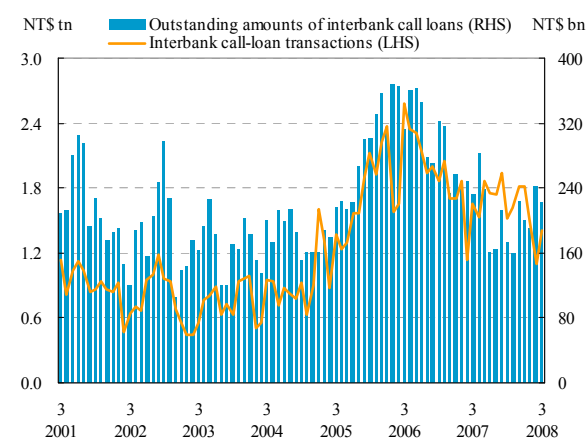
Trading volume in Taiwan's short-term bills and bonds markets continued to decline, while yield spreads remained tight. This situation is unfavorable to financial institutions which use short-term financing to fund long-term bond positions. Drastic fluctuations in the global stock market intensified stock market volatility here in Taiwan and upped the risks of stock investment positions. Large cross-border capital flows, moreover, increased the volatility of the NT dollar exchange rate against the US dollar. Appreciation of the NT dollar would cause large foreign exchange losses for financial institutions holding huge overseas investment positions, and could also be unfavorable to export industries.

#### 3.1 Money and bond markets

##### *Trading volume contracted for interbank call loans as well as bills and bonds*

Trading volume and outstanding amounts of interbank call loans both picked up materially in 2005, and then peaked in mid-2006. In 2007, however, average monthly trading volume was down 15.10% year on year, while outstanding amounts of interbank call loans at the end of 2007 also fell by 21.74% from the year before. Interbank call-loan transactions consisted mainly of overnight call loans, which accounted for 54% of average interbank call-loan transactions in 2007, followed by one-week call loans with a share of 32%. Average monthly trading volume of interbank call loans in 2008 Q1 further dropped by 13.98% year on year, but the NT\$222.6 billion figure for outstanding amounts at the end of March 2008 rose slightly by 4.18% over the previous year (Chart 3.1).

**Chart 3.1 Interbank call-loan market**

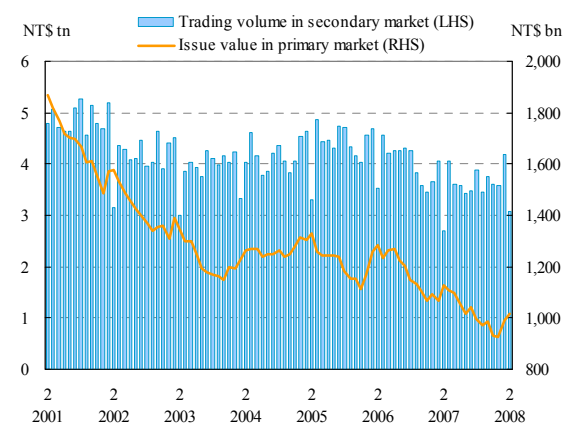


Source: CBC.

The primary bills market has contracted notably as enterprises have shown little interest in issuing bills, and bills houses have tightened the supply of credit to certain sectors of the economy in recent years. The outstanding amount of bills issuance as of 31 December 2007 had fallen to NT\$925.3 billion, down 15.30% year on year, and roughly one-half the amount outstanding in early 2001. The figure for commercial paper has shown the steepest decline. The amount of bills issuance outstanding rose slightly in February 2008 due to funding needs connected with the Chinese New Year, but still declined by 9.63% year on year. Affected by the contraction in primary market issuances, the secondary market saw a similar decline with trading volume in 2007 off 11.03% from the year before. In January and February of 2008, however, trading volume increased by 7.28% year on year due to an abundance of funds in the market (Chart 3.2).

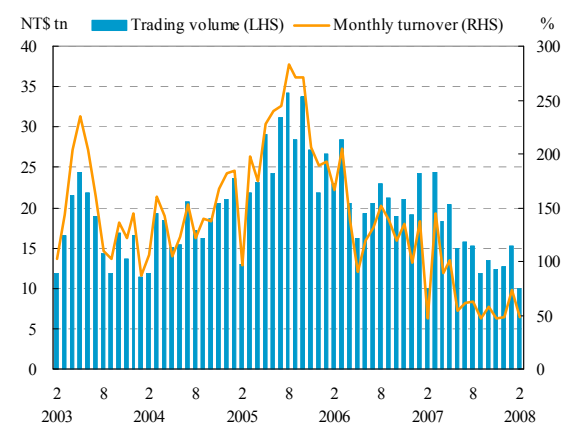
Trading volume in the bond market expanded sharply in the latter half of 2005, but began falling off notably in 2006 as the volume of hedge trading between traders plunged and the number of key market participants was reduced after some bills houses were merged by banks that are affiliates of domestic financial holding companies (such as Fubon Financial Holding and E.Sun Financial Holding). Reflecting this, bond trading amounts contracted appreciably, together with a declining turnover rate. In 2007, the bond trading amounts on a full-year basis plunged 25.03% due to rebounding bond yields and rotation of investor funds into the equity markets. The monthly turnover rate also fell to 47.64% by December 2007, the second lowest level over the past five years (Chart 3.3). The figure for government bonds was 73.02%, while it was 2.55% for corporate bonds (including bank debentures), reflecting insufficient market depth. As equity markets fell once again in January and February, funds rotated back into the

**Chart 3.2 Primary and secondary bills markets**



Source: CBC.

**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.

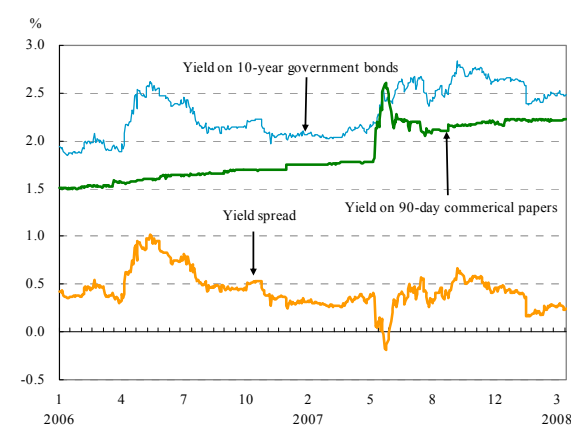
bond market, causing bond market trading volume and monthly turnover rates to rebound slightly, but they still remained at low levels.

### ***Interest rates rose steadily, while yield spreads remained tight***

NT dollar liquidity in domestic financial markets tightened slightly in early 2007 as local citizens continued to increase their overseas investments and banks took a more conservative attitude about funding management. Overnight interbank call-loan rates rose, peaking at 3.91% in late May, and then descended gradually in response to CBC open market operations, eventually falling back to an average of 2.08% in March 2008. Broadly tracking movements in overnight interbank call-loan rates, interest rates on bills rose and then fell, with the average rate on 1-30 day commercial paper at 2.03% in the secondary market in March 2008. As for long-term interest rates, the yield on 10-year government bonds began a gradual rise from 2.04% in March 2007 after the authorities raised the limit on the amount of overseas investment for domestic insurers and the CBC expanded open market operations to eliminate excess liquidity in the marketplace. The rate briefly dipped back down in August as funds flowed into the bond market due to global plunge in equities, but it then resumed its upward march (reaching as high as 2.84%) when the equity market rebounded and funds rotated back out of the bond market. However, yields trended downwards in 2008 Q1, and registered 2.47% at the end of March, as funds rotated back again into the safety of the bond market and US bond yields slid steeply.

The spread between 10-year government bonds and 90-day commercial papers began to shrink in June 2006. It actually turned to a negative 19 basis points in June 2007, but then rebounded to around 50 basis points. Due to declining bond yields, however, it contracted once again in 2008 Q1 and eventually reached an average of 27 basis points in March (Chart 3.4). Shrinking yield spreads will be unfavorable to financial institutions which use short-term financing to fund long-term 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.

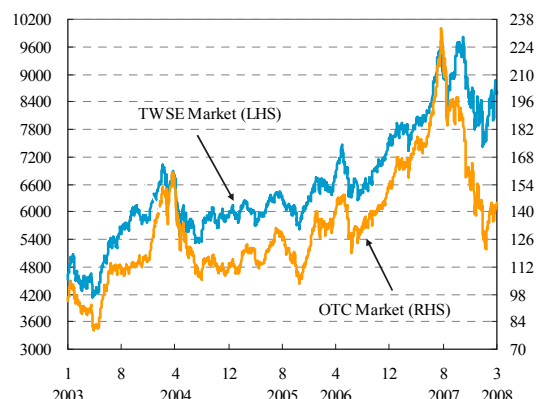
### 3.2 Equity markets

#### *Stock indices trended higher amid increased volatility*

Spurred on by buoyant stock markets around the globe, the Taiwan Stock Exchange Weighted Index (TAIEX) of the Taiwan Stock Exchange (TWSE) market began to rise from about 6,200 in the second half of 2006, climbing to highs around 9,800 twice in July and October of 2007, but then fell back to 8,506 at the end of 2007 as the world's major stock markets reacted to the worsening US subprime mortgage crisis. The TAIEX declined further in early 2008, falling to a low of 7,408 before rebounding in late February on bullish sentiment prior to an election season and strong capital momentum. By the end of March, the TAIEX was back to 8,572, up 0.78% from the end of 2007. In the meantime, Taiwan's GTSM Index (the OTC index) basically tracked the movements of the TAIEX, falling sharply after hitting a peak of 233 in July 2007, and commencing a rebound in late February 2008 (Chart 3.5).

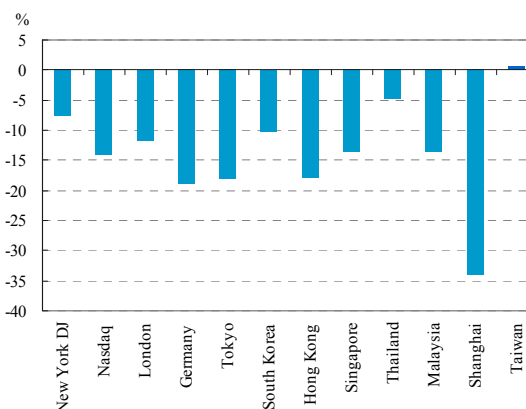
Broken down by sectors, the indices for the building material and construction sector and the tourism sector recorded the best performance in 2008 Q1, climbing 57.25% and 53.68%, respectively. However, most indices for electronics-related sectors declined, particularly the electronic parts & components sector and the optoelectronic sector. In addition, most major stock markets around the world declined in 2008 Q1, while Taiwan

Chart 3.5 Taiwan stock market indices



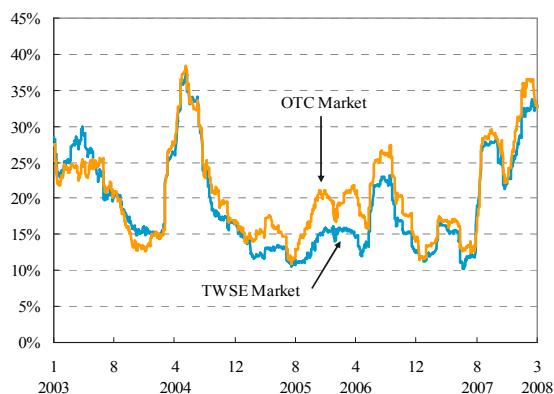
Sources: TWSE and GTSM.

Chart 3.6 Comparison of major stock market performances



Notes: 1. Figures are in 2008 Q1.  
2. Taiwan's data is for TWSE market.  
Sources: TWSE and Bloomberg.

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.

alone bucked the trend by rising 0.78% (Chart 3.6).

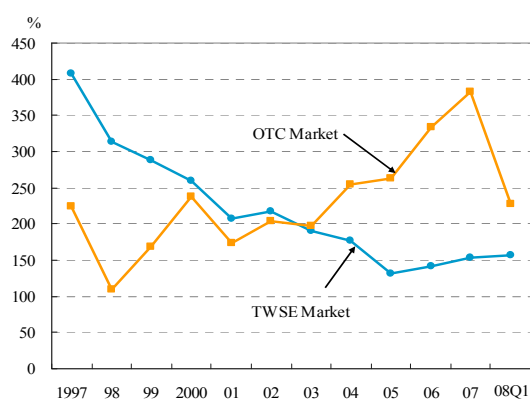
TAIEX volatility had been generally low since the latter half of 2004, but began to increase notably in August 2007, triggered by global stock market turbulence precipitated by the US subprime mortgage crisis. As the volatility on the TWSE market and the OTC market in March 2008 reached 32.66% and 32.56% (Chart 3.7), respectively, the risks in stock investments have risen significantly.

### *Slightly higher turnover in exchange-listed shares*

Turnover ratio in terms of trading value on the TWSE posted a low of 131.36% in 2005, down from a peak of 407.32% in 1997. As the market turned bullish in 2006, the turnover ratio rose steadily and reached 153.28% in 2007. Trading remained active in 2008 Q1 as foreign capital inflows stimulated rising stock prices, causing the turnover ratio to increase slightly to 161.84%. Meanwhile, turnover ratio in the OTC market rose sharply amid heavy volume after the introduction of same day net settlement of margin purchases and short sales in 2005. As a result, its annual turnover ratio in 2007 reached 382.81% (Chart 3.8), far higher than on the TWSE, but plummeted to 227.72% in 2008 Q1 as the OTC market slumped and investors retreated to the sidelines.

Compared with major stock markets around the world, the annual turnover ratio on the TWSE in 2007 was lower than on the US NASDAQ and in Germany, South Korea, Shanghai, and Shenzhen, but was still higher than in neighboring Tokyo, Hong Kong, Singapore, Thailand, and Kuala Lumpur (Chart 3.9).

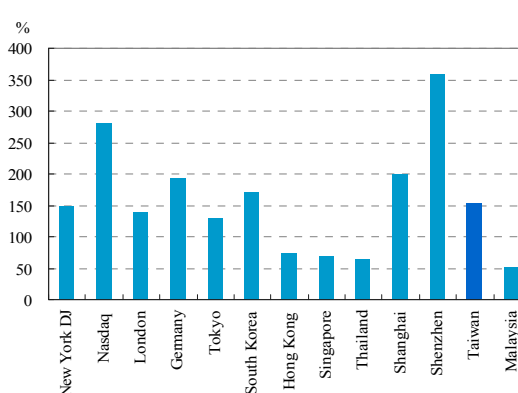
**Chart 3.8 Annual turnover ratios in Taiwan's stock markets**



Note: 2008 Q1 figures are annualized results of the accumulative monthly turnover ratios.

Sources: TWSE and GTSM.

**Chart 3.9 Comparison of turnover ratios in major stock markets**



Note: Figures refer to turnover ratios of 2007. Taiwan's data is for TWSE market.

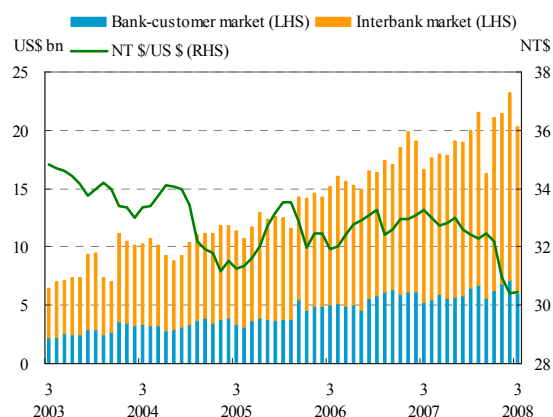
Source: TWSE.

### 3.3 Foreign exchange markets

#### *Capital flows were sizable and trading volumes continued to expand*

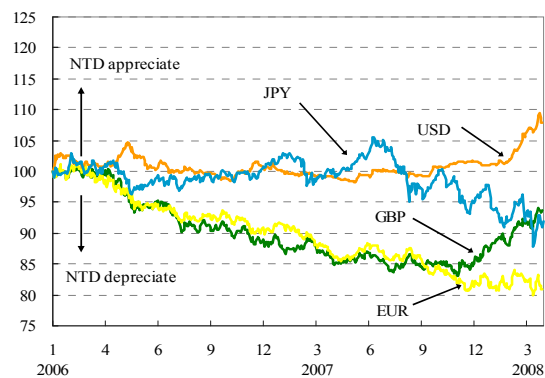
The NT dollar exchange rate generally moved in a narrow range around 33 against the US dollar during the first three quarters of 2007, but then appreciated slightly to 32.44 at the end of 2007 due to increasing concerns over the US economic slowdown, the worsening subprime mortgage crisis, and the expectation of interest rate cuts from the Federal Reserve. In 2008 Q1, the NT dollar appreciated further due to sizable capital inflows into Taiwan, and the exchange rate against the US dollar reached 30.41 by the end of March, a quarter-on-quarter appreciation of 6.70% (Chart 3.10). Meanwhile, the NT dollar trended downward against the euro and yen, depreciating by 1.43% and 4.88% quarter-on-quarter, respectively, in 2008 Q1, while against the GBP it appreciated by 6.73% over the same period (Chart 3.11). The sharp appreciation of the NT dollar against the US dollar and GBP has not only caused losses to financial institutions with large foreign assets denominated in these currencies, but has also adversely impacted export industries.

**Chart 3.10 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.

**Chart 3.11 Movements of NT dollar exchange rates against key international currencies**



Note: January 2006 = 100.  
Source: CBC.

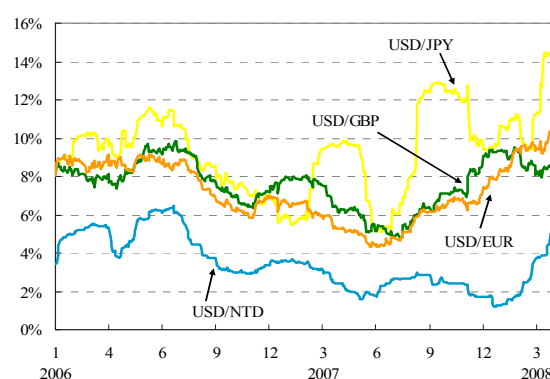
Taiwan's foreign exchange market has grown steadily over the past five years. Average daily trading volume reached US\$18.6 billion in 2007, and rose further to US\$21.9 billion in 2008 Q1. The interbank market accounted for a relatively large portion of the growth. A breakdown by counterparty showed that the average daily trading volume in the interbank market

accounted for 69.15% of total volume in 2008 Q1, while the bank-customer market made up a 30.85% share (Chart 3.10). As for types of transaction, spot trading accounted for 51.97% of total volume, followed by foreign exchange swaps with 30.20%.

### ***Exchange rate volatility against US dollar increased***

Volatility in the NT dollar exchange rate against the US dollar stayed under 4% throughout 2007, and finished the year at 1.30%. In 2008 Q1, however, sizable foreign capital inflows and outflows caused volatility to increase to 5.00% by the end of March. But compared with the volatility in the exchange rates of major currencies (e.g. GBP, EUR, and JPY) against the US dollar, the NT dollar exchange rate was relatively stable (Chart 3.12).

**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.

## **4. Financial institutions<sup>23</sup>**

Domestic banks are steadily improving the soundness of operations, but still face considerable credit, market, and operational risks. Conditions at community financial institutions have also improved notably, but some institutions are still burdened with poor quality assets, and the average capital adequacy ratio of fishermen's association credit departments is below the statutory minimum of 8%. Life insurance companies are enjoying rapid asset growth, and their overall profitability has clearly improved, but negative interest rate spreads and foreign exchange losses on overseas investments may erode future profitability, while RBC ratios at some companies are below the statutory minimum. At bills finance companies, assets are contracting, profitability is waning, and capital adequacy ratios are slipping.

<sup>23</sup> Unless otherwise indicated, all data in the section on financial institutions is taken from call reports submitted by financial institutions to the competent authorities and has not been audited by a certified public accountant.