III. Financial sectors

3. Financial markets

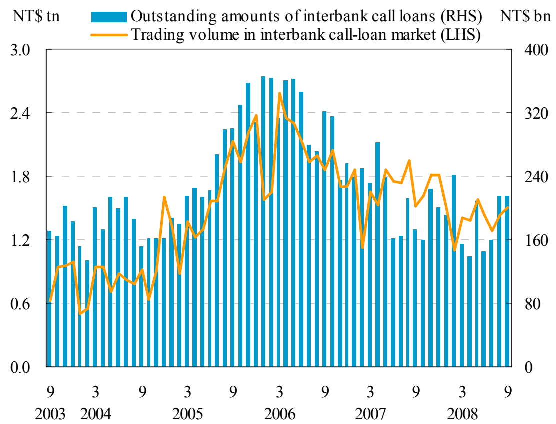
The trading volume in Taiwan's bond market continued to shrink, along with the once-negative yield spreads registered in 2008 Q3. This situation is unfavorable to financial institutions which use short-term financing to fund long-term bond positions. Local equity prices slumped and volatility increased 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%.

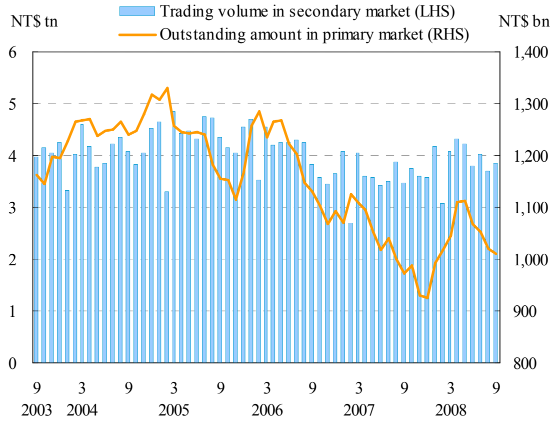
Chart 3.1 Interbank call-loan market



Source: CBC.

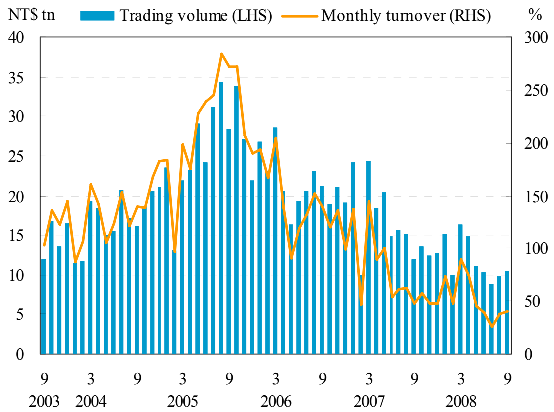
The outstanding amount of bills issuance ascended in early 2008 but turned to contraction in June. In September, the figure declined by 9.14% compared to the previous year end, primarily because of a marked reduction in the outstanding issuance of treasury bills, while that of commercial paper rose by 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.

Chart 3.3 Bond market size and turnover



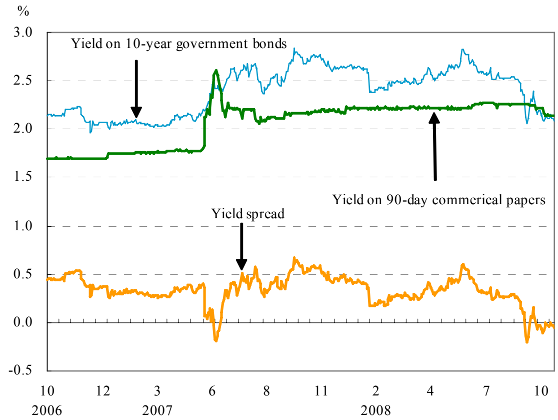
Note: Monthly turnover ratio = trading value in the month / average bonds issued outstanding.
Sources: CBC and FSC.

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).

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

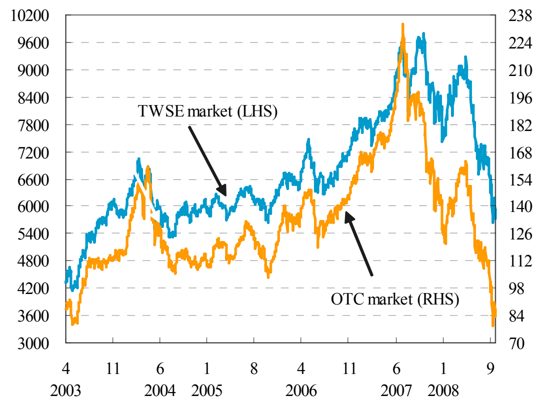
Chart 3.4 Yield spreads



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

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).

Chart 3.5 Taiwan stock market indices



Sources: TWSE and GTSM.

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.

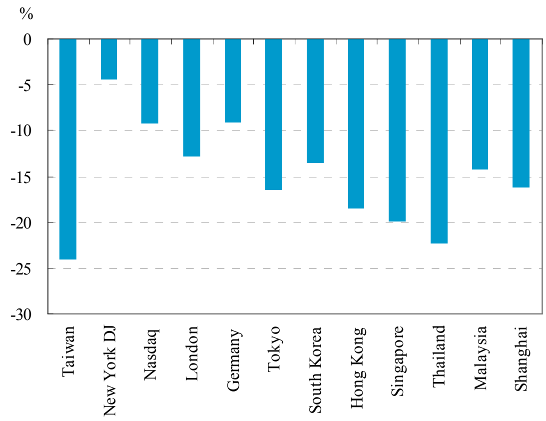
3.2 Equity markets

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 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).

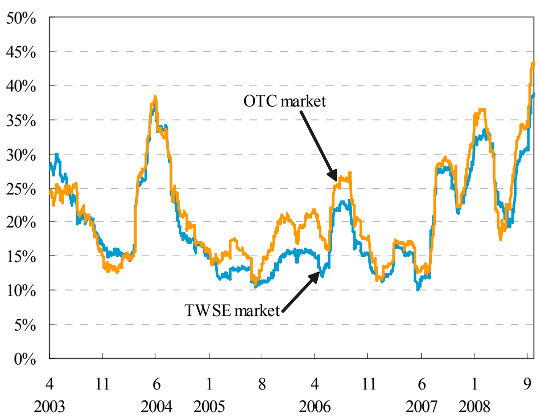
Broken down by sector, all indices were in bear territory in 2008 Q3, while the indices for the building material and construction sector and the cement sector performed the most poorly, dropping by 52.33% and 43.00%, respectively. Indices for communication and networking sectors and the oil, electricity, 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.

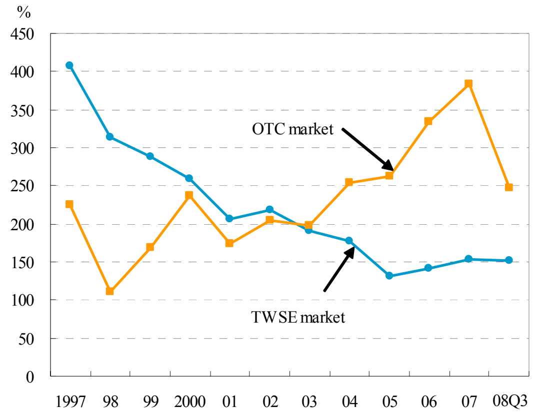
TAIEX volatility began to come down after hitting a peak of 33.67% in mid-March, dropping below 20% in mid-June 2008, but it climbed again in July owing to the global stock market crash. With the volatility on the TWSE market and the OTC market in September 2008 reaching a record five-year high of 38.85%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

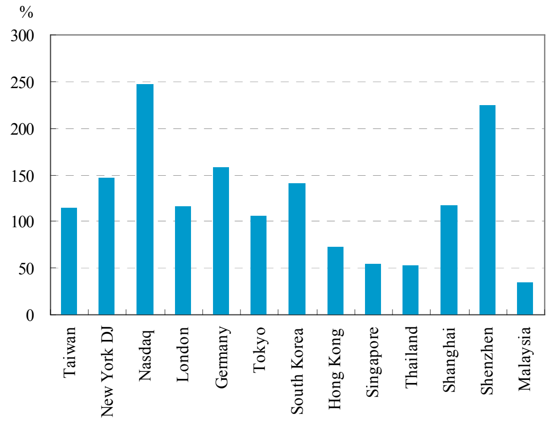
As the global stock market turned bearish, the TWSE market cooled down during the first three quarters of 2008, with a dramatic decrease in trading value. However, as the result of market value tracking the movements of trading value, turnover ratio in terms of trading value on the TWSE still posted 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.

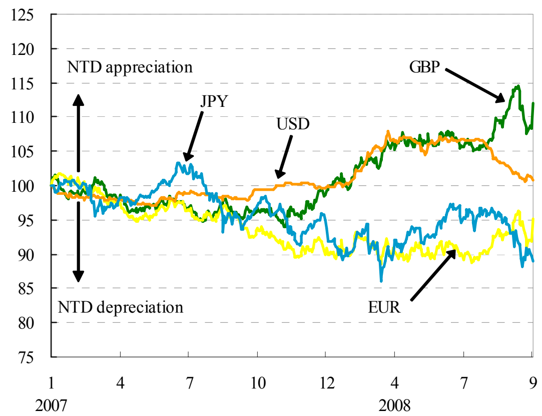
neighboring markets of Tokyo, Hong Kong, Singapore, Thailand, and Kuala Lumpur (Chart 3.9).

3.3 Foreign exchange markets

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

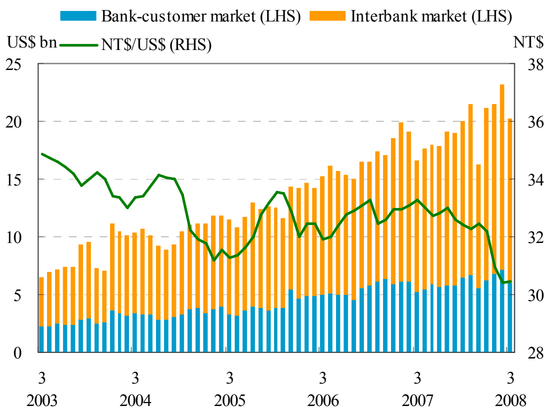
After the dramatic appreciation in 2008 Q1, the NT dollar exchange rate generally moved in a narrow range between 30 and 31 against the US dollar in Q2, but then depreciated to 32.13 at the end of September, a 5.53% drop compared to the end of June, or a rise of 0.97% compared to the end of 2007. The 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.

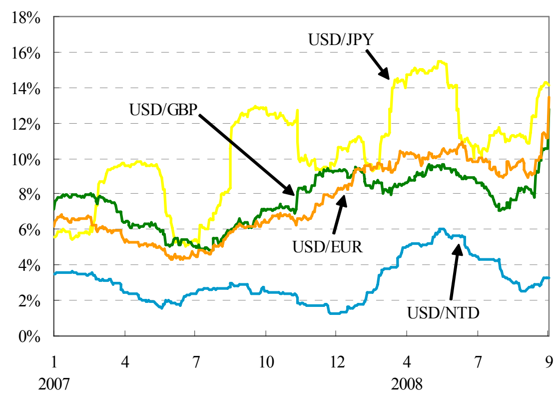
Chart 3.11 NT$/US$ exchange rate and foreign exchange market trading volume



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).

4. Financial institutions[21]

4.1 Deposit-taking institutions[22]

Size and market share

Deposit-taking institutions held a total of NT$37.92 trillion in assets at the end of June 2008, climbing by 1.82% from the previous year's end and equivalent to 3.00 times of the DGBAS-estimated GDP of 2008. Total loans and total deposits amounted to NT$20.09 trillion and NT$28.64 trillion, respectively. Compared to the end of the previous year, total loans rose slightly by 2.34%, while total deposits increased by 0.84% (Table 4.1).

Domestic banks dominated nearly 74% of assets and deposits, and had a share of more than 90% in loans in all deposit taking institutions, while their market share in each category dropped slightly from the end of 2007, mainly because the assets and liabilities of the Chinese Bank and Bowa Bank were taken over by the Hongkong and Shanghai Banking Corporation and DBS Bank, respectively. After the aforementioned takeover, the individual market share of the local branches of foreign banks rose moderately from the end of 2007.

Table 4.1 Size and market share of deposit-taking institutions

Unit: %

Items	End of period	Balance (trillion)	Market Share					
			Domestic banks	Local branches of foreign banks	Chunghwa Post Co.	Credit departments of farmers' associations	Credit departments of fishermen's associations	Credit cooperatives
Assets	2004	32.91	76.77	6.00	10.79	4.28	0.11	2.05
	2005	34.81	76.99	5.85	11.03	4.16	0.11	1.86
	2006	36.38	76.20	6.36	11.57	4.00	0.11	1.76
	2007	37.24	75.76	7.13	11.57	3.88	0.10	1.56
	June 2008	37.92	74.53	8.36	11.69	3.79	0.10	1.53
Deposits	2004	24.61	74.66	3.80	13.57	5.28	0.14	2.55
	2005	26.30	74.78	3.73	13.99	5.07	0.14	2.29
	2006	27.66	74.23	4.05	14.62	4.84	0.13	2.13
	2007	28.40	74.41	4.37	14.56	4.65	0.13	1.88
	June 2008	28.64	74.04	4.52	14.88	4.57	0.13	1.86
Loans	2004	16.90	92.03	2.53	0.01	3.23	0.08	2.12
	2005	17.98	92.15	2.61	0.01	3.23	0.08	1.92
	2006	18.75	91.69	2.90	0.01	3.44	0.09	1.87
	2007	19.63	91.25	3.32	0.01	3.58	0.09	1.75
	June 2008	20.09	90.42	4.20	0.01	3.56	0.10	1.71

Sources: CBC and CDIC.

[21] 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.

[22] "Deposit-taking institution" stated in this report includes domestic banks (including small and medium business banks), the local branches of foreign banks, credit cooperatives, credit departments of farmers' associations, credit departments of fishermen's associations, and the Remittances & Savings Department of Chunghwa Post Co.

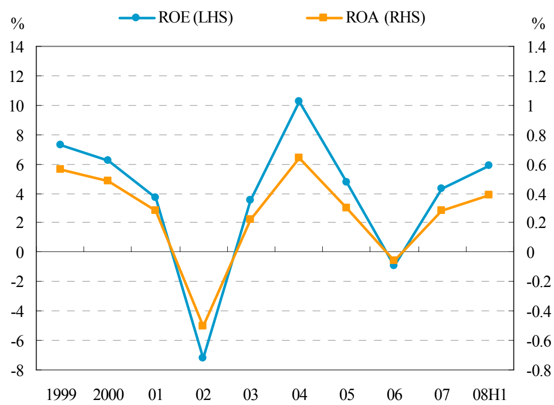
The Remittances & Savings Department of Chunghwa Post Co. held a slightly increasing market share of 14.88% in deposits. Community financial institutions, including credit departments of farmers' and fishermen's associations and credit cooperatives, commanded small market shares, which either remained stable or declined in all categories, except for a slight increase in market share for loans of the credit departments of fishermen's associations (Table 4.1).

4.1.1 Domestic banks

Domestic banks were subject to declining profitability in the first half of 2008, while asset quality continued to improve. The average capital adequacy ratio rose slightly, whereas only a few banks had ratios below the statutory minimum. Average external credit ratings of domestic banks increased slightly on the whole. Domestic banks held ample liquidity, except for a few banks faced with a temporary problem of insufficient liquidity in the second half of 2008. However, the liquidity tensions in these banks eased afterwards.

Domestic bank credit exposures at the end of June 2008 remained concentrated in the real estate market as well as the electronics and electrical machinery manufacturing sectors. Credit risk appeared to increase as the real estate market turned to a slowdown and the global economy worsened. In respect to market risks, the VaR (value at risk) for equity risk increased as a result of the sharp fluctuations in the stock market in 2008 Q3. However, the impact on domestic banks was limited due to relatively small positions. The VaR for interest rate risk and foreign exchange risk once rose owing to the higher volatility in these markets. Nevertheless, both of them declined substantially when the markets gradually stabilized at the end of September, leading to a considerable decrease in total VaR on domestic banks as a whole compared to the end of the previous year.

Chart 4.1 ROE & ROA of domestic banks



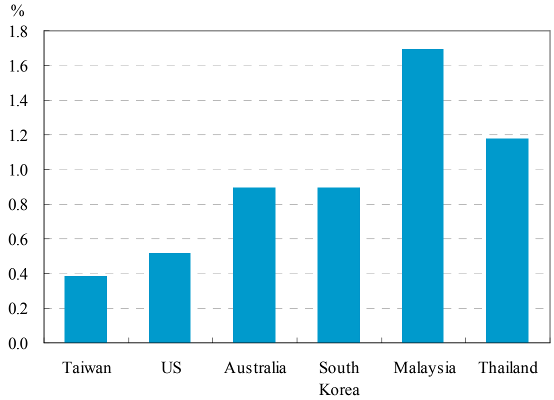
Notes: 1. ROE (return on equity) = net income before income tax / average equity. ROA (return on assets) = net income before income tax / average total assets.
2. Ratios for 2008 H1 had been annualized.
Source: CBC.

Domestic banks' overall profitability[23] declined

Domestic banks as a whole posted a net income before tax of NT$54.6 billion in the first half of 2008, decreasing by 22.34% on a year-on-year basis. This was mainly due to an increase in investment losses stemming from sharp falls on the local and foreign stock markets and continuously increasing provisions in investment positions associated with American subprime mortgage products. Return on equity (ROE) and return on assets (ROA) came to 5.84% and 0.39%, respectively, in the first half of 2008. These figures reflected a slight increase from the yearly figures of 4.32% and 0.28% in 2007, yet showed a decrease from 8.14% and 0.51% year on year, respectively (Chart 4.1). Compared to the US and other Asia-Pacific neighboring countries, the profitability of domestic banks in Taiwan still needs to be improved (Chart 4.2).

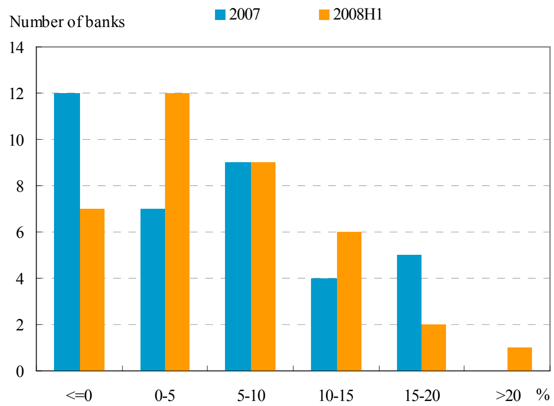
Among individual banks, seven banks[24] suffered losses and posted negative ROEs in the first half of 2008, fewer than the twelve banks in the previous year. This was mainly because some weak banks improved their profitability after being merged or taken into conservatorship. Moreover, the number of banks achieving an ROE of 15% or more decreased from five in the previous year to three owing to the reduced profitability (Chart 4.3).

Chart 4.2 Comparison of ROA in selected countries



Note: Data for Australia is for end-March 2008, while the others are for end-June 2008.
Sources: CBC, FDIC, APRA, FSS, BNM, and BOT.

Chart 4.3 Distribution of ROE of domestic banks



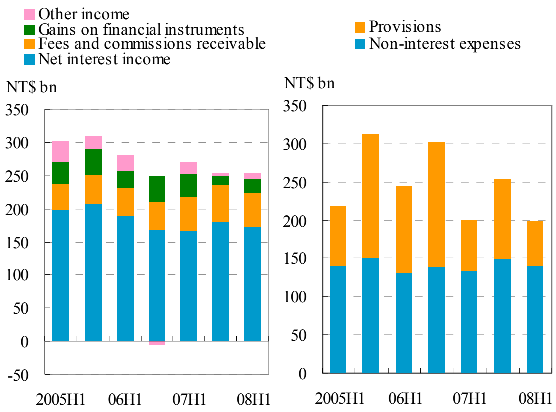
Note: Excludes Chinfon Bank, who had negative net worth and the banks set up during the assessment period.
Source: CBC.

[23] The Chinese Bank and Bowa Bank were both taken into conservatorship in 2007 and exited the market in March and May 2008, respectively. In order to prevent their losses from affecting analyses of overall profitability at domestic banks, the data of the Chinese Bank and Bowa Bank for 2006 and 2007 were excluded in this section. The Chinese Bank and Bowa Bank suffered losses of NT$6.7 billion and NT$8.0 billion, respectively, in 2006, and NT$4.6 billion and NT$41.3 billion, respectively, in 2007.

[24] These exclude Chinfon Bank, which suffered losses of NT$5.5 billion in the first half of 2008. Due to the negative net worth at the end of June 2008, its ROE could not be calculated.

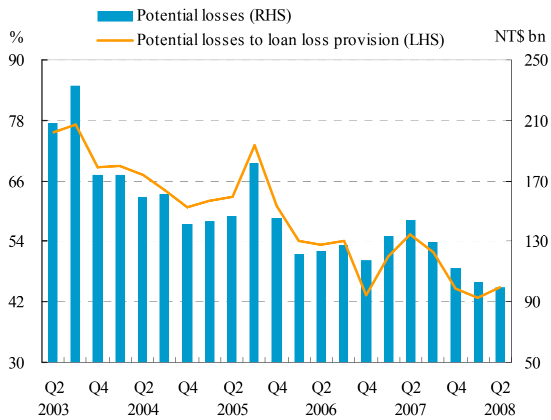
As for operating revenues and costs, net interest income, the primary source of operating revenues for domestic banks, leveled off due to a continued low interest rate spread between deposits and loans.[25] Net fee and commission income decreased materially under the influence of a sharp drop in the sales volume of structured notes and mutual funds. The net revenues from financial instruments and other net revenues fell dramatically, mainly due to the weakened financial market and increasing provisions for impairment losses on assets linked to the US subprime mortgage-related products. As a result, the total operating revenues declined by 5.91% year on year. On the cost side, although non-interest expenses rose in the first half of 2008 as employee bonuses were recognized as expenses, total operating costs fell slightly by 0.16% compared to the first half of 2007 as a result of a sharp decline in provisions (Chart 4.4).

Chart 4.4 Composition of income and cost of domestic banks



Source: CBC.

Chart 4.5 Potential classified asset losses of domestic banks



Notes: 1. End-of-period figures.
2. Excludes interbank loans.
Source: CBC.

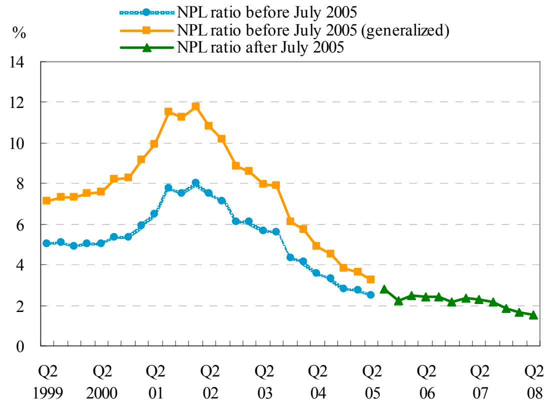
As of the end of June 2008, domestic banks reported limited exposure to or losses from outstanding investments associated with subprime mortgage-related products. Some financial institutions in the US and Europe have experienced severe financial distress since July 2008. As leading countries adopted measures to stabilize their financial systems such as liquidity injection, bailout programs, and an urgent rescue of some vulnerable countries through financial aid from the IMF, the systemic crisis was relieved temporarily. However, the financial emergency condition showed little notable improvement and global stock markets continued to decline due to increasing concerns about the economic downturn. These developments, which are likely to cause more losses on the investments and credit positions of domestic banks and undermine their profitability, need to be closely monitored.

[25] The average interest rate spread between deposits and loans was a mere 1.69 percentage points in 2008 Q2, shrinking from 1.70 percentage points in 2007 Q4.

Asset quality continued to improve

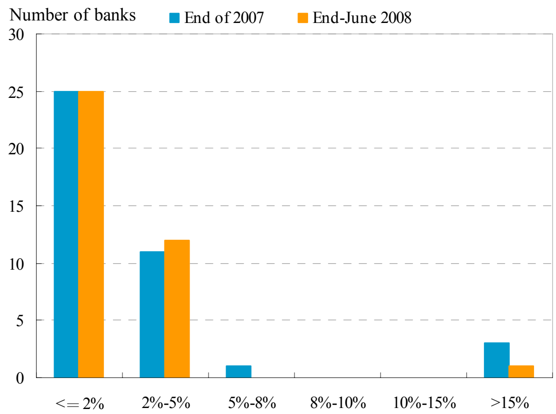
At the end of June 2008, the outstanding classified assets[26] of domestic banks as a whole stood at NT$579.8 billion, and the average classified asset ratio was 2.05%, decreasing by 11.69%, or 0.27 percentage points, compared to the end of 2007, respectively. Expected losses on classified assets were estimated at NT$99.5 billion,[27] also decreasing from the end of the previous year by 11.72%. The asset quality of domestic banks improved steadily. Expected losses from classified assets were equal to 44.78% of loan loss provisions and other reserves, indicating that the provisions and reserves were sufficient to cover expected losses (Chart 4.5).

Chart 4.6 Average NPL ratio of domestic banks



Notes: 1. End-of-period figures.
2. Excludes interbank loans.
Source: CBC.

Chart 4.7 Distribution of NPL ratio of domestic banks



Note: Excludes interbank loans.
Source: CBC.

At the end of June 2008, the outstanding NPL of domestic banks as a whole stood at NT$281.2 billion, and the average NPL ratio was 1.55%, down by 14.29% and 0.28 percentage points when compared with the end of 2007, respectively (Chart 4.6). The drop was mainly due to the ongoing write-off and sales of non-performing loans. Among individual banks, all had NPL ratios of less than 5%, except for one bank[28] with an NPL ratio as high as 28.15; among them, twenty-five had ratios below 2% (Chart 4.7). Compared to the US and other Asian neighboring countries, the NPL ratio of domestic banks in Taiwan is lower than in the US, Thailand, Indonesia, and Malaysia, but higher than in Hong Kong and South Korea (Chart 4.8).

[26] The Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans break down credit assets into five different categories as follows: Category One – normal credit assets; Category Two – credit assets requiring special mention; Category Three – substandard credit assets; Category Four – doubtful credit assets; Category Five – loss assets. Other assets are broken down into four different categories as follows: Category One for normal assets, while Category Two, Category Four, and Category Five are for specially mentioned, doubtful, and loss assets, respectively. The term “non-performing assets” includes all classified assets other than those in Category One.

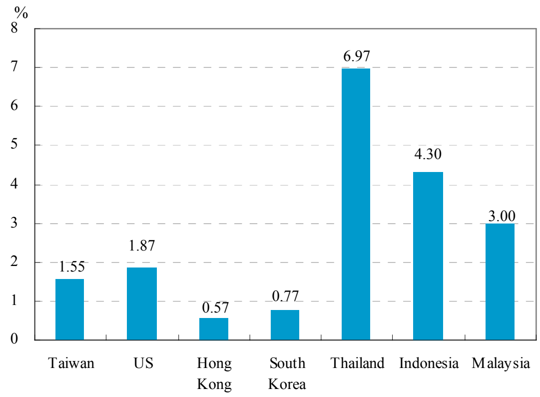
[27] The loss herein refers to the losses from loans, acceptance, guarantee, credit card revolving balance, and factoring without recourse.

[28] Chinfon Bank was taken into conservatorship by the CDIC on 26 September 2008.

As to loan loss provisions, the NPL coverage ratio at the end of June 2008 was 67.36%, advancing 3.30 percentage points from the end of the previous year, primarily due to a sharp drop in non-performing loans. The loan loss reserve ratio fell to 1.04% from 1.17% at the end of 2007 as loan loss provisions decreased and loans outstanding continued to grow (Chart 4.9).

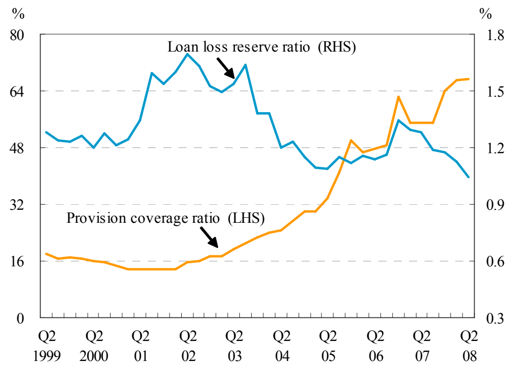
Asset quality of domestic banks has been steadily improving , but may be affected by remaining uncertainties including the following factors: (1) the cumulative repayment rate on modified payment plans for delinquent loans has continued to drop,[29] adding to the uncertainty about the prospects for future repayment; (2) pursuant to the Consumer Debt Clearance Act, in force as of April 2008, financial institutions engaged in preliminary negotiations with debtors outside the court,[30] but whether such debtors can continue to repay normally in accordance with payment terms needs to be watched closely; (3) for deliquent debtors under modified payment plans and debtors performing repayment normally but almost on the brink of default, banks agreed to renegotiate with them the terms of repayment, which may increase the incentive of moral hazard for debtors; and (4) domestic and global economic growth was expected to slowdown, which may weaken the financial health of the business sector and the repayment ability of the household sector, hence heightening credit risk.

Chart 4.8 NPL ratio in selected countries



Note: Figures for Hong Kong, South Korea, and Malaysia are for end-March 2008, while Indonesia is for end-May 2008. The others are for end-June 2008.
Sources: CBC, FDIC, HKMA, FSS, BOT, BI, and BNM.

Chart 4.9 Provision coverage ratio and loan loss reserve ratio of domestic banks



Notes: 1. Provision coverage ratio = loan loss provisions / non-performing loans. Loan loss reserve ratio = loan loss provisions / total loans.
2. Excludes interbank loans.
Source: CBC.

[29] Based on the reported data submitted by domestic banks, the outstanding amount under modified plans for delinquent loans stood at NT$274.3 billion. The cumulated repayment rate (monthly number of successful payment / number of signed contracts) dropped from 54.91% at the end of 2007 to 48.08% at the end of June 2008.

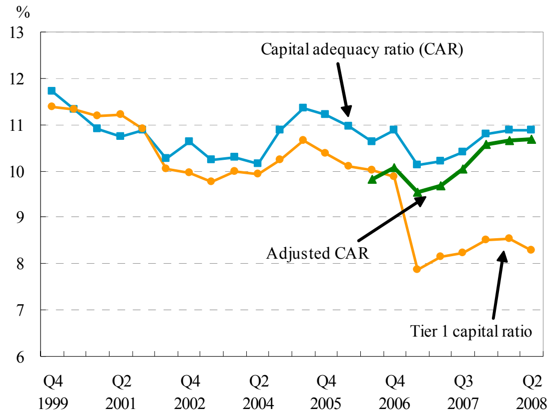
[30] According to the Bankers Association of the Republic of China as of end-August 2008, the financial institutions have held preliminary negotiations with 18,774 debtors holding a total debt of NT$33.2 billion.

Capital adequacy ratios increased slightly

The average capital adequacy ratio stood at 10.87% by the end of June 2008, slightly higher than the 10.80%[31] registered at the end of 2007. The average ratio of Tier 1 capital to risk-weighted assets was 8.28%, down by 0.22 percentage points from the end of 2007 due to the sharp capital reduction by one bank and cash dividends paid by banks in the second quarter. Given unamortized deferred assets of NT$33.5 billion[32] arising from losses recorded on the sale of classified assets were deducted from regulatory capital, the adjusted capital adequacy ratio at the end of June 2008 came to 10.68%, up from the 10.57% of the end of 2007. The average capital adequacy ratio increased slightly (Chart 4.10). Compared to the United States and some Asia-Pacific neighboring countries, the average capital adequacy ratio of domestic banks is slightly higher than in Australia, but lower than in the United States and other Asian neighbors (Chart 4.11).

Further breaking down the component of regulatory capital, Tier 1 capital, which features the best risk bearing capacity, accounted for 76.21% of eligible capital at the end of June 2008, decreasing by 2.48 percentage points from the end of 2007. Tier 2 capital registered at 23.46%, up by 2.47 percentage points from the end of 2007, owing to some banks increasing the issue of

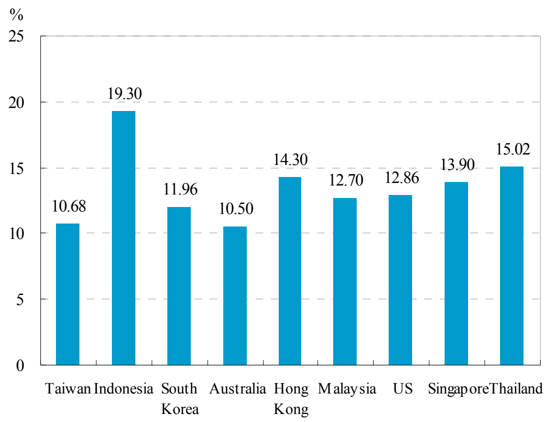
Chart 4.10 Capital adequacy ratio of domestic banks



Notes: 1. End-of-period figures.
2. The data are on semiannual basis before June 2006 and on quarterly basis after September 2006.
3. Adjusted capital adequacy ratio = (eligible capital - unamortized deferred assets arising from losses recorded on the sale of non-performing assets) / risk -weighted assets.

Source: CBC.

Chart 4.11 Comparison of capital adequacy ratio in selected countries



Notes: 1. Figures for Indonesia and South Korea are as of end-2007, while those for Hong Kong and Australia are as of end-March 2008. The others are as of end-June 2008.
2. The figure for Taiwan is adjusted for unamortized deferred assets arising from losses recorded on the sale of classified assets.

Sources: BI, FSS, APRA, HKMA, BNM, FDIC, MAS, BOT, and CBC.

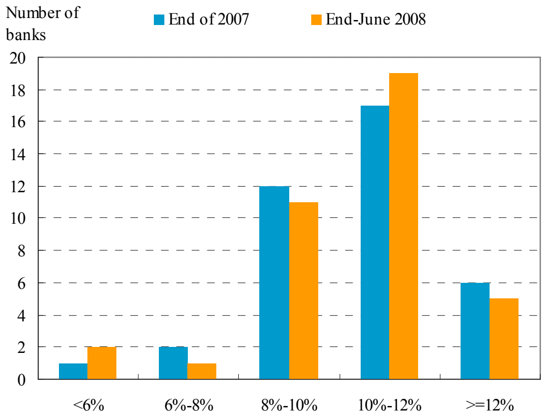
[31] The capital adequacy ratio at the end of 2007 had been revised by a Certified Public Accountant.

[32] Article 4 of the Regulations Governing the Capital Adequacy of Banks as amended on 5 January 2007 requires that unamortized losses recorded on the sale of non-performing assets in 2007 or later should be deducted from Tier 1 capital, but this requirement does not apply to sales made on or before 31 December 2006.

long-term subordinated debt, while Tier 3 capital contributed a mere 0.33%.

There was only one bank with a capital adequacy ratio under the statutory minimum (8%) at the end of June 2008. As for adjusted capital adequacy ratios, three banks, with combined assets accounting for only 2.21% of all domestic bank assets, had ratios below the statutory minimum, posing limited impact on the banking system. In addition, there were twenty-four banks with ratios above 10%, unchanged from the end of the previous year (Chart 4.12).

Chart 4.12 Distribution of adjusted capital adequacy ratio of domestic banks

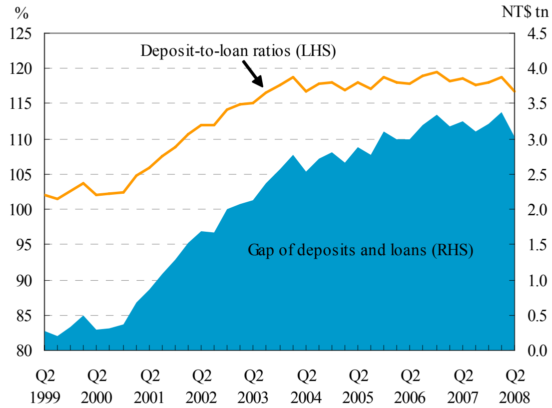


Source: CBC.

Funding remained in good supply, and liquidity tension eased at a few banks

Funding remained ample

Chart 4.13 Deposit-to-loan ratio in domestic banks



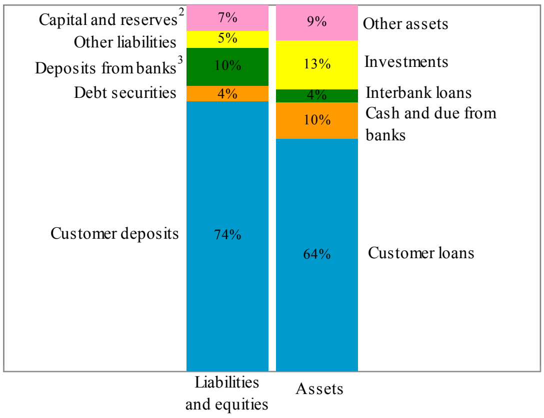
Notes: 1. Deposit-to-loan ratio = total deposits / total loans.
2. Gap of deposits and loans is defined as total deposits minus total loans.
3. End-of-period figures.

Source: CBC.

The deposit-to-loan ratios of domestic banks as a whole have been standing above 115% since June 2003 and reached 117.98% at the end of 2007. With the annual growth rate of deposits lower than that of loans in the first half of 2008, the deposit-to-loan ratios slightly dropped to 116.72% at the end of June 2008, while the funding surplus (i.e. deposits exceeding loan demand) stood at NT$3.04 trillion, reflecting ample liquidity in domestic banks (Chart 4.13).

The sources and uses of funds in domestic banks at the end of June 2008 remained broadly unchanged. On the sources side, customer deposits accounted for the largest share at 74%, followed by deposits from banks at 10%, while debt securities in issue contributed a mere 4%. On the uses side, customer loans accounted for the biggest share at 64%, followed by investments in debt securities and equities at 13% (Chart 4.14).

Chart 4.14 Sources and uses of funds in domestic banks

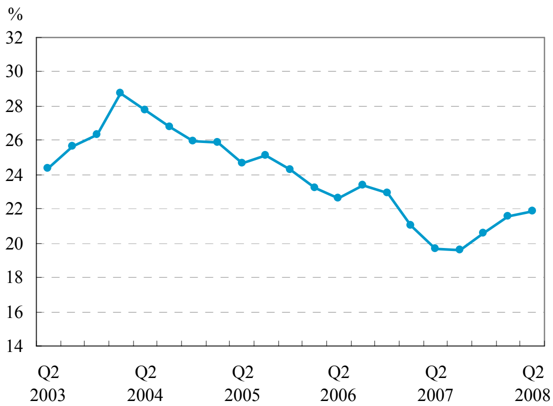


Notes: 1. End-June 2008 figures.
2. Includes provision.
3. Includes "due to Central Bank" and "borrowing funds."
Source: CBC.

Average liquid reserve ratio kept high, and liquidity tension eased at some banks

The average NT dollar liquid reserve ratio of domestic banks escalated to 21.85% in June 2008, well above the statutory minimum of 7% (Chart 4.15), and the reserve ratio of each bank was higher than 12%. Tier 1 liquid reserves,[33] mainly consisting of certificates of deposit issued by the CBC, accounted for 86.63% of total liquid reserves in June 2008, while Tier 2 and Tier 3 reserves accounted for 2.41% and 10.96%, respectively. This reflected the fact that the quality of liquid assets remained satisfactory and overall liquidity risk was low.

Chart 4.15 Liquid reserve ratio of domestic banks



Note: Figures are the average of the last month in each quarter.
Source: CBC.

In September 2008, Lehman Brothers and other financial institutions in the US were mired in financial difficulties successively, which in turn affected domestic depositors' confidence in Taiwan. A few private banks suffered from drainage of deposits and faced funding difficulty (Chart 4.16). To bolster public confidence, the government announced in October 2008 that it would provide a blanket guarantee on deposits of all insured financial institutions (i.e. banks and community financial institutions) and actively strengthen financial supervision. The

[33] Tier 1 liquid reserves include excess reserves, treasury bills, certificates of deposit issued by the CBC, government bonds, bank debentures, and deposits at designated banks with term to maturity of no more than one year. Tier 2 liquid reserves include net due from banks in the call-loan market, negotiable certificates of deposit, and banker's acceptances. Tier 3 liquid reserves include commercial paper, trade acceptances, corporate bonds, and other liquid assets as approved by the CBC.

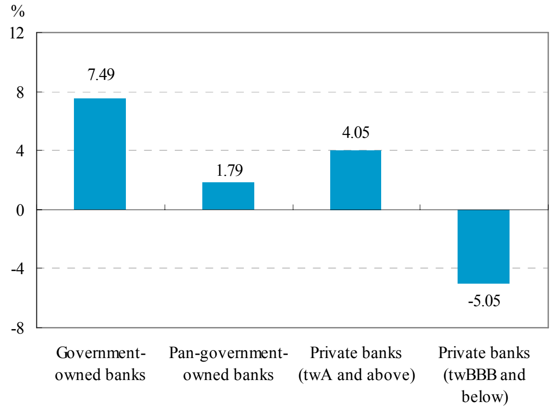
liquidity tension had hence been relieved.

Average credit ratings improved

The rankings of Taiwan's banking system in the Standard & Poor's Banking Industry Country Risk Assessment (BICRA)[34] and the Fitch Ratings Banking System Indicator /Macro-Prudential Indicator (BSI/MPI)[35] remained unchanged in the first half of 2008 at Group 4 and D/1, respectively. In October 2008, Fitch Ratings upgraded Taiwan's ranking on BSI from D to C, reflecting an improvement in both capital and loss reserves of Taiwan's banking sector (Table 4.2). Compared to other Asian economies, risks in Taiwan's banking industry are higher than in Hong Kong, Singapore, and Japan, about the same as those in South Korea and Thailand, but much lower than in China, Indonesia, and the Philippines.

According to statistics from the rating agencies,[36] two banks received rating downgrades in the first half of 2008 due to weakened capital adequacy and poor profitability, while two other banks were upgraded and one weak bank had its credit rating withdrawn. As a result, the credit rating

Chart 4.16 Changes in the balances of domestic bank deposits



Notes: 1. Figures are the percentage of change between balances at end-September 2008 and end-2007.
2. Government-owned banks include Bank of Taiwan and Land Bank of Taiwan. Pan government-owned banks include Taiwan Cooperative Bank, First Bank, Hua Nan Bank, Mega Bank, and Taiwan Business Bank.

Source: CBC.

Table 4.2 Systemic risk indicators for banking system

Banking System	Standard & Poor's	Fitch
	BICRA	BSI/MPI
Hong Kong	2	B/1
Singapore	2	B/1
Japan	3	B/1
South Korea	4	B/3
Taiwan	**4**	**C/1**
Thailand	6	C/1
China	6	D/1
Indonesia	8	D/1
Philippines	8	D/1

Note: Figures are as of end-October 2008.
Sources: Standard & Poor's and Fitch Ratings.

[34] The classification scheme used by the Banking Industry Country Risk Assessment (BICRA) is a synthetic assessment developed by Standard & Poor's Corporation that is based on the credit standing of financial institutions in the context of the structure and performance of the economy, legal and regulatory infrastructure supporting the financial system, and the competition and operation environment of the banking sector, while factoring out the potential for government support for banks. Assessment results reflect relative country risk and banking sector credit quality, and are indicated with a score of 1 (strongest) to 10 (weakest).

[35] Fitch Ratings has devised two complementary measures, the Banking System Indicator (BSI) and Macro-Prudential Indicator (MPI), to assess banking system vulnerability. The two indicators are brought together in a Bank Systemic Risk Matrix that emphasizes the complementary nature of both indicators. The BSI, based on the synthetic assessment results composed of individual ratings and systematic risks in the banking system, measures intrinsic banking system quality or strength on a scale from A (very high quality) to E (very low quality). On the other hand, the MPI indicates the vulnerability of stress on above-trend level of private sector credit, a bubble in real asset prices, and/or major currency appreciation, measuring the vulnerability of the macro environment on a scale from 1 (low) to 3 (high) in terms of banking system vulnerability.

[36] Include Taiwan Ratings Corporation ratings (tw~) and Fitch ratings (~(twn)).

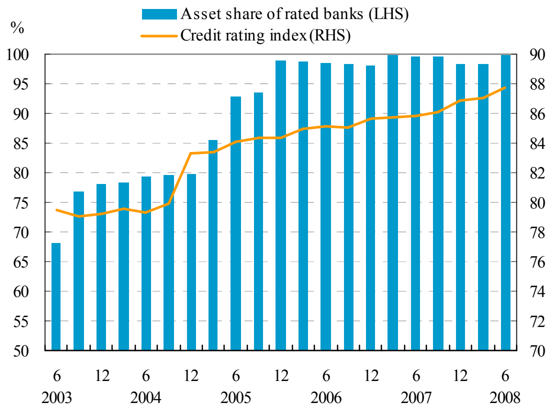
indices[37] for rated banks in Taiwan continued to rise (Chart 4.17), reflecting improvement in the overall credit rating level of domestic banks.

Most rated banks received credit ratings of twAA/twA (Taiwan Ratings Co.) or A(twn) (Fitch Ratings) at the end of June 2008, while there was only one bank with a credit rating of twB+ (Chart 4.18). All banks had a rating outlook or credit watch of either "stable" or "positive," except for two banks with a negative rating outlook or creditwatch due to poor profitability or under-capitalization and one bank with a "developing" rating outlook. In addition, there was one bank without a long-term issuer credit rating at the end of June 2008.

Credit exposure concentration sustained, and credit risk increased

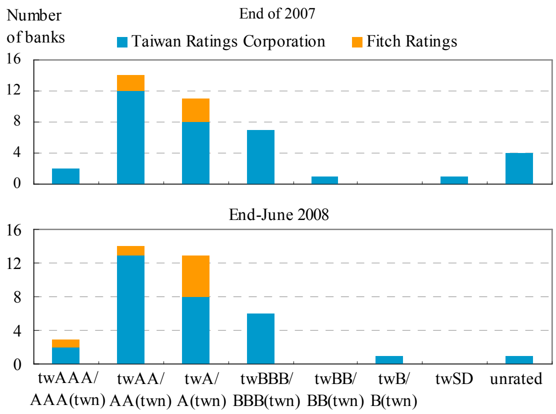
Customer loans[38] were the major credit exposures for the local business units of domestic banks, equaling NT$16.36 trillion, or 57.88% of total assets, at the end of June 2008. The annual growth rate in loans saw a modest decline of 2.73% over the same period (Chart 4.19), attributable mainly to a sharper decelerating growth in individual loans.

Chart 4.17 Credit rating indices of rated domestic banks



Note: End-of-period figures.
Sources: CBC, Taiwan Ratings Corporation, and Fitch Ratings.

Chart 4.18 Distribution of credit ratings of rated domestic banks



Note: Credit rating "twSD" refers to selective default.
Sources: CBC, Taiwan Ratings Corporation, and Fitch Ratings.

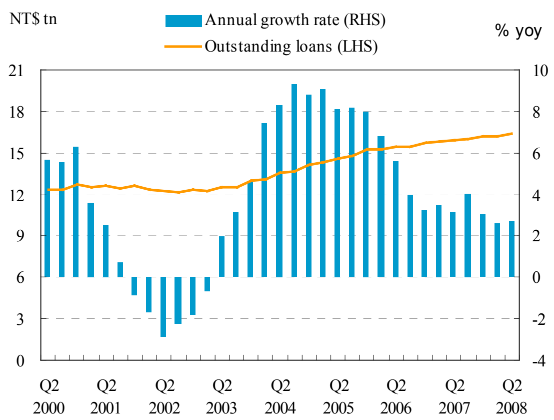
[37] The credit rating index is an asset-weighted average rating score of rated domestic banks, measuring the overall creditworthiness of those banks on a scale from 1 (weakest) to 100 (strongest). The rating score for banks is determined according to their long-term issuer ratings from Taiwan Ratings Corporation or national long-term ratings from Fitch Ratings.

[38] The term "loan" herein refers to amounts lent by local business units of domestic banks to their customers. It excludes interbank lending.

Risk on real estate-related loans increased

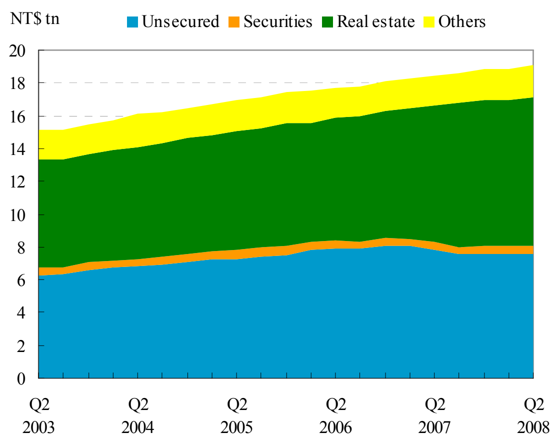
As of the end of June 2008, the outstanding real estate-related loans[39] of domestic banks reached NT$6.45 trillion and accounted for 35.50% of total loans. In addition, the real estate secured credit extended by domestic banks amounted to NT$9.1 trillion, or 47.69% of the total, slightly up from the end of the previous year (Chart 4.20). Among individual banks, eleven had ratios of real estate secured credit to total credit of over 60%, reflecting a high concentration of credit exposure in the real estate market. Despite the fact that the NPL ratio of real estate-related loans remains at a lower level, the credit risk of banks may rise in the future because the borrower's debt repayment capacity would be undermined by some adverse developments, such as a downturn in the real estate market, sluggish economic growth, and the continuous wave of expiration for the grace period for high leveraged loans.

Chart 4.19 Outstanding loans of domestic banks and annual growth rate



Note: Outstanding loans are end-of-period figures.
Source: CBC.

Chart 4.20 Credits by type of collaterals of domestic banks



Note: End-of-period figures.
Source: CBC.

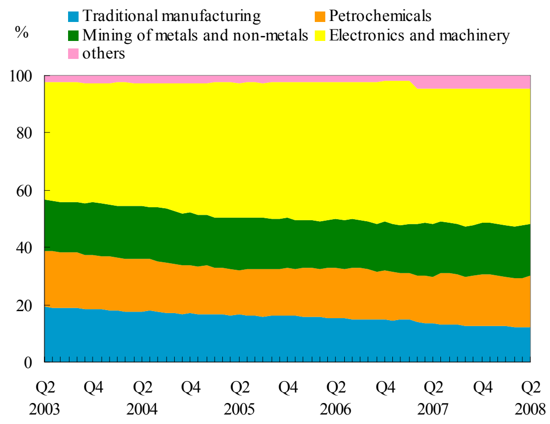
Loans to SMEs made up a considerable share

The outstanding corporate lending of domestic banks stood at NT$7.32 trillion at the end of June 2008, with loans to the manufacturing sector accounting for the largest share (44.62%). Within the manufacturing category,[40] loans to electronics and machinery-related industries accounted for the biggest proportion (NT$1.5 trillion, or 47.00%[41]), and the percentage was slowly rising (Chart 4.21). In addition, analyzed by type of corporate loan borrowers, domestic banks' loans to small and medium-sized enterprises (SMEs) stood at NT$3.17 trillion, registering a high 41.99% of

[39] The term "real estate-related loans" includes loans for construction, house purchases, and house refurbishments.
[40] Loans to the manufacturing sector are divided into four categories by industries, including electronics and machinery-related industries, mining of metals and non-metals related-industries, petrochemicals related-industries and traditional manufacturing industries. The remainder is classified as "others."
[41] The production value of electronics and machinery-related industries accounts for 37.45% of total manufacturing production value, which is less than loans to electronics and machinery makers as a percentage of total loans to the manufacturing sector.

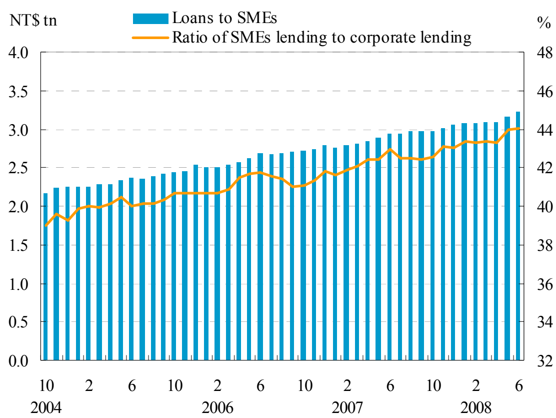
total corporate lending at the end of June 2008 (Chart 4.22). Among loans to SMEs, the amount supported by the Small and Medium Enterprise Credit Guarantee Fund of Taiwan (SMEG) reached NT$517.5 billion, or 16.05% of the total, while the guaranteed amount and guarantee coverage percentage stood at NT$333.7 billion and 64.48%, respectively. The prevailing global economic slowdown and elevated raw material costs, coupled with the more conservative attitude toward banks' credit policies, may cause a rise in business risk for the corporate sector, particularly posing a far greater challenge to SMEs as they tend to be less transparent in financial disclosure and weaker in loss tolerance. As the business sector is one of the main driving forces of Taiwan's economic growth, and the SMEs in particular serve as a pivotal foundation of Taiwan's economy, the government continues to support enterprises (especially SMEs) in funding through bank loans. However, banks should focus more on strengthening the effectiveness of risk management and ensuring operational performance as well as keeping in line with the government policy.

Chart 4.21 Loans to the manufacturing sectors by domestic banks



Note: End-of-period figures.
Source: CBC.

Chart 4.22 Outstanding loans to SMEs in domestic banks



Source: FSC.

Equity risk was on the rise, but interest and foreign exchange risk were on the decline

Calculated on the basis of market information at the end of September 2008, the estimated value-at-risk (VaR) for market exposures[42] of domestic banks over a ten-day period stood at NT$130 billion, dropping significantly from the end of March 2008. Among the market risks, interest rate risk once reached to a peak as the volatility of long-term bonds shot up, but then

[42] The VaR (Value at Risk) with each category of risks for the test period as estimated by multivariate historical simulation model for foreign exchange risk, constant correlation generalized autoregressive conditional heteroscedasticity model for interest rates risk, and quantile autoregression model for equity risk are presented in this report, given that a confidence level is 99% using a holding period of ten trading days and exposure positions are assumed unchanged. The models are estimated using 250 exchange rate, interest rate, and stock price samples (with sampling periods of 1 October 2007 - 30 September 2008 for exchange rates, 26 September 2007 - 30 September 2008 for interest rates, and 28 September 2007 - 30 September 2008 for stock prices).

decreased appreciably after the interest rate turned to a stable level at the end of September 2008. Meanwhile, the foreign exchange rate risk also diminished sharply due to a reduction both in position held and volatility of the US dollar against the NT dollar. The equity risk of domestic banks, despite a drop in the net positions of equity securities, eventually rose due to an increasing expansion of stock market fluctuations (Table 4.3).

Table 4.3 Market risk in domestic banks

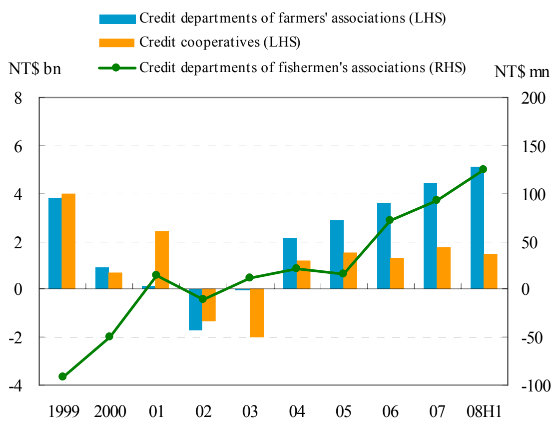
Units: NT$ bn; %

Types of market risk	Items	End-March 2008	End-Sep. 2008	Changes	
				Amount	%
Foreign Exchange	Net position	90.9	87.6	-3.3	-3.63
	VaR	6.5	3.1	-3.4	-52.31
	VaR/net position	7.15	3.54		-3.61
Interest rate	Net position	2,833.8	3,058.9	225.1	7.94
	VaR	184.6	64.3	-120.3	-65.17
	VaR/net position	6.51	2.10		-4.41
Equity	Net position	559.1	525.4	-33.7	-6.03
	VaR	59.1	62.6	3.5	5.92
	VaR/net position	10.57	11.91		1.34
Total VaR		250.2	130.0	-120.2	-48.04

Note: Figures for net position of respective market risks are end-June 2008.
Source: CBC.

As of the end of September 2008, the effects of VaR for exchange rates, interest rates, and stock prices upon capital adequacy ratios were 0.01, 0.06, and 0.28 percentage points,[43] respectively. Assuming that the above-mentioned risks are mutually independent and occur simultaneously, market risk would cause a change of 0.35 percentage points in the capital adequacy ratio of the domestic banks as a whole, and the current ratio would fall to 10.33% from 10.68%.[44]

Chart 4.23 Pre-tax net income of community financial institutions



Sources: CBC and CDIC.

4.1.2 Community financial institutions

Profitability in every category of community financial institutions (which include credit cooperatives, credit departments of farmers'

[43] To avoid double counting, the regulatory capital required for market risks is deducted from the effects of VaR on the capital adequacy ratio.

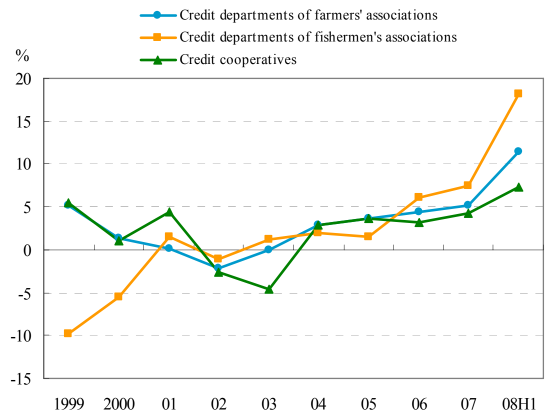
[44] The term "capital adequacy ratio" used herein is based on the regulatory capital which has deducted unamortized deferred losses on the sale of NPLs.

associations and credit departments of fishermen's associations) continued to grow in the first half of 2008, coupled with an improvement in asset quality and higher capital adequacy ratios in most institutions. However, some individual institutions still showed a need for further improvement.

Profitability continued to grow

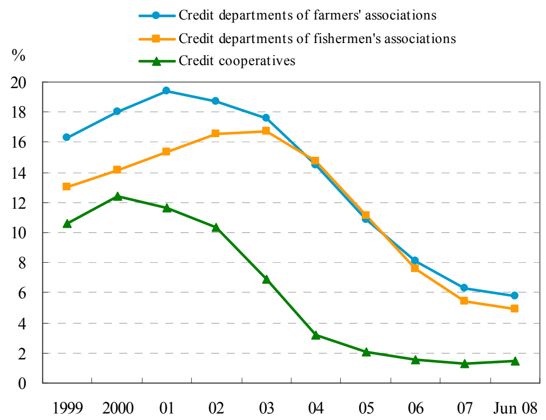
All categories of community financial institutions not only posted positive earnings in the first half of 2008, but also surpassed their performance over the same period in 2007. Net income before tax in the first half of 2008 was NT$1.4 billion at credit cooperatives, NT$5.1 billion at the credit departments of farmers' associations, and NT$120 million at the credit departments of fishermen's associations (Chart 4.23). The average ROE also improved significantly. Among those institutions, the highest ROE was registered by the credit departments of fishermen's associations (18.24%), followed by the credit departments of farmers' associations (11.47%) and credit cooperatives (7.28%) (Chart 4.24).

Chart 4.24 ROE of community financial institutions



Sources: CBC and CDIC.

Chart 4.25 NPL ratio of community financial institutions



Note: End-of-period figures.
Sources: CBC and CDIC.

Asset quality remained satisfactory at credit cooperatives and continuously improved in the credit departments of farmers' associations and fishermen's associations

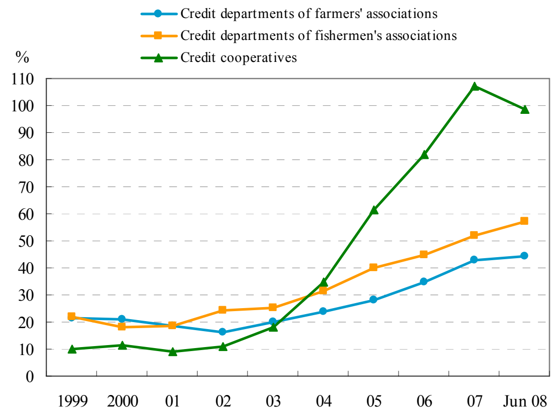
The average NPL ratio at credit cooperatives registered 1.44% at the end of June 2008, slightly higher than the figure at the end of 2007, but asset quality remained satisfactory. The average NPL ratios for the credit departments of farmers' and fishermen's associations were still high at 5.81% and 4.90%, respectively (Chart 4.25). Among the credit departments of farmers' and fishermen's associations, some institutions suffering high NPL ratios need to be further improved.

The NPL coverage ratio at credit cooperatives reached 98.52% at the end of June 2008, which was the highest among community financial institutions, reflecting sufficient reserve provisions. The ratios at the credit departments of farmers' and fishermen's associations stood at 44.30% and 56.92%, respectively (Chart 4.26), reflecting an upward trend, but still registered at a lower level compared to all categories of deposit institutions.

Capital adequacy ratios slightly increased at credit cooperatives

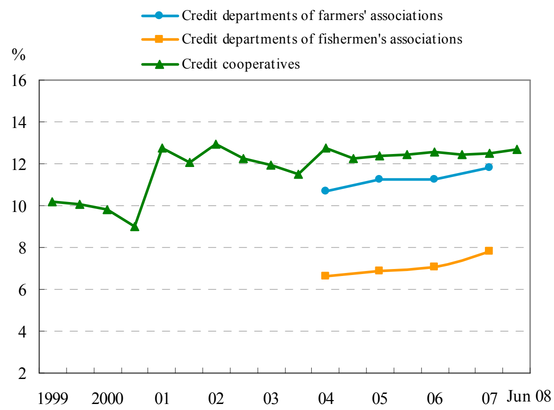
At the end of June 2008, the average capital adequacy ratio at credit cooperatives increased to 12.68% contributed by their earnings, slightly higher than the 12.50% registered at the end of 2007. There were no updated data for the credit departments of farmers' associations and fishermen's associations at the end of June 2008[45] as these financial institutions are required to calculate their own capital adequacy ratio on a yearly basis in accordance with applicable regulations (Chart 4.27).

Chart 4.26 NPL coverage ratio of community financial institutions



Note: End-of-period figures.
Sources: CBC and CDIC.

Chart 4.27 Capital adequacy ratio of community financial institutions



Notes: 1. End-of-period figures.
2. Figures for credit cooperatives are on a semiannual basis, while those for credit departments of farmers' and fishermen's associations are on an annual basis.
Sources: CBC and CDIC.

[45] The average capital adequacy ratios at credit departments of farmers' associations and fishermen's associations were 11.82% and 7.84%, respectively. The ratio at the credit departments of fishermen's associations was below the statutory minimum of 8%. Among individual institutions, some credit departments of farmers' associations and fishermen's associations had insufficient capital, but with their smaller scale, the impact on the average capital adequacy ratio of all deposit-taking institutions was limited.

4.2 Non-deposit taking financial institutions

4.2.1 Life insurance companies

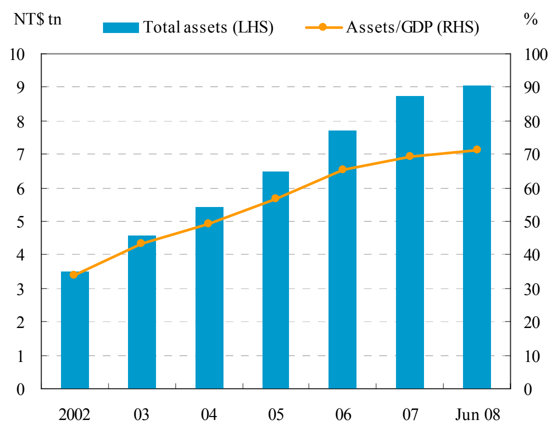
The asset size of Taiwan's life insurance companies increased slowly, while they showed huge losses of NT$77 billion in the first half of 2008. Although the depreciation of the NT dollar was expected to significantly reduce the losses on foreign exchange positions in 2008 Q3, the deepening global financial crisis and plummeting stock prices may continue to undermine future profitability. The average risk-based capital (RBC) ratio declined sharply, exerting the pressure of capital injection on some companies. Among the top three insurers, the credit ratings for Cathay Life and Shin Kong Life remained stable. In contrast, Nan Shan Life was downgraded to AA (twn) amid the adverse impact stemming from the financial crisis at its parent company, the AIG Group, and once experienced a surge of termination of insurance policies and an increase in policy collateral lending. However, the disturbance was eased following active measures taken by the company and the government, as well as a capital injection of NT$47.2 billion from the parent company.

Total assets increased slowly

The total assets of life insurers reached NT$9.04 trillion, equivalent to 71.38% of annual GDP at the end of June 2008, while the year-on-year growth rate rose at a slower pace, down to 9.09% from 12.70% at the end of 2007 (Chart 4.28). Compared to 2007, the increase was mainly supported by a surge of investments in domestic securities along with the continued growth of insurance products held in segregated custody accounts.[46]

The structure of Taiwan's life insurance market changed slightly. As of the end of June 2008, twenty-three domestic life insurers held a 98.87% market share by assets, while seven foreign life insurers commanded a share of only 1.13%. The top three life insurers held a combined market share of 56.94% and 46.20% in terms of assets and premium income, respectively, reflecting high market concentration.

Chart 4.28 Total assets of life insurance companies



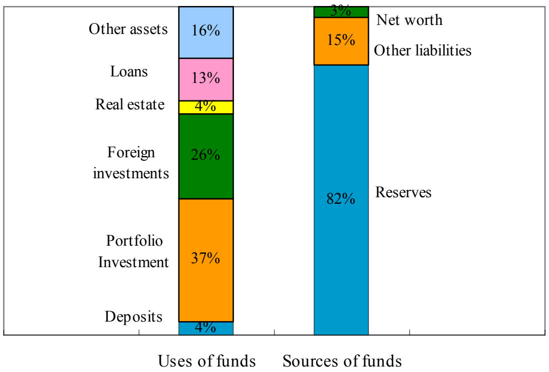
Note: End-of-period figures.
Source: FSC.

[46] When a life insurer sells a product held in segregated custody accounts, the amount of insurance coverage offered under the policy is booked both under "insurance product assets held in segregated custody account" and "insurance product liabilities held in segregated custody account."

Funds invested in domestic securities increased the most

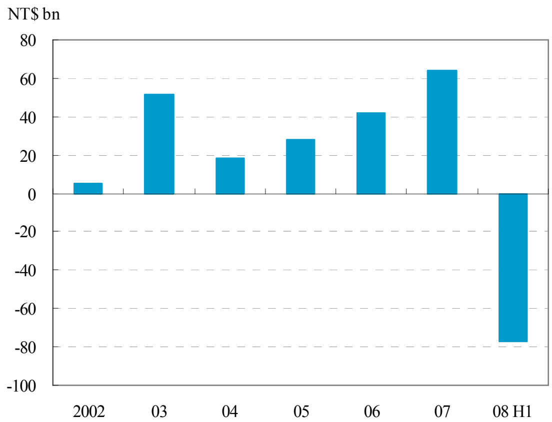
Securities investments and loans constituted the two main uses of funds by life insurers at the end of June 2008, with 37% of funds invested in domestic securities, 26% in foreign securities, and only 13% in loans. As to sources of funds, various policy reserves constituted 82%, while net worth accounted for 3% of funds (Chart 4.29). Affected by the deteriorating foreign investment environment and an optimistic perspective on the development of the cross-strait relationship, investment in domestic securities registered a marked increase of NT$186.8 billion, or 5.89%, from the end of 2007, whereas that in foreign securities only increased slightly by NT$18.2 billion, or 0.78%. Other assets and liabilities also continued to account for a growing share of insurer balance sheets due to the rapid growth of insurance products held in segregated custody accounts.

Chart 4.29 Sources and uses of funds in life insurance companies



Note: Figures are as of end-June 2008.
Source: FSC.

Chart 4.30 Pre-tax net income of life insurance companies



Source: FSC.

Poor operating performance in the first half of 2008

Life insurers as a whole registered a considerable loss of NT$77 billion in the first half of 2008 (Chart 4.30), posting a substantial year-on-year decrease of NT$126.9 billion, or 254.21%, in net income before tax. This was mainly led by sizable foreign exchange losses on the positions of foreign investments due to the appreciation of the NT dollar, as well as the enormous loss recognition of investments in US subprime mortgage-related products. Average ROE and ROA also turned negative, registering -43.53% and -1.73%, respectively (Chart 4.31), indicating that overall operating performance was poor. The foreign exchange losses on the positions of foreign investment were expected to shrink significantly as the NT dollar exchange rate has depreciated gradually since the second half of 2008, reaching the level seen at the end of 2007. Nevertheless, average return on investment was only 3.24% in the first half of 2008, lower than the 3.78% registered in 2007, reflecting the deterioration in the negative interest rate spread. Moreover, the deepening global financial crisis and falling stock prices since September 2008 may continue to erode future profitability.

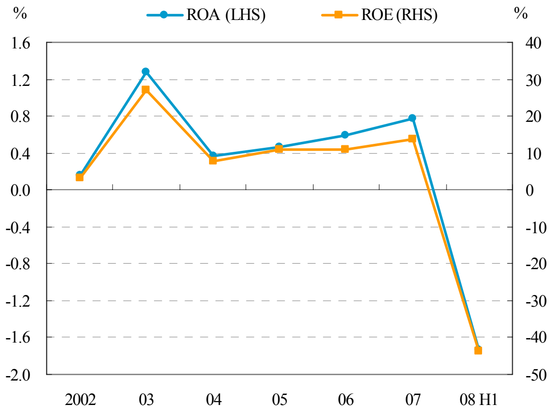
Average RBC ratio decreased considerably

Affected by the huge losses in the first half of 2008, the average RBC ratio[47] for life insurers decreased considerably from 263.29% at the end of 2007 to 162.37% (below the statutory minimum standard of 200%) at the end of June 2008. There were seven companies with a ratio of over 300% and eleven under the statutory minimum (Chart 4.32). The total assets of these latter firms accounted for 33.55% of the total assets of all life insurers, and some of these companies faced the pressure of capital increase.[48]

Credit ratings for the top three life insurers remained at twAA or AA (twn) above

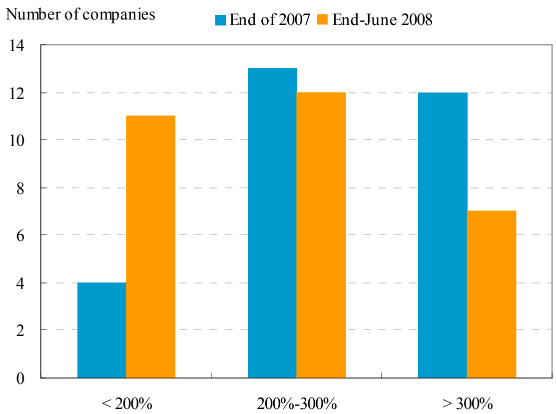
Of Taiwan's twenty-three domestic life insurers, only twelve[49] are rated by credit rating agencies. Among the top three insurers, Cathay Life and Shin Kong Life were rated at twAAA and twAA, respectively, signifying an extremely strong or strong ability to meet their financial commitments, whereas Nan Shan Life was downgraded from AAA(twn)to AA(twn)[50] amid the unfavorable impact stemming from the financial crisis in its parent company, the AIG Group. In the meantime, three insurers were listed on CreditWatch

Chart 4.31 ROE & ROA of life insurance companies



Note: ROA = net income before tax / average assets.
ROE = net income before tax / average equity.
Source: FSC.

Chart 4.32 RBC ratio of life insurance companies



Source: FSC.

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47 Risk-Based Capital (RBC) ratio for life insurers = regulatory capital/risk-based capital. Under Article 143-4 of the Insurance Act, this ratio must be at least 200%.

48 In view of the global impact of the financial crisis and to maintain the operating function of RBC and the stability of the domestic insurance market, the FSC amended the capital system of the insurance industry in October and November 2008, respectively. The main content included: (1) additional issuance of bonds with a capital nature can be included in equity capital, and a relaxation of bonds with a capital nature and preferred stock of a liability type may be included in the limit of equity capital; (2) relaxation of the funds invested in bonds with a capital nature or preferred stock of a liability type of the insurance industry that need not be deducted from equity capital before the end of 2009; (3) the special reserve of major events may be included in equity capital; and (4) equity capital can recognize an unrealized gain or loss of 20% for stock and equity-related funds of domestic or foreign investment. The above amendments apply only until the end of 2009.

49 Life insurance companies rated by credit rating agencies include Taiwan Life, Cathay Life, China Life, Nan Shan Life, Shin Kong Life, Fubon Life, Allianz Taiwan Life, Prudential Life, Aegon Life, Metlife Taiwan, Antai Life, and First-Aviva Life.

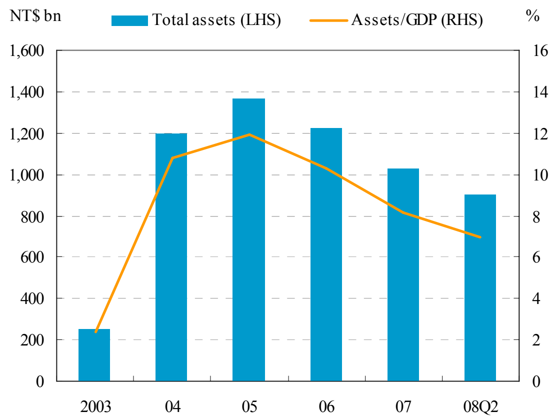
50 Ratings prefixed with "tw" are from the Taiwan Ratings Corporation, while ratings suffixed with "(twn)" are from Fitch Ratings.

negative.[51] This was mainly led by the fact that Taiwan Life faced the suspension of its scheduled capital increase, while Antai Life and Fubon Life both faced uncertainty in the consolidated capital levels and integrated risks of their respective conglomerates after Antai Life was acquired by Fubon Life. The rating outlook for the other six domestic life insurers was either stable or positive.

4.2.2 Bills finance companies

The total assets of bills finance companies continued to contract in the first half of 2008. At the same time, profitability declined with asset quality remaining satisfactory and average capital adequacy ratios in excess of regulatory minimum requirements. Affected by the global financial crisis, bills finance companies were vulnerable to the risk of deterioration in the quality of credit extensions secured by stocks as Taiwan stock prices declined sharply after September 2008. It also led to some of companies with greater exposure to liquidity risk. Besides, the bills issuance market was likely to shrink, having a negative influence on expanding bills business.

Chart 4.33 Total assets of bills finance companies

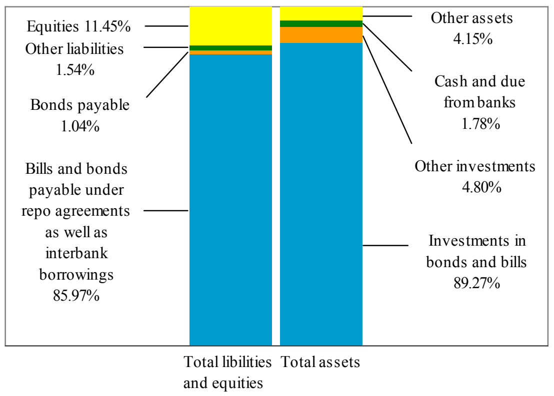


Note: Total assets are end-of-period figures.
Sources: CBC and DGBAS.

Assets continued to contract

The total assets of bills finance companies continued to decline and stood at NT$900.6 billion, equal to 7.11% of annual GDP, as of the end of June 2008 and decreased by 12.60% year on year (Chart 4.33), mainly driven by two factors. The first factor was that two bills finance companies (Chinaturst Bills Finance and Hua Nan Bills Finance) were merged respectively by their affiliated banks, and the second factor was that some bills finance companies' assets shrank. The three largest bills finance companies (Mega Bills

Chart 4.34 Asset/liability structure of bills finance companies



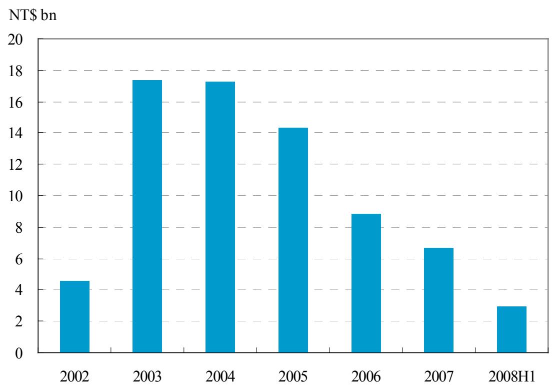
Note: Figures are end-June 2008.
Source: FSC.

[51] CreditWatch highlights the potential direction of a short- or long-term rating. The "positive" designation means that a rating may be raised; "negative" means a rating may be lowered; and "developing" means that a rating may be raised, lowered, or affirmed.

Finance, International Bills Finance, and China Bills Finance) commanded market shares by assets of 26.88%, 23.39%, and 18.72%, respectively, for a combined market share of 68.99%. No other firm had a market share as high as 10%.

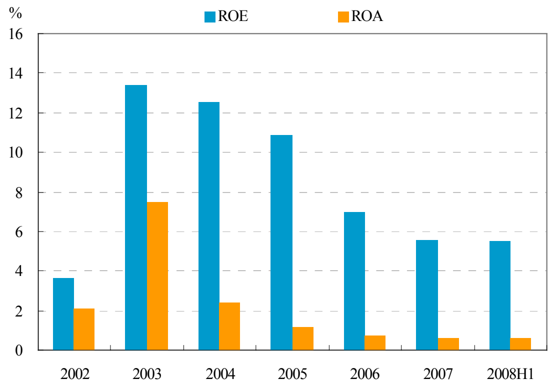
As for asset / liability structure, investments in bonds and bills accounted for 89.27% of total assets, an increase of 1.44% compared to the end of 2007, indicating a more considerable concentration in the uses of funds, while bills and bonds payable under repo agreements as well as interbank borrowings accounted for 85.97% of liabilities, a slight increase of 0.63 percentage points compared to the end of 2007, indicating that the sources of funds were mostly short-term (Chart 4.34).

Chart 4.35 Pre-tax net income of bills finance companies



Source: CBC.

Chart 4.36 ROE & ROA of bills finance companies



Notes: 1. ROA = net income before tax / average assets.
ROE = net income before tax / average equity.
2. Ratios for 2008 H1 are annualized.
Source: CBC.

Overall profitability continued to deteriorate

Bills finance companies posted net income before tax of NT$2.93 billion in the first half of 2008, a decrease of NT$0.44 billion, or 12.96%,[52] year on year (Chart 4.35), showing that profitability continued to deteriorate. At the same time, however, ROE and ROA changed little, reaching 5.50% and 0.61%, respectively, due to the obvious reduction in equity and assets (Chart 4.36).

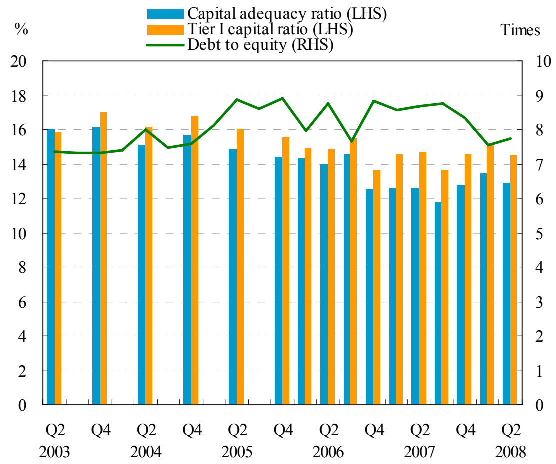
Capital adequacy ratios rose higher than statutory requirements

The average capital adequacy ratio of bills finance companies reached 12.88% at the end of June 2008, slightly higher than the figure recorded at the end of the previous year, as all companies had a ratio above 10%, higher than the statutory minimum of 8%. The average

[52] Excluding the factor of two merger cases (Chinatrust Bills Finance Corp.-Chinatrust Commercial bank and Hua Nan Bills Finance Corp.-Hua Nan commercial bank), bills finance companies posted net income before tax as of the first half of 2008, a further decrease of 17.61% compared with the same period last year.

Tier 1 capital ratio was 14.50%, slightly lower than the figure recorded at the end of the previous year. The average ratio of debt to equity slid to 7.74 times as of the end of June 2008, down from 8.33 times at the end of 2007 (Chart 4.37) as a result of a marked reduction in debt, reflecting improved leverage.

Chart 4.37 Capital adequacy ratio of bills finance companies

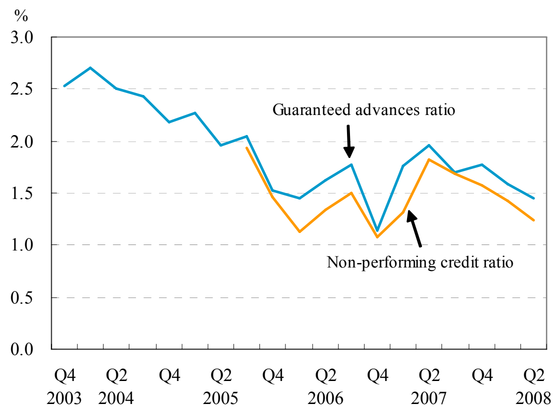


Note: The debt figures before 2003 included securities sold under repo agreements.
Source: CBC.

The risk of stock-secured credit increased

The guaranteed advances ratio and non-performing credit ratio [53] for the guarantee business were down to 1.45% and 1.23%, respectively, at the end of June 2008, lower than the figure recorded at the end of the previous year. Overall, the quality of credit assets at bills finance companies remained satisfactory (Chart 4.38). However, the outstanding amount of stock-secured credit was NT$74.7 billion at the end of 2007, accounting for 19.67% of total credit. With the high level of stock-secured credit and the recent sharp falls in the stock market, bills finance companies might not fully preserve their rights owing to the deep decline in the value of pledges of stocks. The risk of related credit extension could increase.

Chart 4.38 Guaranteed advances ratio of bills finance companies



Notes: 1. Guaranteed advances ratio = overdue guarantee advances / (overdue guarantee advances + guarantees). Non-performing credit ratio = non-performing credit / (non-performing credit + guarantees).
2. The data of non-performing credit ratios are compiled from September 2005 onwards.
Source: CBC.

Liquidity risk of some companies increased

Investments in bonds and bills constituted nearly 90% of the assets of bills finance companies as of the end of June 2008. Bonds, in particular, accounted for about 50% (Chart 4.39). An apparent mismatch in asset-liability maturity persisted, with short-term interbank loans and repos making up over 86% of funding sources. As a result of the global financial crisis,

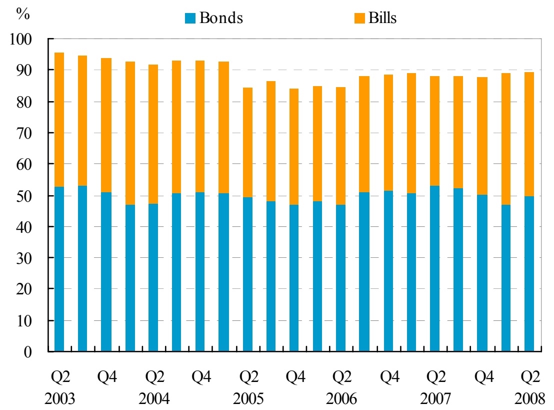
[53] Non-performing credit for guaranteed advances refers to those guaranteed advances that are more than three months overdue.

financial institutions in Taiwan became cautious and conservative in lending to bills finance companies after September 2008. Bills finance companies were exposed to higher liquidity risk as funding from the interbank call-loan market was dramatically reduced.

The shrinking of supply in bills finance market may have a negative effect on future business

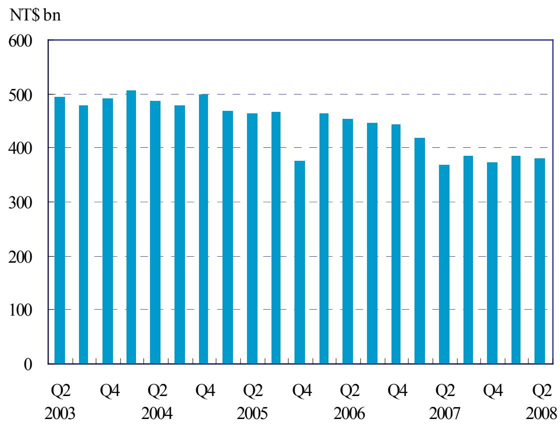
The outstanding balance of commercial paper guaranteed by bills finance companies gradually declined and remained at a low level. This figure was NT$379.5 billion at the end of June 2008, up 1.71% from the end of the previous year (Chart 4.40). With slightly weakened confidence in Taiwan's financial market resulting from the global financial crisis, a number of bills finance companies found it somewhat difficult to obtain financing from the interbank call-loan market. In response to a condition of such tight liquidity, they appeared to reduce the credit lines of their customers or to reluctantly issue new bills as commercial paper guarantees came due. If this situation persists, the supply in bills finance market would be reduced, thereby affecting the future business of bills finance companies.

Chart 4.39 Bond & bill positions as percentage of assets at bills finance companies



Note: End-of-period figures.
Source: CBC.

Chart 4.40 Outstanding of CP guarantees



Note: End-of-period figures.
Source: CBC.

5. Financial infrastructure

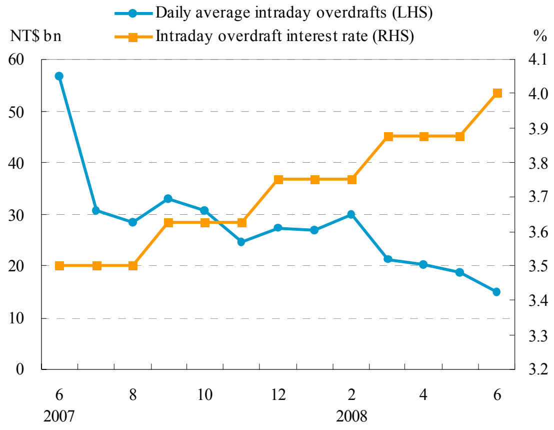
5.1 Measures to increase efficiency of payment and settlement systems

CBC Interbank Funds-Transfer System

To ensure the sound operation of the CBC Interbank Funds-Transfer System (CIFS), the CBC adopted the Real-Time Gross Settlement (RTGS) mechanism in September 2002. Meanwhile, the CBC also provides intraday overdraft facilities to prevent financial institutions from temporary intraday liquidity shortage and thus to resolve gridlock[54] in the RTGS system.

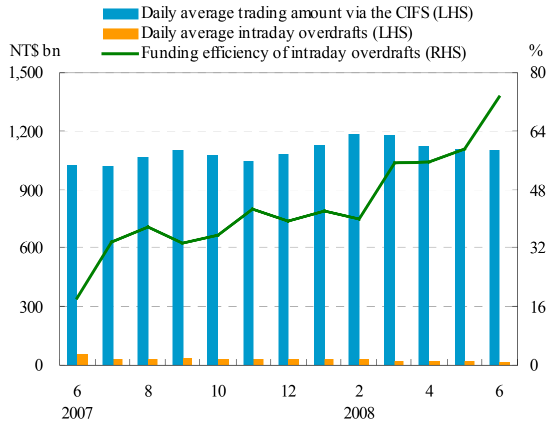
To avoid excessive use of intraday overdraft facilities and, in turn, prompt financial institutions to control intraday overdraft facilities and proactively manage daily funding, the CBC charges interests on intraday overdrafts.[55] The intraday overdraft usage of financial institutions gradually decreased with the rising interest rate, reflecting that the interest-charging policy has functioned as intended. The daily average overdrafts decreased from NT$56.7 billion in June 2007 to NT$15 billion in June 2008 (Chart 5.1). However, the decrease in intraday overdraft has not influenced the processing of transactions by the CIFS. The daily average trading amount via the CIFS increased from NT$1.03 trillion in June 2007 to around NT$1.1 trillion in June 2008. The ratio of daily average trading amount via the CIFS to daily average intraday overdraft amount indicates that the funding efficiency arising from intraday overdrafts has significantly increased (Chart 5.2).

Chart 5.1 Intraday overdraft amount and interest rate in the CIFS



Source: CBC.

Chart 5.2 Transactions and intraday overdraft via the CIFS



Source: CBC.

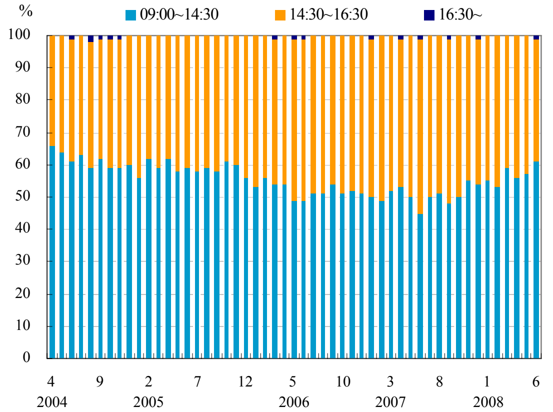
54 The RTGS processes payments in real time. When a financial institution fails to send funds in time (but funds will be sent before the book is closed) for its payable transaction, the transaction will be rejected or queued and, in turn, affect the receiving bank. If the delayed payment brings about insufficient funds in the receiving bank's account, the payable transaction of the receiving bank will also be put off. The chain reaction, resulting from deadlocks on funds between the sender and the receiver, is called "gridlock."

55 The intraday overdraft interest is assessed at the CBC's rate on accommodations with collateral, on the amount of overdraft per minute.

Bills Central Depository and Clearing System

Aiming at the immobilization of physical bills, Taiwan launched the Bills Central Depository and Clearing System (BCDC) in April 2004, replacing physical delivery of bills by way of book-entry. Also, in order to effectively eliminate settlement risk, a delivery versus payment (DVP) mechanism was implemented by linking up the BCDC and the CIFS.

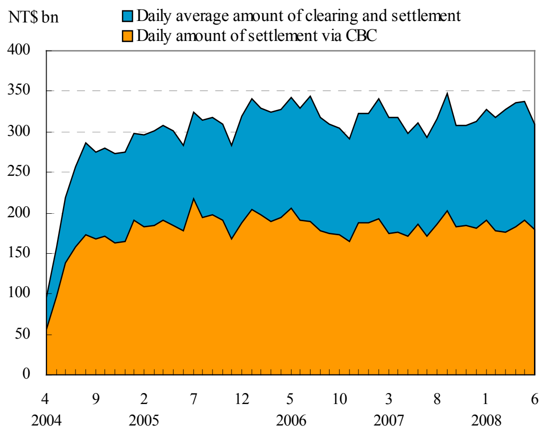
Chart 5.3 Distribution of bills settlements completion time



Source: Taiwan Depository & Clearing Corporation.

Before implementation of the BCDC, most transactions in the secondary bills market were settled after 3:30 p.m. since market participants formerly procured funding after noon. After the adoption of the BCDC, thanks to the linkage of the BCDC and the CIFS that allows transactions to be settled on a DVP basis, the share of settlements completed before 2:30 p.m. has reached 56% (Chart 5.3), and thus the efficiency of bills settlements has effectively improved.

Chart 5.4 Transactions via the BCDC



Source: Taiwan Depository & Clearing Corporation.

The BCDC also contains the bundling module,[56] aiming to ease funding pressure on bills finance companies. The daily clearing and settlement of bills via the BCDC averaged around NT$320.1 billion in 2007, among which NT$183.8 billion was settled by the CBC. Since daily funds settled by the CBC only accounted for 57% of the total trading amount (Chart 5.4), the BCDC did have the benefit of conserving liquidity.

[56] The bundling module allows bilateral net settlement positions settled between every bilateral combination (i.e. bills finance company vs. investor, bills finance company vs. clearing bank, and bills finance company vs. bills finance company).

5.2 A series of policy tools for financial stabilization and economic vitalization launched

The subprime debacle in the US triggered global financial crisis and the risk of economic slowdown, which spilled over into Taiwan's domestic financial system and, in turn, macroeconomic activity. In order to stabilize the local financial system and boost the economy, the government actively implemented the Economic Vitalization Package (detailed in Box 2), which is comprised of numerous measures to secure financial stability and invigorate the economy. Among these measures, the policy tools related to financial stabilization have exerted positive effects that led the financial system to gradually recover from instability, whereas it takes time for the desired outcomes promoted through the tools targeting economic stimulation to emerge. The major measures for stabilizing the financial system are listed as follows:

5.2.1 Implementation of eased monetary policy

Lowering policy rates and deposit reserve ratios

For the sake of lifting domestic demand and ensuring sufficient market liquidity, the CBC loosened its monetary policy stance and successively lowered its policy rates (i.e. discount rate, accommodation rate with collateral, and accommodation rate without collateral) four times from September to November 2008, with a range totaling 0.875 percentage points. In the same period of time, the reserve ratios for banks' demand deposits and time deposits were also reduced by 1.25 percentage points and 0.75 percentage points respectively, releasing a fund of approximately NT$200 billion into the banking system. Domestic banks are also allowed to pledge certificates of deposit (CDs) issued by the CBC or re-deposits with the CBC as collaterals to get accommodations from the CBC whenever they are in need of funding, or to early terminate the deposits/re-deposits.

Carrying out expansion of repo facility operations

Referring to foreign central banks' responses to market liquidity issues, the CBC passed a resolution to expand repo facility operations at the Board of Directors' Meeting on 25 September 2008 with a view to sufficiently providing financial institutions with the funds they require. Major contents of the mechanism include:

- Participating counterparties in repo facility operations are broadened to include all securities firms and insurance companies.

- The term of facility is extended to within 180 days from 30 days.
- CBC-issued CDs are recognized as an eligible operational instrument.
- Financial institutions can submit the application for repo facility operations based on their funding demand in addition to participating in the operations pursuant to the CBC's announcement.

5.2.2 Adoption of interim blanket deposit guarantee

With an aim to stabilize the local financial system, anchor depositors' confidence, and enhance the soundness of financial institutions, the government announced a measure to provide a blanket guarantee of deposits on 7 October 2008, which is effective from 1 November 2008 until the end of 2009. Under this measure, deposits with financial institutions participating in the deposit insurance scheme (such as banks and community financial institutions) are fully covered. The scope of coverage has been broadened to involve foreign-currency deposits, interbank deposits, as well as interbank call loans, which were not insured previously. The Financial Supervisory Commission (FSC), along with the Ministry of Finance (MOF) and the CBC, jointly issued the Measures to Support Blanket Guarantee of All Bank Deposits, which set forth, among others, relevant legal foundation, applicable counterparties, insurance coverage, and special premium charge. In step with the package approach, the FSC will strengthen the supervision of the financial conditions and business operations of financial institutions. The institutions shall be punished seriously if their operations violate relevant laws and regulations during the implementation. Those which do not comply with supervisory authorities' improving requirements within a specific period of time will be duly disposed of in accordance with the Banking Act and relevant laws.

5.2.3 Initiation of the approaches to stabilizing stock markets

The local stock market dropped under the influence of the global stock calamity. To help reverse the market's slump, the government launched multiple approaches, which mainly consist of:

- Halving the securities transaction tax;
- Temporarily resuming the ban on short-selling 150 listed shares below the previous

day's closing price, suspending from short-selling for borrowed and margin stocks, and narrowing the sagging range of share prices;[57]

- Encouraging TWSE- or OTC-listed companies to buy back their shares as treasury stocks, and their directors to purchase their company's shares; and
- Urging state-owned financial institutions and the four government-managed funds (i.e. the Civil Service Pension Fund, the Labor Pension Fund, the Labor Insurance Fund, and the Postal Savings Fund) to purchase under-valued low-priced stocks of well performing companies.

5.2.4 Aiding enterprises and individuals to get loans from banks

With a view to facilitating enterprises and individuals to obtain loans, various measures have been undertaken as follows:

- The Ministry of the Interior carried out the Allocating an Additional NT$200 Billion for Preferential Home-Purchase Loans Program and raised individual borrowers' credit line and increased the subsidy of interest payments.
- The MOF, CBC, FSC, the Ministry of Economic Affairs (MOEA), and the Council for Economic Planning and Development (CEPD) jointly organized a Task Force on Facilitating Enterprises to Obtain Operational Funds, which helps solve financing problems for SMEs and large enterprises.
- Borrowers who are granted preferential housing loans promoted by the Executive Yuan (Cabinet) can apply for the extension of the terms of their loans or for the deferred payment on their principals. The Bankers' Association also published a guideline for banks coping with the postponed repayment of housing loans by involuntarily unemployed workers.
- The SMEG adopted numerous approaches that include but are not limited to increasing the percentage and line of guarantees in order to share banks' credit risk. The government will additionally appropriate at least NT$6 billion to replenish the credit guarantee fund in 2009.

[57] Please refer to Box 2 with regard to the period of implementing the approaches related to the stock market.

Box 2
Economic Vitalization Package in Taiwan

Impacted by the global financial crisis, the growth of the local economy slowed perceptibly. In order to revive the domestic economy and solidify the foundation of long-term economic development, the government launched the Economic Vitalization Package in September 2008. This package is drawn up from three basic policy directions on “stimulating consumption,” “vitalizing investment and accelerating construction,” and “stabilizing financial markets and promoting exports.” The government is pushing forward ten concrete policy measures which comprise: (1) looking after the disadvantaged; (2) encouraging consumption; (3) promoting employment; (4) offering preferential housing loans; (5) strengthening public construction; (6) promoting private investment; (7) stabilizing financial and stock markets; (8) enhancing financing to SMEs; (9) expanding exports; and (10) pursuing tax reform. It is forecasted that the package can spur domestic investment and consumption totaling at least NT$1 trillion. Moreover, focusing on the policy of “stimulating consumption,” in November 2008, the government further put forth a new measure to distribute consumer vouchers to reverse the flagging economy and increase domestic demand. These measures have been implemented successively, key items of which are summarized as follows:

1. Stimulating consumption

1.1 Looking after the disadvantaged

- Implementing subsidy measures to continue caring for the disadvantaged.

1.2 Encouraging consumption

- Subsidizing the purchase of energy-saving lights and home appliances;
- Relaxing restrictions on the use of National Travel Cards;
- Promoting the use of energy-saving LED lights;
- Subsidizing the purchase of electric-powered and low-polluting vehicles, and the replacement of old vehicles, by members of the general public; and
- Expecting to distribute consumer vouchers in January 2009.

1.3 Promoting employment

- Relaxing the Regulations for Subsidizing and Awarding Employers for Hiring

Unemployed Workers;

- Helping young people obtain employment;
- Conducting temporary special projects for raising living quality or promoting social welfare;
- Encouraging enterprises to invest in staff training; and
- Providing temporary work opportunities to increase employment.

2. Vitalizing investment and accelerating construction

2.1 Providing preferential housing loans

- Allocating an additional NT$200 billion for the provision of preferential home-purchase loans;
- Helping young families buy or change houses because of having a child or children with housing loans of zero interest rate for the first two years;
- Continuing the provision of interest subsidies for home-purchase and home-refurbishment loans; and
- Providing rent subsidies for those without the means to purchase a home.

2.2 Strengthening public construction

- Actively encouraging private participation in public construction and urban renewal;
- Acting with the utmost urgency to promote foreign and mainland Chinese investment in public construction projects in Taiwan;
- Specially executing and accelerating the implementation of an NT$240 billion budget for large-scale public construction projects; and
- Speeding up the execution of the Program for Strengthening Local Construction to Expand Domestic Demand.

2.3 Promoting private investment

- Implementing a five-year tax-exemption for new or increased investment before year-end 2009;
- Promoting a program for the preferential sale of land in industrial parks;

- Raising tax deduction rates for enterprises purchasing and installing energy-saving equipment or investing in new and clean energy technology;
- Increasing the funding, raising the upper limits, and extending the duration of preferential loans to encourage the upgrading of the tourism industry;
- Actively guiding the implementation of major private investment projects amounting to NT$4 trillion within four years;
- Encouraging insurance companies to participate in the national major construction projects;
- Rationally releasing government-owned land in order to reduce investors' land use costs; implementing the four years rent-free and six years at half-rent scheme for leasing out government-owned land;
- Expanding efforts to attract international investors, and planning the 2008 Taiwan Business Alliance Conference; and
- Pushing for the amendment to the Statute Governing the Establishment and Management of Free Trade Zones, setting up a single window, and strengthening inducements for foreign investors.

3. Stabilizing financial markets and promoting exports

3.1 Stabilizing financial and stock markets

- Halving the securities transaction tax for half a year with the draft amendment to the Securities Transaction Tax Act to be forwarded to the Legislative Yuan for deliberation;
- Coordinating the funding support needed by banks to continue conducting corporate financing operations and avoid tightening the supply of credit to companies that are operating normally but facing temporary difficulty;
- Organizing a Task Force on Facilitating Enterprises to Obtain Operational Funds to help those that are assessed to be viable to apply for participation in the disciplinary debt negotiation mechanism coordinated by the Bankers' Association;
- Giving the green light to Qualified Domestic Institutional Investors (QDIIs) from mainland China wishing to invest in Taiwanese securities and futures; and
- Continuing to implement the following measures for revitalizing the stock market:

   - Prohibiting short-selling below the closing price on the previous trading day (from 22 September to 3 October 2008) of 150 listed shares, suspending short-selling for borrowed and margin stocks (from 1 October to 31 December 2008), and narrowing the range of price fall to 3.5% (from 13 October to 24 October 2008), in order to mitigate stock market fluctuations;
   - Organizing numerous fora for policy interpretation to propagate the fact that Taiwan's economic fundamentals remain sound;
   - Encouraging investment trust companies to raise domestic stock funds for investment in the stock market, company directors to purchase their companies' stocks, and well performing companies to buy back their stocks as treasury stocks;
   - Encouraging banks, securities firms, and insurance companies to make good use of their funds by investing in good quality stocks that have fallen excessively in price;
   - Revising the threshold at which financial holding companies may buy back their shares to hold as treasury stocks from a minimum capital adequacy ratio of 110% to 105%; and
   - Encouraging state-owned institutions to conduct their own evaluation and purchase of low-priced stocks of well performing companies, and urging the four government-managed funds to continuously exert the function of stabilizing the stock market, in order to reinforce investor confidence.
- Enforcing a blanket deposit guarantee measure until the end of 2009;
- Implementing various monetary easing measures to sufficiently inject liquidity to the market; and
- Providing funding support to commercial banks whose home-purchase lending is facing a shortage of funds or bordering on the upper limit prescribed by Article 72-2 of the Banking Act through simplifying the procedure for issuance of financial debentures, expediting the approval of applications for securitized housing loan products (mortgage bonds), and coordinating with Chunghwa Post Co. to provide postal savings deposits to supplement banks' deposit base for the provision of home-purchase loans.

3.2 Enhancing financing to SMEs

- Implementing the Program for Strengthening Domestic Bank Financing of SMEs, and increasing the loan percentage and amount of the guarantees provided by the SMEG; and
- Carrying out the Micro-enterprise Startup Loan Program and the "Phoenix" Program of Small Business Startup Loans for Women, along with the provision of comprehensive business startup consultation and guidance, to help women and middle-aged and older people set up micro-businesses.

3.3 Expanding exports

- Executing continuously the plan for expanding overseas export markets, setting targets for growth of at least 10% in the second half of 2008 and 14% in 2008; and
- Diversifying export markets and especially pursuing expansion in emerging markets, and planning to accomplish the Global Market Expansion Plan.

3.4 Pursuing tax reform

- Implementing the income tax credit for middle- and low-income families, and raising the exemption of individual income tax and other deductions; and
- Lowering the estate tax and gift tax rate to 10% and the income tax for general profit-seeking enterprises.

5.3 Taiwan's amendment to fair value accounting standards based on recent international trends

Fair value accounting standards (Box 3) reflect current market conditions, enhance comparability of values of financial instruments purchased at anytime, and provide transparent and important information to financial statement users. However, recent market illiquidity due to the subprime mortgage crisis forced financial instruments to be measured by models instead of market prices, in turn increasing the uncertainty of fair value measurements. This not only raised concerns about vague classifications of the fair value hierarchy[58] of financial instruments stipulated by the US accounting standards, but also caused the stock prices of many corporations to slump when they disclosed large amounts of unexpected

[58] Refer to "The Definition of Fair Value" in Box 3.

losses according to fair value accounting standards. As a result, market fluctuations intensified and global investors started to panic. This is the reason that the reliability of fair value accounting and its impacts on financial statements were criticized. As required by the US$700 billion Bailout Act passed by the US Congress in October 2008, the Securities and Exchange Commission should submit study reports on fair value accounting standards[59] at the beginning of 2009, in line with the Emergency Economic Stabilization Act. The International Accounting Standard Board was also concerned with the drastic changes in the international financial conditions recently and amended International Accounting Standards No. 39 (IAS 39) and International Financial Report Standard No.7 (IFRS 7) on 13 October 2009, which relaxed fair value accounting reclassification limitations.[60]

Since Taiwan's Statement of Financial Accounting Standards No. 34, Financial Instruments: Recognition and Measurement (Taiwan's SFAS 34), was adopted with reference to IAS 39, and local corporations were damaged by the unfavorable international economic situation, the Accounting Research and Development Foundation in Taiwan, referring to the newest amendments to IAS 39 and IFRS 7, published the second amendment to Taiwan's SFAS 34 in October 2008. The second amendment states that, in limited circumstances, trading purpose non-derivative financial assets may be reclassified into other categories, and available-for-sale financial assets may be reclassified into the loans and receivables category. It also allowed retrospective application of the amendment starting from 1 July 2008. Besides, the amendment required corporations to disclose the following information in the current and subsequent periods when reclassification was made: (1) the book values and fair values of all reclassified assets; (2) the changes in fair value recognized in profits or losses, or stockholders' equity adjustments in each period if the financial asset was not reclassified; and (3) the incomes and expenses recognized as profits and losses after reclassifications.

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[59] Key issues addressed by the report include: (1) the effects of fair value accounting standards on a financial institution's balance sheet; (2) the impacts of such accounting practice on bank failures in 2008; (3) the impacts of such accounting standards on the quality of financial information available to investors; (4) the process of developing accounting standards used by the FASB; (5) the advisability and feasibility of modifications to fair value accounting standards; and (6) alternatives to those provided in SFAS 157.

[60] Originally, according to IAS 39, reclassifications of financial assets or liabilities classified as the fair value through profit or loss category upon initial recognition were not permitted in subsequent periods. The International Accounting Standard Board approved amendments to the standards of reclassifications on 15 October 2008. The changes included: (1) financial derivatives can not be reclassified into other categories; (2) if upon initial recognition, financial instruments have been designated as the fair value through profit or loss category, they can not be reclassified into other categories; (3) if a financial asset, which is not within the previously mentioned scope, is no longer held for the purpose of selling in the near term, and is subject to meeting specified criteria, it is permitted to be reclassified into other categories.

Box 3
Introduction to fair value accounting standards

1. The definition of fair value

According to International Accounting Standards No. 32 (IAS 32) and Taiwan's Statement of Financial Accounting Standards No. 36（Taiwan's SFAS 36）, "Financial Instruments: Disclosure and Presentation," fair value represents the amount for which an asset could be exchanged and a liability could be settled in an arm's-length, orderly transaction between knowledgeable and willing parties. IAS 39 and Taiwan's SFAS 34 "Financial Instruments: Recognition and Measurement" have further mandated that quoted market prices in an active market are strong evidence of fair values. If the markets for financial instruments are not active, however, valuation methodologies may be employed. The acceptable methodologies include the prices generated by recent market transactions (or referring to the current fair value of another instrument that is substantially the same), discounted cash flow analysis, and option pricing models.

Moreover, in order to improve the consistency and comparability of fair value measurements and disclosures, the US released SFAS 157 in 2006, which clearly specified that fair value is, at measurement date, the price to be received or paid in an orderly transaction between market participants when selling the asset or transferring the liability. Based on the prioritization of inputs used to measure fair value, the statement established a hierarchy of fair value methodologies, which comprised three levels:

- Level 1: financial instruments with observable, quoted prices in active markets should be measured at the quoted prices. This level carries the best quality of fair value information.
- Level 2: those financial instruments with observable inputs for identical or similar assets or liabilities in markets (e.g. infrequently traded corporate bonds or government bonds that have no quoted prices or trade infrequently, but can be referred to market values of similar securities) should measure their fair values by introducing the observable inputs into the models.
- Level 3: for financial instruments with unobservable inputs for the assets or liabilities (e.g. asset-backed securities), fair values can be measured based on the assumptions, made by the reporting entity, with the best information available (which may include the reporting entity's own data) and are estimated by mathematical valuation models.

2. Pros and cons of fair value accounting

pros	***cons***
Fair value is more predictable A fair value of financial instruments represents market expectations and assessments as to the amount, time, and uncertainties of such instruments' future cash flows. It takes elements that affect market values, such as interest rates, exchange rates, credit, and demand and supply into consideration. Hence it is more predictable. ***Increasing comparability among financial instruments with similar economic characteristics*** Fair value information normally reflects judgments on the current value of expected future cash flows for related financial instruments in the financial market, which allows comparability among financial instruments with similar economic characteristics. ***Consistency with approaches of financial risk management and beneficial to performance evaluations*** Fair values reflect the latest values of financial instruments. This accounting	***Reliability of fair value measurements is relatively low*** Financial instruments without market prices, due to an inactive market or exhausted liquidity, should be valued by models. However, the high uncertainty on the parameters, hypothesis and estimation deviations introduced by valuation models, and the lack of definite measurement indicators for evaluation calibrations have raised concerns about the reliability of fair value measurements. ***Lack of comparability of financial statements among peers*** The classifications of financial instruments in fair value accounting standards are based on corporate intentions and capabilities. As a result, various corporations who hold similar financial instruments will have inconsistent bases for subsequent measurements owing to the classification differences. This could undermine the comparability of financial statements among peers.

approach helps to set and control stop-loss limits for financial risk managements, and evaluate the corporate internal performance. It is also beneficial for external financial statement users to objectively evaluate the performance of corporations.

Financial reports are presented more fairly

Financial derivatives are generally off balance sheet transactions. As fair value accounting standards require corporations to recognize effects of changes in fair value in order to reflect off balance sheet risks on time, the financial reports can be presented more fairly.

Increasing the volatility in the financial statements and enhancing effects of procyclicality

The volatility in the financial statements with fair value measurements will be increased when unrealized profits or losses are instantly recognized on income statements or balance sheets. Also, if corporations distribute surplus to shareholders based on the unrealized gains from assets revaluations or from liability reductions, their financial structures will be impaired. Moreover, fair value accounting is mainly applicable to the measurement of financial assets, while most financial liabilities are recognized at amortized costs. The inconsistent accounting approaches between financial assets and liabilities will lead to a procyclical effect. For example, during economic recessions, fair value measurements will enable a drastic reduction of corporate values and even trigger the contagion effect.

Measurements of fair value can be manipulated easily

As market values of financial instruments are easily manipulated, fair value may fail to reflect the real values. This could erode the quality of financial statement information.