

IV. Financial sectors

4.1 Financial markets

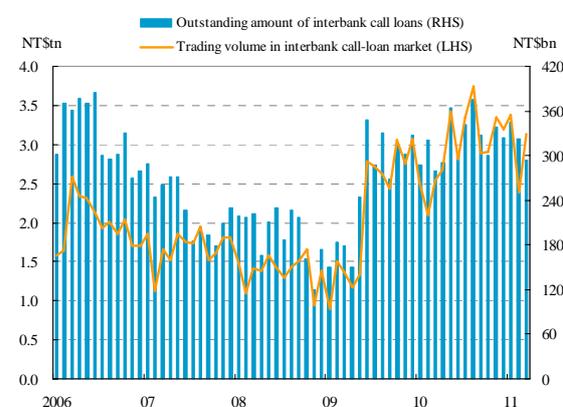
The trading volume of interbank call loans increased materially in 2010; in addition, trading volumes trended upwards in the bills and bond markets, while yield spreads between long-term and short-term rates varied between 59 and 105 basis points. As for the domestic stock market, stock indices reached record highs post the global financial crisis but then fell back moderately, and the volatility decreased. In the foreign exchange market, the NT dollar exchange rate appreciated obviously against the US dollar in the second half of 2010, but remained relatively stable compared to the exchange rates of other major currencies; moreover, the trading volume increased markedly.

4.1.1 Money and bond markets

Interbank call loan trading volume posted a significant increase, and trading volumes in bills and bond markets also rebounded

In 2010, the average monthly trading volume of interbank call loans increased by 38.01% year on year and the average daily outstanding amount also rose by 24.86% over the previous year. The reason was primarily because a large proportion of the funds remitted into Taiwan by foreign portfolio investors were channeled into interbank call loans by custodian banks, coupled with the ample liquidity provided by domestic banks. In 2011 Q1, the trading volume of interbank call loans remained at the same level as in 2010 Q4, except a remarkable decrease in February owing to the Chinese Lunar New Year holidays. However, the average outstanding amount of interbank call loans slightly descended on a monthly basis (Chart 4.1).

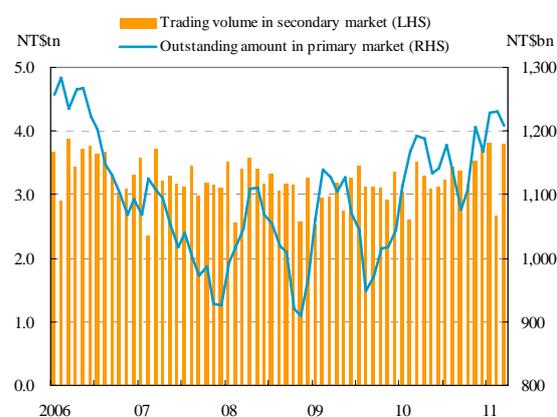
Chart 4.1 Interbank call-loan market



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

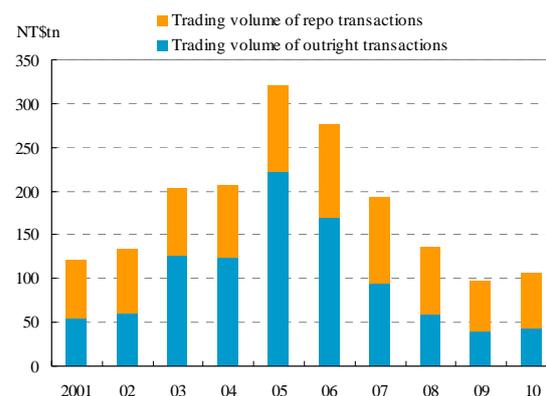
In 2010, there was an expansion in the trading volume and the outstanding amount in the primary and secondary bills markets. In the primary bills market, the outstanding amount of bills issuance continued to rise in 2010 Q1 and became volatile from Q2 onwards due to notable changes in the issuance amount of treasury bills, commercial papers, and certificates of deposit. The outstanding amount of bills issuance at the end of 2010 rose by 11.93% year on year. Broken down by instruments, the outstanding issuance amount of certificates of deposit at the end of 2010 increased by 36.83%, while that of commercial paper rose by 5.34%. Moreover, at the end of March 2011, the outstanding amount of bills issuance remained high. As for the secondary bills market, its trading volume,⁵² affected by an increase in the issuance of commercial paper,⁵³ rose by 6.53% year on year in 2010. In 2011 Q1, the trading volume soared, except for a decline in February, affected by the Chinese Lunar New Year holidays (Chart 4.2).

Chart 4.2 Primary and secondary bills markets



Note: Excludes asset-backed commercial paper (ABCP).
Sources: CBC and FSC.

Chart 4.3 Outright and repo transactions in the bond market



Source: CBC.

Regardless of the sluggish bond market in 2009, the trading volume trended upwards and rose by 8.99% year on year in 2010. Of the components, outright transactions and repo transactions increased by 8.24% and 9.50%, respectively (Chart 4.3). The monthly turnover ratio of outright transactions rebounded from a low in March 2010, despite ample liquidity and less bonds being traded in the market. From September onwards, owing to the lack of trading willingness of bond traders and the expectation of rising market rates, outright transactions dropped significantly and their monthly turnover ratio fell to a trough of 16.60% in December 2010, a five-year low. In 2011 Q1, the outright turnover ratio in the bond market

⁵² Source: the FSC.

⁵³ The trading value of commercial paper was more than 80% of the trading volume in the secondary bills market. The effect of its change on the total trading volume was huge.

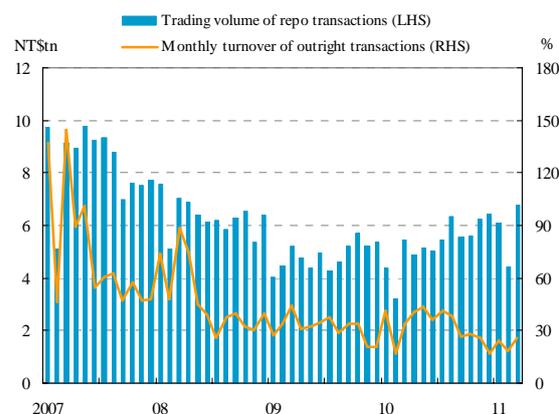
remained at a low level (Chart 4.4).

As bond markets have long been an important source of capital for government and corporations to raise medium- and long-term funds, the soundness of bond markets are closely related to financial stability. Nevertheless, the local bond market has been facing a bottleneck in its development during recent years. In response, the MOF, the CBC, and the bond market supervision authorities⁵⁴ jointly implemented measures relating to bond issuance, trading and settlement. However, as many financial institutions held large amounts of government bonds and were reluctant to trade them in the market, it is expected that the trading volume of outright transactions will remain low in 2011 (Box 5).

Yield spreads ranged between 59 and 105 basis points

Short-term and long-term market interest rates remained at a similar level and yield spreads fluctuated within a narrow range in the first half of 2010. In the second half of 2010, following the CBC's policy rate rises since June, short-term market rates climbed up. On the other hand, government bond yields declined from July onward, due to the falling bond yields in the US and Japan caused by the expectation of another round of quantitative easing by major central banks and the insufficient government bond supply at home to meet the strong demand from domestic investment institutions. In November, as a result of soaring yields on US government bonds and tightening rules on foreign investment in Taiwan's government bonds, together with the lack of trading willingness of bond traders and higher than expected government bond issuance in 2011, government bond yields rose again. In general, yield spreads fluctuated

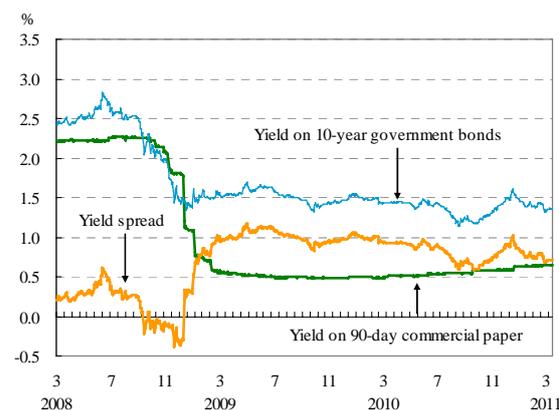
Chart 4.4 Bond transactions and turnover



Note: Monthly turnover = trading value in the month / average bonds issued outstanding.

Sources: CBC and FSC.

Chart 4.5 Yield spread



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

Source: Bloomberg.

⁵⁴ The authorities include the FSC and the GTSM (GreTai Securities Market).

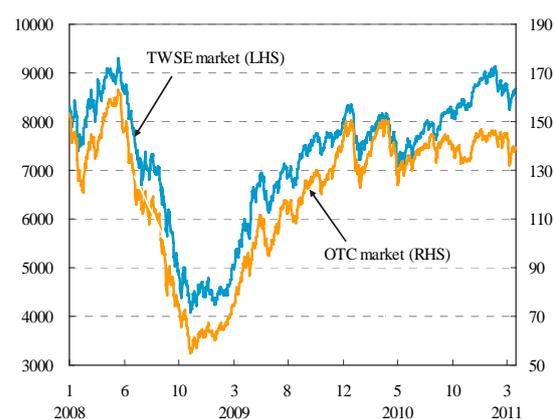
between 59 and 105 basis points throughout the year of 2010. In 2011 Q1, short-term rates increased gradually; nevertheless, government bond yields slumped due to increased purchase by life insurance companies and rebuilt positions by bond traders. As a result, yield spreads fluctuated between 67 and 90 basis points (Chart 4.5).

4.1.2 Equity markets

Stock indices dropped after hitting new highs, while volatility rebounded slightly after sharp falls

The Taiwan Stock Exchange Weighted Index (TAIEX) of the Taiwan Stock Exchange (TWSE) market hit a high in mid-April 2010, due to the strengthening of the world's major stock markets and the benefits of the signing of ECFA. However, the TAIEX dropped to an annual low of 7,072 on 9 June 2010, owing to the impact of the European sovereign debt crisis and the repatriation of foreign capital.⁵⁵ Afterwards, the TAIEX climbed to its annual high of 8,973 at the end of December, an increase of 27% from the trough in June. This strength was due to net stock buying by foreign institutional investors because of strong capital inflows into Asia, the ECFA becoming effective and robust performance in global stock markets. In 2011 Q1, amid the brighter outlook for the US recovery, the TAIEX further climbed up and reached 9,145 before the Chinese Lunar New Year holidays. However, owing to political turmoil in several countries and rising oil prices, the TAIEX dropped to 8,683 at the end of March, a decrease of 3.22% compared to that of the previous December. Meanwhile, Taiwan's GreTai Securities Market (GTSM) Index of the OTC market closely tracked the movements of the TAIEX, climbing to 144 in December 2010, after hitting a new low of 123 in May 2010. It fell to 139 at the end of March 2011, a decrease of 3.49% from the end of December 2010 (Chart 4.6). Compared to major stock markets around the world, the TAIEX's 9.58% rise in 2010 was higher than the stock indices of London, Tokyo, Hong Kong and Shanghai (Chart 4.7).

Chart 4.6 Taiwan stock market indices



Sources: TWSE and GTSM.

⁵⁵ In May 2010, foreign investors (foreign institutional investors, overseas Chinese, and foreign individual investors) were net sellers of NT\$127.2 billion worth of securities in Taiwan, with the net selling amount reaching a new high for a single month since 2008.

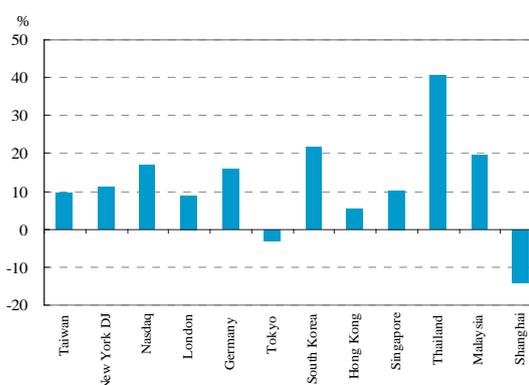
Broken down by sectors, most sector indices in the TWSE market were in bullish territory in 2010 and half of them outperformed the TAIEX. The Trading and Consumers' Goods Index performed the best due to an increase in aggregate demand from Mainland China and the effects of the ECFA, increasing by 52.45%. Additionally, the Transportation Index experienced large growth, increasing by 47.81%, owing to the effects of cross-strait direct flights. The Optoelectrical Industry Index performed poorly, with a drop of 11.05%. In 2011 Q1, most indices entered bearish territory following falls in international stock markets, while the Plastic Index and the Communications and Internet Industry Index both performed well. These two sectors benefited from soaring oil prices and strong demand for smartphones.

Equity market volatility was significant in the first half of 2010, especially that in the OTC market. In the second half of 2010, the volatility in the TWSE and OTC markets trended down and stood at 11.28% and 13.86%, respectively, at the end of December, while that in the TWSE market touched a new low since 2008. In 2011 Q1, the volatility in the TWSE and OTC markets declined further at the end of January, but then trended up and stood at 16.53% and 18.41%, respectively, at the end of March (Chart 4.8). Nevertheless, the risks involved in stock investments were relatively low compared to those during the global financial crisis of 2008 and 2009.

Transactions in the stock markets remained active

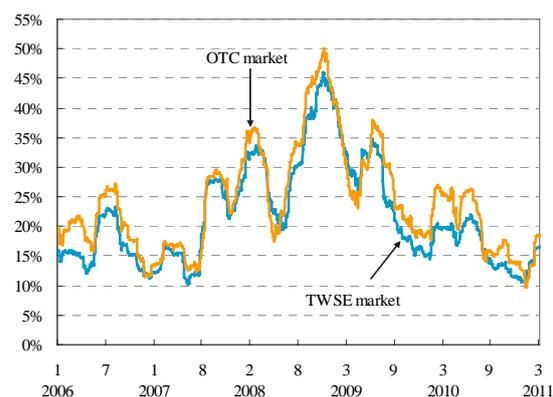
The TWSE and OTC markets were moderately active in 2010. The average monthly trading value on the TWSE market was NT\$2.35 trillion, a moderate decrease of 4.93% year on year, while its turnover ratio in terms of trading value in the same year decreased to 136.74%,

Chart 4.7 Comparison of major stock market performances



Notes: 1. Figures are for 2010.
2. Taiwan's data is for the TWSE market.
Source: TWSE.

Chart 4.8 Stock price volatility

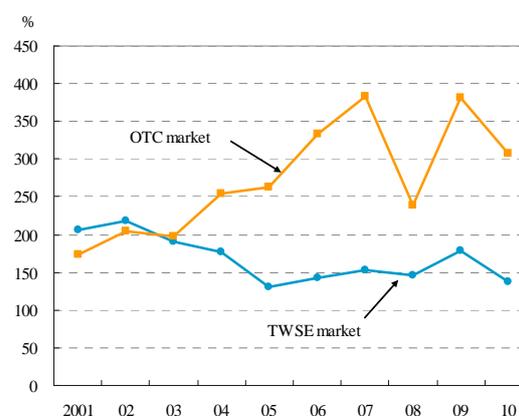


Note: Volatility refers to the annualized standard deviation of 60-day daily index returns.
Sources: TWSE, GTSM, and CBC.

touching a new low since 2006 (Chart 4.9). The trading value in the OTC market saw a significant increase in 2010. The average monthly trading value in the OTC market was NT\$469.5 billion in 2010, an increase of 7.53% year on year, but its turnover ratio saw a significant fall to 306.68% from 380.61% posted in the previous year (Chart 4.9). In 2011 Q1, affected by the local stock market slump and the Chinese Lunar New Year holidays, the turnover ratios and monthly trading value in the TWSE and the OTC markets in January and February 2011 moved in a downward direction, while the numbers reflected a rebound in March.

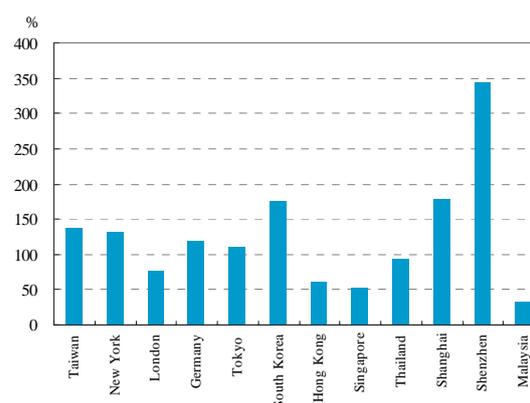
Compared to major stock markets around the world, the annual turnover ratio in the TWSE market in 2010 was lower than the neighboring stock markets in South Korea, Shanghai and Shenzhen, while approximately equal to that in New York's Dow Jones, but higher than those in London, Germany, Tokyo, Hong Kong, Singapore, Thailand and Malaysia (Chart 4.10).

Chart 4.9 Annual turnover ratios in Taiwan's stock markets



Sources: TWSE and GTSM.

Chart 4.10 Comparison of turnover ratios in major stock markets



Notes: 1. Figures refer to accumulated turnover ratios in 2010.
2. Taiwan's data is for the TWSE market.

Source: TWSE.

Box 5

History and prospects of Taiwan's bond markets

Bond markets play an important part in a country's capital markets as a key channel for corporations and the government to raise medium- and long-term funds. The soundness of bond markets is closely related to financial stability and is always the focus of the Ministry of Finance, the CBC and bond market supervisors (the FSC and the Gre Tai Securities Market). This box discusses the history and present condition of Taiwan's bond markets, and analyzes their future prospects.

1. History

The history of Taiwan's bond markets can be divided into three phases (Chart B5.1):

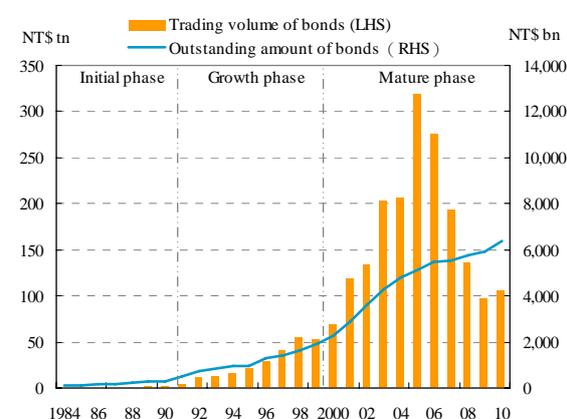
1.1 1949~1990

On 1 August 1949, the central government issued the first public bond and established the first bond market in Taiwan. During this period, bond issuance volume was small and most bonds were held by financial institutions as liquidity reserves, resulting in an insufficient supply of traded bonds. Coupled with limited market participants, secondary bond markets were inactive.

1.2 1991~1999

Since 1991, Taiwan's government issued more government bonds in order to raise necessary funds for the Six-year National Development Plan, leading to an increasing supply of government bonds in the market. Financial institutions also began to actively participate in bond markets. Furthermore, corporations started to raise funds through capital markets and issue corporate bonds. Beginning from 1997, government bonds were issued in book-entry form and the CBC implemented the real-time gross settlement (RTGS) mechanism for bond transactions. Transaction parties who conduct settlement through the same clearing bank are allowed to settle their transactions through the delivery versus payment (DVP) mechanism. These developments simplified government bond management and lowered settlement risks faced by market participants. As a result,

Chart B5.1 History of Taiwan's bond markets



Note: The trading volume and outstanding amount before 1984 are excluded here for being too small.

Source: CBC.

Taiwan's bond markets entered into a growth phase.

1.3 2000~present day

In July 2000, the Gre Tai Securities Market introduced the Electronic Bond Trading System (EBTS), providing bond dealers an online trading platform different from the price negotiations conducted via phone. The EBTS significantly improved trading efficiency and thus substantially increased the outright transaction volume. It was an important progress in Taiwan's bond market. Moreover, the Ministry of Finance, the CBC and bond market supervisors have continued to introduce measures regarding the improvement of bond issuance, trading and settlement. These included the introduction of a regular and moderate issuance system, reopening system, when-issued trading system, primary dealer system and lending facility for government bonds, the establishment of a corporate bond and financial debenture trading platform, as well as the opening of new bond-related financial products. They also introduced a delivery-versus-payment (DVP) mechanism for book-entry security transactions in order to reduce the settlement risk in bond markets.

The efficiency of Taiwan's bond markets improved substantially and both issuance and trading volume grew markedly. In particular, the bond trading volume hit a new high in 2005, making Taiwan's bond markets the second largest in Asia, only behind Japan's. In recent years, though, as Taiwan's bond markets have entered a mature phase, the trading volume has gradually decreased. Furthermore, during this phase, financial institutions bought and hoarded a great deal of bonds due to ample funds at hand, which resulted in an insufficient supply of bonds and an imbalance of supply and demand in the market, and in turn caused distortions of the government bond yield curve. Additionally, high volatility in the cost of bond borrowing also diminished the trading willingness of market participants. All these are crucial factors that have hindered the development of bond markets.

2. Current condition of bond markets

2.1 Primary market

Bond issuance outstanding at the end of 2010 amounted to NT\$6.48 trillion, an increase of 6.4% from a year ago. Government bonds accounted for the largest share of 66.8% of the total, followed by corporate bonds at 18.6% and financial debentures at 12.6%¹. The market share of each kind of bond remained stable (Table B5.1).

Table B5.1 Outstanding amount of bonds by category

Unit: NT\$ Trillion, %

End of year or month	Total	Government bonds		Corporate bonds		Financial debentures		Beneficiary securities		Foreign bonds and international bonds	
		Outstanding amount	Ratio	Outstanding amount	Ratio	Outstanding amount	Ratio	Outstanding amount	Ratio	Outstanding amount	Ratio
2008	5.98	3.74	62.5	1.14	19.1	0.90	15.0	0.14	2.4	0.06	1.0
2009	6.09	3.97	65.2	1.14	18.7	0.81	13.3	0.11	1.8	0.06	1.0
2010	6.48	4.33	66.8	1.20	18.6	0.82	12.6	0.08	1.2	0.05	0.8
2011/2	6.45	4.32	66.9	1.22	18.9	0.81	12.5	0.06	1.0	0.04	0.7

Sources: CBC and FSC.

2.2 Secondary market

The amount of bonds traded in 2010 was NT\$106.31 trillion, an increase of 9.0% year on year. The market share of government bonds in trading volume was roughly 98% before 2009 and decreased to 89.5% in 2010, while that of corporate bonds increased from 1.3% to 9%. The changes were mainly due to an adjustment to bond categories. As for financial debentures, beneficiary securities, foreign bonds and international bonds, the trading volume only accounted for a small share of the whole market (Table B5.2).

Table B5.2 Trading volume of bonds by category

Unit: NT\$ Trillion, %

Year or month	Total	Government bonds		Corporate bonds		Financial debentures		Beneficiary securities		Foreign bonds and international bonds	
		Trading volume	Ratio	Trading volume	Ratio	Trading volume	Ratio	Trading volume	Ratio	Trading volume	Ratio
2008	135.51	133.75	98.7	1.39	1.0	0.21	0.1	0.08	0.1	0.08	0.1
2009	97.54	95.99	98.4	1.34	1.3	0.15	0.2	0.00	0.0	0.06	0.1
2010	106.31	95.21	89.5	9.56	9.0	1.36	1.3	0.12	0.1	0.06	0.1
2011/1-2	15.32	13.19	86.1	1.89	12.3	0.21	1.4	0.02	0.1	0.01	0.1

Source: CBC.

3. Looking into 2011

3.1 Primary market

The government bond issuance program of 2011, announced by the Ministry of Finance, showed that the government bond issuance amount will be slightly larger than that of 2010. The issuance amount of Type A government bonds in 2011 Q1 will be NT\$185 billion, among which NT\$110 billion will be used to refinance existing debt. This indicates that the supply of government bonds will not increase too much. As for corporate bond issuance, escalating interest rates resulting from the recovering economy

will encourage firms to increase bond issuances to fix their interest expenses at low levels. In addition, the FSC elevated the risk weight for non-self-use residence loans from 45% to 100% in order to enhance banks' risk management on real estate-related loans. In response, banks also tended to increase subordinated financial debentures issuance to meet the new capital requirement.

3.2 Secondary market

Currently, domestic funds are ample, but the supply of bond instruments is insufficient and most of them are hoarded by financial institutions. As a result, a structural imbalance between the supply and demand of bonds still exists. Therefore, the outright transactions of bond markets in 2011 are estimated to remain at the low levels seen in recent years.

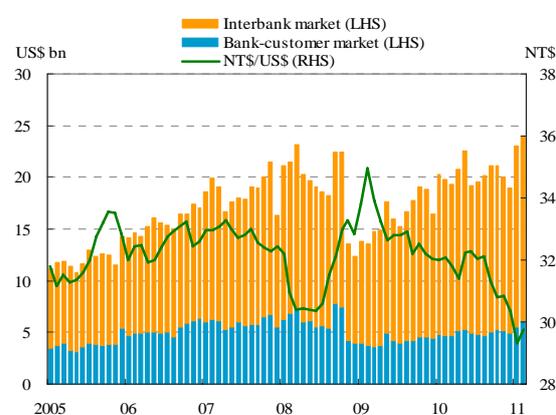
Note: Financial institutions started to issue subordinated financial debentures from 2002 to decrease their NPL ratios and increase their capital adequacy ratios.

4.1.3 Foreign exchange market

The NT dollar exchange rate appreciated and the trading volume increased in the second half of 2010

Due to increasing hedging needs for US dollars triggered by the European sovereign debt crisis, the NT dollar exchange rate experienced depreciation in early 2010. Afterwards, it turned to a period of appreciation mainly due to considerable capital inflows to Asian markets. Up to mid-2010, the effects of the sovereign debt crisis in Europe prevailed in the region, and there were military confrontations on the Korean peninsula; therefore, the NT dollar exchange rate again entered into a period of depreciation and fell to 32.528 against the US dollar in early June, which was a new annual low in 2010. In the second half of 2010, the NT dollar exchange rate experienced appreciation, mainly due to Asian countries' implementation of tighter monetary policies and capital inflows to emerging markets caused by a second round of quantitative easing in the US. The NT dollar exchange rate stood at 30.368 against the US dollar at the end of December 2010, appreciating by 5.47% compared to the end of 2009 (Chart 4.11). At the beginning of 2011, the NT dollar exchange rate kept appreciating, reaching 29.300 against the US dollar at the end of January. Subsequently, owing to foreign investors repatriating capital from emerging economies as they considered an increased likelihood of economic slowdown following tighter monetary policies in those countries, and the increasing hedging needs for US dollars arising from the political turmoil in the Middle East and North Africa, the NT

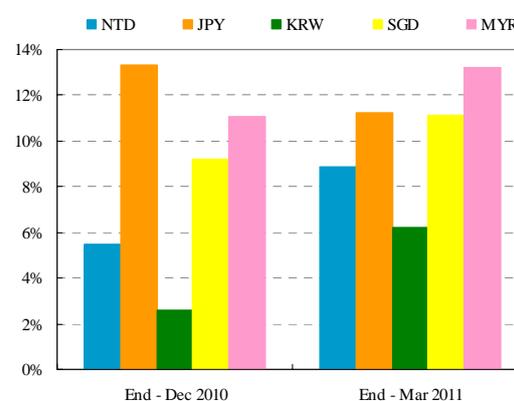
Chart 4.11 NT\$/US\$ exchange rate and foreign exchange market trading volume



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

Source: CBC.

Chart 4.12 Appreciation percentages of major Asian currencies against the US dollar



Note: Appreciation percentages refer to exchange rates as of the end of 2010 and end-March 2011 compared to those as of the end of 2009.

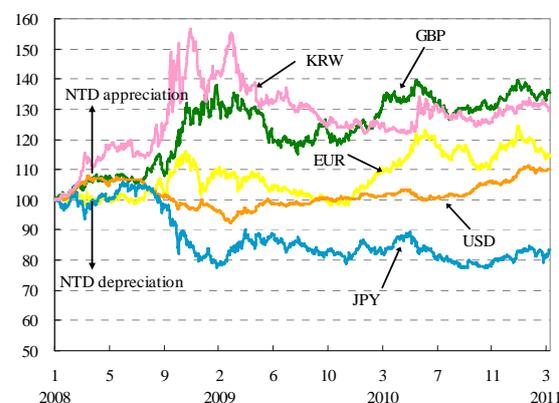
Source: CBC.

dollar exchange rate turned to depreciation at the end of February. After a strong earthquake hit Japan, the NT dollar exchange rate appreciated in March, reaching 29.418 against the US dollar at the end of that month. Compared to other major currencies in Asia, the percentage of the NT dollar appreciation was lower than that of the Japanese yen, Singapore dollar and Malaysian ringgit (Chart 4.12).

As for other key international currencies, the value of the yen went up significantly as a result of the increasing hedging needs for international funds and the purchase in large amount of Japanese financial assets by Mainland China. As a result, the NT dollar depreciated against the yen by 6.92% year on year at the end of 2010. Conversely, the NT dollar appreciated by 9.66% and 13.70% against the British pound and the euro, respectively, over the same period; in addition, it appreciated by 2.78% against the Korean won (Chart 4.13).

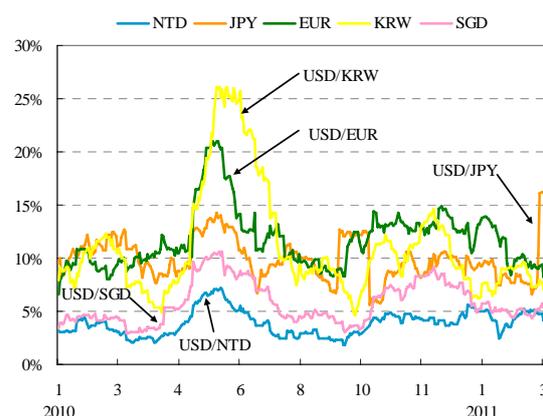
Owing to continued export growth and greater international capital movements, the foreign exchange market became more active in 2010 as the average daily trading volume registered US\$20.2 billion, increasing by 24.72% year on year. In January-February 2011, the trading volume also increased significantly (Chart 4.11). A breakdown by counterparties shows that the average daily trading volume in the interbank market accounted for 75.52% of the total in 2010, while the retail sales market made up a 24.48% share. As for types of transactions, spot trading accounted for 42.86% of the total, followed by foreign exchange swaps with 42.32%.

Chart 4.13 Movements of NT dollar exchange rate against key international currencies



Note: 2 January 2008 = 100.
Source: CBC.

Chart 4.14 Exchange rate volatility of various currencies against the US dollar



Note: Volatility refers to the annualized standard deviation of 20-day daily returns.
Source: CBC.

NT dollar exchange rate volatility remained relatively stable compared to other currencies

The volatility in the NT dollar exchange rate against the US dollar fluctuated between 2% and 4% in 2010 Q1, but then increased to an annual high in the middle of May. In the second half of 2010, however, volatility turned to a decrease as the NT dollar exchange rate appreciated at a more modest pace. Annual average volatility stood at 3.74% for the year as a whole. In 2011 Q1, the average volatility in the NT dollar exchange rate against the US dollar increased moderately to 4.42%, though it was relatively mild when compared to other currencies (Chart 4.14).

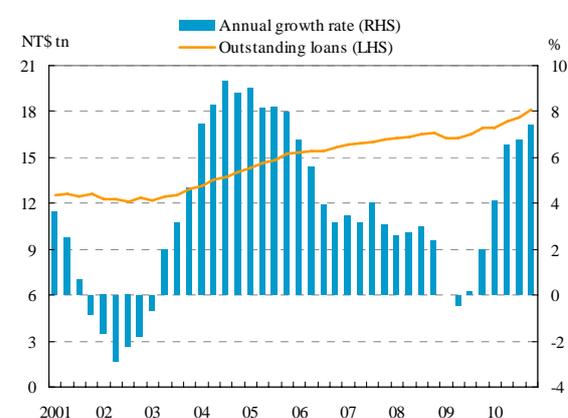
The CBC adopts a managed floating exchange rate regime and may step into the market to stabilize the exchange rate when seasonal or irregular disruptions cause disorderly conditions in the market. Though the volatility in the NT dollar exchange rate against the US dollar temporarily increased in 2010, the NT dollar exchange rate was relatively stable compared to the volatility in the exchange rates of major currencies such as the Japanese yen, euro, Korean won and Singapore dollar against the US dollar (Chart 4.14).

4.2 Financial institutions

4.2.1 Domestic banks

In 2010, the growth in loans increased notably, and asset quality remained satisfactory. However, credit risk concentration was still high and the concentration risk in the real estate market was increasing gradually. The estimated Value at Risk (VaR) for market risk exposures of domestic banks had limited influence on their capital adequacy. Liquidity risk was moderate too as the banking system benefited from ample liquidity. The profitability of domestic banks rose substantially and the capital adequacy continued to improve in 2010, strengthening the capability of domestic banks to bear risks.

Chart 4.15 Outstanding loans and annual loan growth rate in domestic banks



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

Source: CBC.

Credit risk

Customer loan growth increased significantly

Customer loans⁵⁶ were the major source of credit risks for domestic banks. The outstanding loans of the local business units of domestic banks at the end of 2010 stood at NT\$18.2 trillion and accounted for 54.27% of total assets. In 2010, due to the economic recovery and increasing funding needs, the annual loan growth rate increased significantly and reached 7.42% in December (Chart 4.15). To analyze the borrowers specifically, the annual growth rate of individual loans and corporate loans both ascended markedly and registered 8.02% and 8.40%, respectively, at the end of 2010.

Chart 4.16 Credit by type of collateral in domestic banks



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

Credit exposure significantly concentrated in the real estate market, thus the relevant risk gradually climbed

The concentration of credit exposure in real estate-related loans continued growing from the previous year. Outstanding real estate-related loans of domestic banks reached NT\$7.74 trillion and accounted for 42.62% of total loans as of the end of 2010. In addition, real estate-secured credit granted by domestic banks was also large, which amounted to NT\$10.37 trillion, or 49.13% of total credit,⁵⁷ at the end of 2010 (Chart 4.16). Among individual banks, thirteen had ratios of real estate-secured credit to total credit of over 60%, reflecting a high concentration of credit risk.

The NPL ratio of real estate-related loans remained relatively low. However, since the CBC and the FSC introduced several measures to enhance risk management for real estate-related loans, and the MOF will soon start to impose the Specifically Selected Goods and Services Tax, real estate market conditions are expected to turn less buoyant. The buyer bargaining power became larger in some areas with ample housing supply. Therefore, it would be advisable for banks with credit exposure highly concentrated in real estate-related loans to review their credit policies, such as loan-to-value, concentration and real estate appraisal, to cope with the potentially higher credit risks.

⁵⁶ The term "customer loans" herein refers to lending by local business units of domestic banks to their customers. It excludes interbank lending.

⁵⁷ The term "credit" herein includes loans, guarantee payments receivable and acceptances receivable.

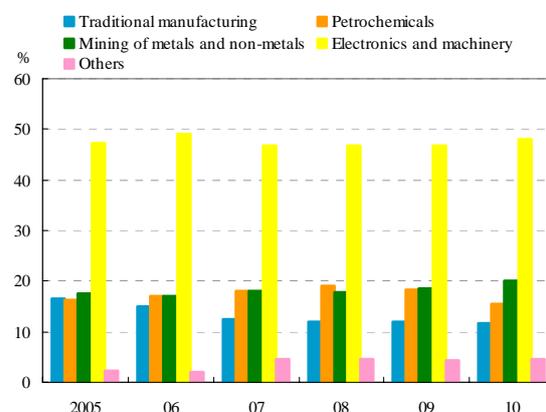
Industrial credit concentration of corporate loans gradually increased

Outstanding corporate loans of the local business units of domestic banks stood at NT\$7.92 trillion at the end of 2010, while loans to the manufacturing sector stood at NT\$3.58 trillion and accounted for the largest share of 45.15% of the total.

Within the manufacturing category,⁵⁸ the largest proportion of loans were for electronics, electric machinery and machinery-related industries, which stood at NT\$1.72 trillion and accounted for 48.09% of the total loans to the whole manufacturing sector⁵⁹ (Chart 4.17). The ratio gradually increased in the past three years, reflecting an ascending industrial credit concentration.

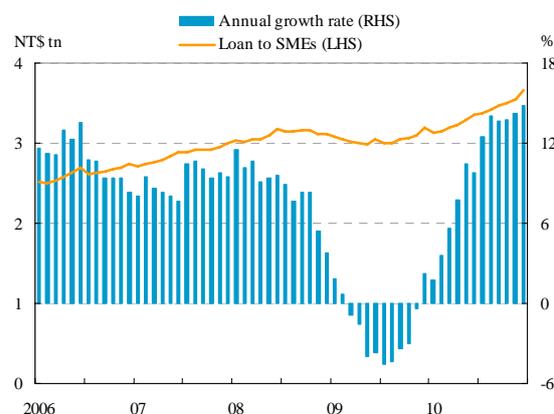
As the funding demand of SMEs increased from 2010 on due to the recovery of the global economy and strong growth in Asian emerging economies, outstanding corporate loans to SMEs by domestic banks grew markedly and registered NT\$3.66 trillion⁶⁰ at the end of 2010, which accounted for 46.19% of total corporate loans, with an annual growth rate of 14.79% (Chart 4.18). Furthermore, in line with the government's Economic Vitalization Package and measures to promote employment, the Small and Medium Enterprise Credit Guarantee Fund of Taiwan (SMEG) also implemented several projects to encourage financial institutions to lend to SMEs. As a result, the outstanding loans guaranteed by the SMEG rose significantly to NT\$597.3 billion at the end of 2010 with an

Chart 4.17 Weight of loans to the manufacturing sector by domestic banks



Notes: 1. End-of-period figures.
2. Weight of each sector = loans to each sector / loans to the whole manufacturing sector.
3. See note 58 for the definition of manufacturing sector.
Source: CBC.

Chart 4.18 Loans to SMEs by domestic banks



Source: FSC.

⁵⁸ Loans to the manufacturing sector are divided into four categories by industry, including (1) electronics, electric machinery and machinery-related industries, (2) mining of metals and non-metals related industries, (3) petrochemicals related industries and (4) traditional manufacturing industries. The remainders are classified as "others."

⁵⁹ The production value of electronics, electric machinery and machinery-related industries accounted for 42.18% of total manufacturing production value at the end of 2010, which was less than loans to electronics, electric machinery and machinery-related industries as a percentage of total loans to the manufacturing sector.

⁶⁰ Outstanding corporate loans to SMEs of domestic banks are the FSC data.

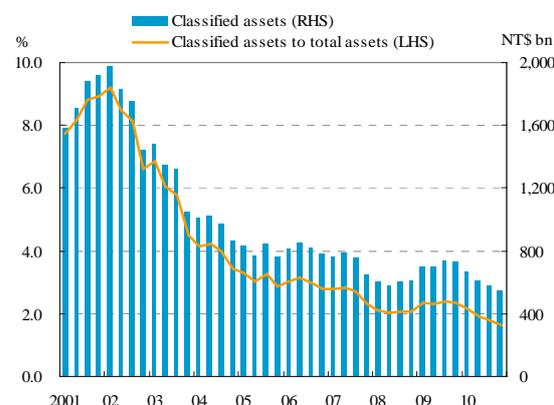
18.11% year-on-year increase and accounted for 16.32% of total SME loans. The guarantee coverage percentage also increased to 78.09% from 73.72% a year earlier. These statistics point to the favorable conditions for SMEs to acquire necessary funds.

As the profitability in the corporate sector rebounded and its interest servicing ability improved due to global economic recovery, the credit risk of domestic banks related to corporate loans is expected to drop. However, as Taiwan's electronics and information industry, an important borrower from domestic banks, heavily relies on components and equipment made in Japan, the potential impact on their future production and operation following the Japan's earthquake in March 2011 could further elevate the credit risk of domestic banks and thus warrants close monitoring.

Asset quality remained satisfactory

As a result of massive write-offs of NPLs, the outstanding classified assets⁶¹ and average classified asset ratio of domestic banks stood at NT\$548.5 billion and 1.64% at the end of 2010, dropping considerably by 25.04% and 0.70 percentage points, respectively, over the previous year, with both registering ten-year record lows (Chart 4.19). At the same time, expected losses of classified assets⁶² also significantly declined by 33.68% year on year to NT\$64.4 billion and the ratio of expected losses to loan loss provisions stood at 26.00%, indicating sufficient provisions of domestic banks to cover expected losses.

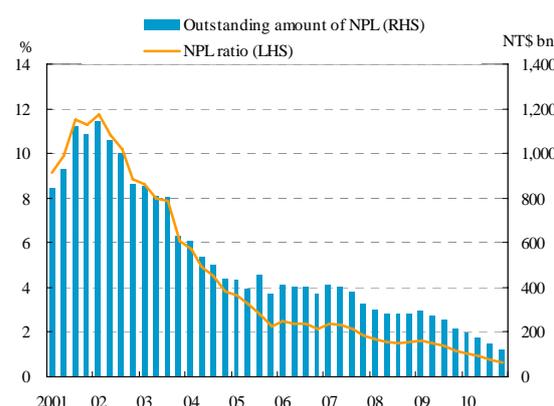
Chart 4.19 Classified assets of domestic banks



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

Source: CBC.

Chart 4.20 Average NPL ratio of domestic banks



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

Source: CBC.

⁶¹ The Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans break down all assets into five different categories, including: category one – normal credit assets; category two – credit assets requiring special mention; category three – substandard credit assets; category four – doubtful credit assets; and category five – loss assets. The term “classified assets” herein includes all assets classified as categories two to five.

⁶² Loss herein refers to the losses from loans, acceptances, guarantees, credit card revolving balances, and factoring without recourse.

The outstanding NPLs of domestic banks stood at NT\$123.0 billion at the end of 2010, contracting dramatically by 43.00% year on year. Meanwhile, the average NPL ratio fell to a ten-year low of 0.61% (Chart 4.20), while all banks had NPL ratios of less than 2%. Compared to the US and neighboring Asian countries, the average NPL ratio of domestic banks in Taiwan was similar to that of Hong Kong and much lower than most of the other countries (Chart 4.21), reflecting the good loan quality in Taiwan's banking industry.

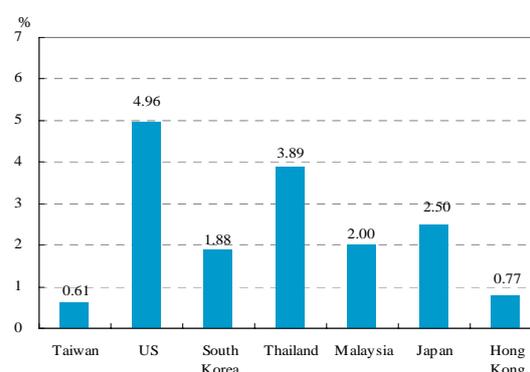
Owing to the substantial decrease in NPLs, the NPL coverage ratio at the end of 2010 rose dramatically to 157.32%, hitting a ten-year record high. However, the loan loss reserve ratio slightly dropped to 0.96% as a result of the marginal contraction of loan loss provisions (Chart 4.22).

Market risk

Estimated Value-at-Risk for market exposures rose

Using market data as of the end of February 2011, the estimated total VaR⁶³ calculated by the CBC's market risk model for foreign exchange, interest rate and equity exposures of domestic banks at the end of 2010 stood at NT\$128.4 billion. The figure expanded significantly by 32.51% year on year (Table 4.1), mainly resulting from the increase in both the volatility and the position of interest rate risk.

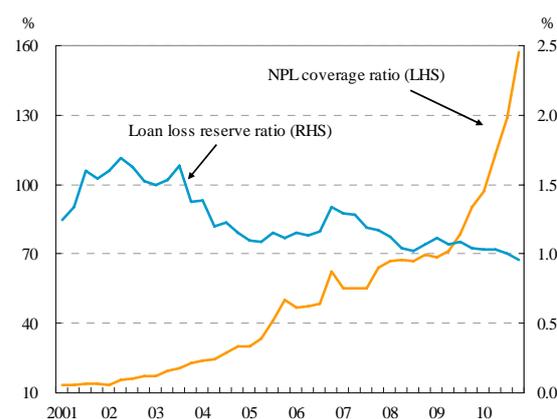
Chart 4.21 NPL ratios of banks in selected countries



Note: Figure for Japan is end-September 2010 data, while the others are end-December 2010.

Sources: CBC, FDIC, FSS, BOT, BNM, BOJ and HKMA.

Chart 4.22 NPL coverage ratio and loan loss reserve ratio of domestic banks



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

Source: CBC.

⁶³ The market risk model describes dependencies among foreign exchange, interest rate and equity positions returns series, and provides a correlation structure between returns series. By means of a semi-parametric method, the new model constructs the sample distribution function of each asset return series using a Gaussian Kernel estimate for the interior and a generalized Pareto distribution (GPD) estimate for the upper and lower tails. The confidence level of the model is 99%, a holding period of ten trading days is used and exposure positions are assumed unchanged. The models are estimated using 1,000 foreign exchange rate, interest rate, and equity price samples.

The effects of market risk on capital adequacy ratios were limited

According to the estimated results mentioned above, market risk would cause a decrease of 0.67 percentage points in the average capital adequacy ratio and induce the current ratio of 11.94%⁶⁴ to fall to 11.27%. Nevertheless, the effects may be considered as limited.

Table 4.1 Market risk in domestic banks

Unit: NT\$ bn

Types of risk	Items	End-Dec. 2009	End-Dec. 2010	Changes	
				Amount	%
Foreign exchange	Net position	47.6	57.4	9.8	20.59
	VaR	1.4	2.2	0.8	57.14
	VaR / net position (%)	2.94	3.83		0.89
Interest rate	Net position	3,755.50	5,649.40	1,893.90	50.43
	VaR	50.1	115.8	65.7	131.14
	VaR / net position (%)	1.33	2.05		0.72
Equities	Net position	502.9	516.8	13.9	2.76
	VaR	50.9	34.1	-16.8	-33.01
	VaR / net position (%)	10.12	6.6		-3.52
Total VaR		96.9	128.4	31.5	32.51

Note: The total VaR was estimated by a revised model in 2009, and the model takes the correlation among three risk categories into consideration; therefore, the sum of individual VaRs of the three types of risks is not equal to the total VaR.

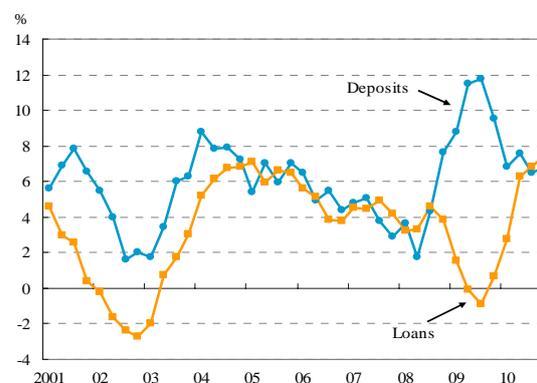
Source: CBC.

Liquidity risk

Banking system liquidity remained ample

Deposits in domestic banks continued to increase in 2010; however, the year on year growth rate of deposits declined to 6.80% in December due to a higher base. As for loans, the annual growth rate climbed markedly to 7.49% as a result of the warming up of economic activity and increasing financing demand from the corporate sector (Chart 4.23).

Chart 4.23 Annual growth rate of deposits and loans of domestic banks



Source: CBC.

⁶⁴ The term "capital adequacy ratio" used herein is based on regulatory capital which has deducted unamortized deferred losses on the sale of NPLs.

The increase in loans exceeded that in deposits, hence the average deposit-to-loan ratio of domestic banks slightly decreased to 132.28% at the end of 2010. The funding surplus (i.e., deposits exceeding loans) registered NT\$6.50 trillion, reflecting abundant liquidity in domestic banks (Chart 4.24).

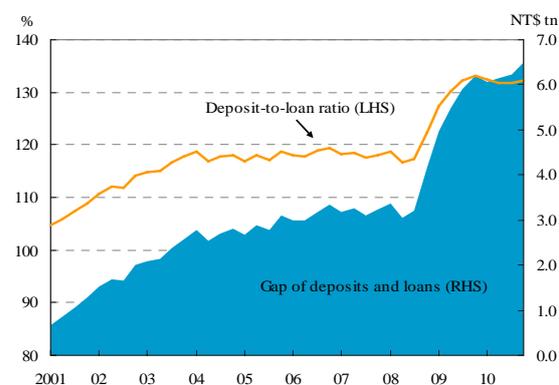
As for the sources of funds, relatively stable customer deposits accounted for the largest share of 77% of the total, which remained unchanged from the previous year, followed by interbank deposits and borrowings at 8%, while debt securities issues contributed a mere 3% at the end of 2010. Regarding the uses of funds, on account of better market conditions, customer loans accounted for the biggest share of 60% with a year on year increase of 1 percentage point, and investment reached 19%, while cash and due from banks declined from 15% at the end of the previous year to 9% of the total at the end of 2010 (Chart 4.25).

Overall liquidity risk was moderate

The average NT dollar liquid reserve ratio of domestic banks was 29.64% in December 2010, well above the statutory minimum of 7% (Chart 4.26), and the ratio of each domestic bank was higher than 13%. In the same period, Tier 1 liquid reserves, mainly consisting of certificates of deposit issued by the CBC, accounted for 96.46% of total liquid reserves,⁶⁵ while Tier 2 and Tier 3 reserves accounted for 3.30% and 0.24%, respectively. This reveals that the quality of liquid assets held by domestic banks remained satisfactory and overall liquidity risk was moderate.

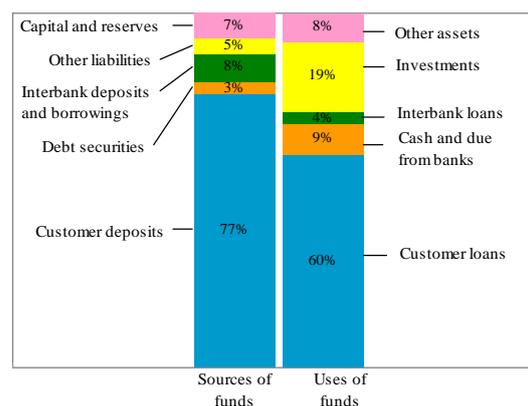
⁶⁵ Tier 1 liquid reserves include excess reserves, net due from banks in the call-loan market, re-deposits at designated banks with terms to maturity of no more than one year, certificates of deposit issued by the CBC, government bonds and treasury bills. Tier 2 liquid reserves include NT dollar-denominated bonds issued in Taiwan by international financial organizations, negotiable certificates of deposit, bank debentures, banker's acceptances, trade acceptances, commercial paper and corporate bonds. Tier 3 liquid reserves include beneficial securities issued in accordance with the asset securitization plan and other liquid assets as approved by the CBC.

Chart 4.24 Deposit-to-loan ratio in domestic banks



Notes: 1. Deposit-to-loan ratio = total deposits / total loans.
2. Gap of deposits and loans = total deposits - total loans.
Source: CBC.

Chart 4.25 Sources and uses of funds in domestic banks



Notes: 1. Figures are end-December 2010.
2. Interbank deposits include deposits with the CBC.
Source: CBC.

Profitability

The highest profitability was recorded

Owing to the rebound of net interest income and the significant reduction in bad debt expenses, the combined net income before tax for domestic banks reached a historical high of NT\$184.8 billion in 2010, which increased dramatically by NT\$99.7 billion, or 117.08%, year on year (Chart 4.27). The average return on equity (ROE) and return on assets (ROA) rose from 4.52% and 0.28% in 2009 to 9.08% and 0.57%, respectively (Chart 4.28). However, compared to Asia-Pacific neighboring countries, the profitability of domestic banks was relatively low, and even lower than that of the US, where the recent global financial turmoil originated from (Chart 4.29).

Among the total thirty-eight domestic banks, only one reported a loss due to amortization of deferred losses on the sale of classified assets, while the others all posted profits, among which six banks had full-year profits of more than NT\$10 billion. Eleven banks achieved a profitable ROE of 10% or more, increasing substantially from two in 2009 (Chart 4.30).

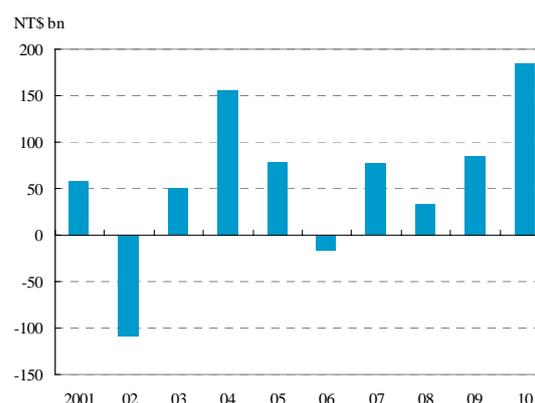
As for operating revenues and costs, total operating revenues of domestic banks stood at NT\$529.6 billion in 2010, rising by NT\$75.2 billion, or 16.55% year on year. Of which, net interest income, accounting for 59.52% of the total revenues, increased by NT\$44.6 billion

Chart 4.26 Liquid reserve ratio of domestic banks



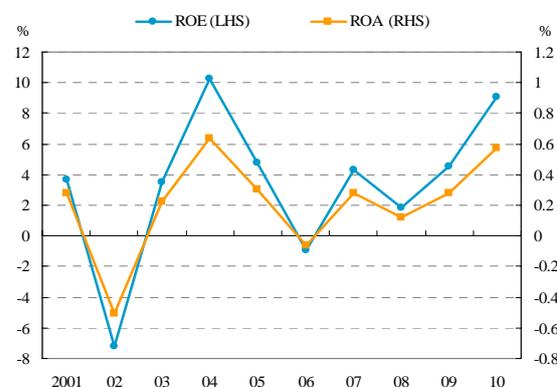
Note: Figures are the average daily data in the last month of a quarter.
Source: CBC.

Chart 4.27 Net income before tax in domestic banks



Source: CBC.

Chart 4.28 ROE & ROA of domestic banks



Notes: 1. ROE (return on equity) = net income before tax / average equity.
2. ROA (return on assets) = net income before tax / average total assets.

Source: CBC.

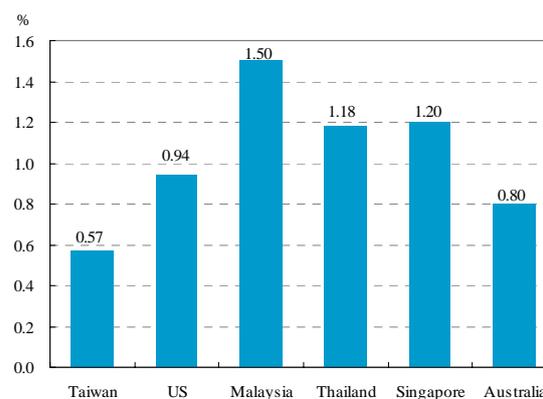
year on year as a result of the rebound of interest rate spreads between deposits and loans. Benefiting from the growth of the asset management business, net fee and commission income climbed to the highest level recorded, increasing by NT\$30.1 billion and accounting for 23.56% of the total revenues. Because valuation profit and gain on the sale of financial assets and liabilities at fair value declined, net gains on financial instruments contracted dramatically by NT\$22.1 billion, only accounting for 9.93% of total revenues.

On the cost side, operation expenses increased due to the strong growth of new hires, while provisions decreased sharply to a record low level as a result of declining loan losses. Consequently, operating costs in 2010 declined to NT\$345.0 billion, falling by NT\$25.2 billion, or 6.80% year on year, the lowest level recorded since 1999 (Chart 4.31).

Factors that might undermine future profitability

After shrinking to 1.11 percentage points in 2009 Q2, the interest rate spread between deposits and loans gradually increased from its lowest and then gradually expanded to 1.40 percentage points in 2010 Q4, owing to the rising weighted average rates on loans and deposits caused by three policy rate hikes by the CBC in 2010 (Chart 4.32). The gradual rebound of interest rate spread will likely prove helpful to boost domestic banks'

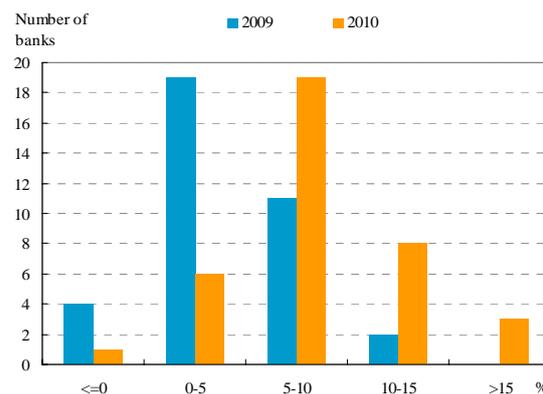
Chart 4.29 Comparison of ROA of banks in selected countries



Note: Data for Singapore is for the first three quarters of 2010, while the others are for the whole year of 2010.

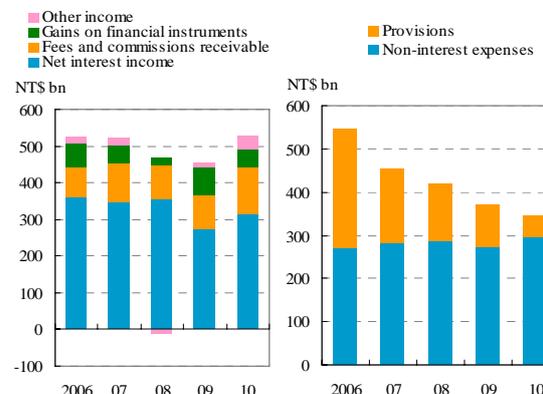
Sources: CBC, FDIC, BNM, BOT, MAS and APRA.

Chart 4.30 Distribution of ROE of domestic banks



Source: CBC.

Chart 4.31 Composition of incomes and costs of domestic banks



Source: CBC.

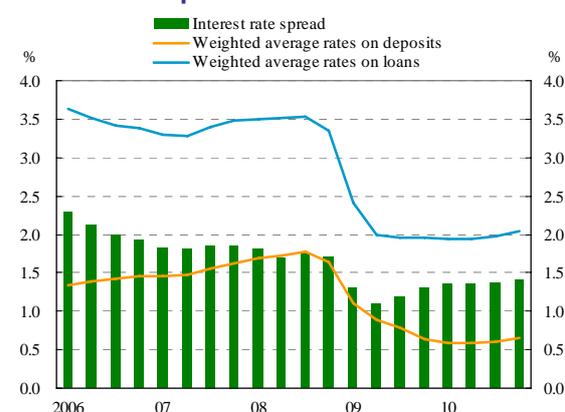
profitability.

The asset quality of domestic banks kept improving, maintaining low level credit costs, and thus contributed to the high profitability of 2010. However, there are several uncertainties worth paying attention to: (1) the third revision of Taiwan's Statements of Financial Accounting Standards (SFAS) No.34 "Financial Instruments: Recognition and Measurement" takes effect from the beginning of 2011. Under SFAS 34, banks have to recognize impairment losses when the loss events occur or there is objective evidence of impairment of loans and accounts receivable. Owing to the pressure of setting aside additional provisions, domestic banks' future profitability might be impacted;⁶⁶ (2) from 2011, domestic banks are required to set aside additional provisions for normal credit assets at the rate of 0.5% of the outstanding. Although there is a 3-year grace period, certain impacts on future profitability are still expected; (3) the Debt Renegotiation Relief Program launched by the Bankers Association of the Republic of China ended on 31 December 2010, as did some related measures such as loan extensions and preferential mortgages. As a result, the default rate of those borrowers might increase and in turn raise the credit costs of domestic banks; (4) global financial markets were turbulent due to the Japan's earthquake in March 2011, the European sovereign debt crisis and the political instability in the Middle East and North Africa. If the turbulence worsens in the future, domestic banks' credit and investment positions could possibly be harmed.⁶⁷

Capital adequacy

Capital adequacy ratios ascended slightly

Chart 4.32 Interest rate spread between deposits and loans



Notes: 1. Interest rate spread = weighted average interest rates on loans - weighted average interest rates on deposits.
 2. The weighted average interest rates on deposits and loans exclude preferred deposits of retired government employees and central government loans.
 3. Excludes the data of medium business banks.

Source: CBC.

⁶⁶ According to the FSC's press releases on 12 Aug 2010, domestic banks need to set aside an additional NT\$30 billion in provisions. However, due to the economic recovery and improved financial structure in the real sector, the amount is expected to decline.

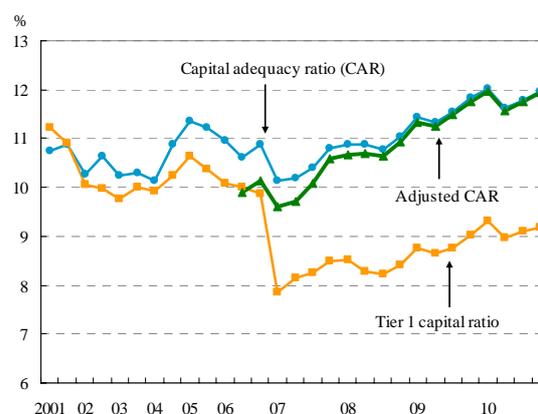
⁶⁷ At the end of 2010, domestic banks had US\$1.42 billion in claims on Japan and US\$0.89 billion in claims on the most debt-laden European countries (dubbed PIIGS), respectively.

Benefiting from accumulated earnings and the increase of common equity, net regulatory capital increased. As a result, the average capital adequacy ratio rose from 11.83% at the end of 2009 to 11.96% at the end of 2010. The Tier 1 capital ratio of domestic banks also increased to 9.17% (Chart 4.33). If unamortized deferred assets of NT\$4.6 billion⁶⁸ arising from losses recorded on the sale of classified assets were deducted from regulatory capital, the adjusted capital adequacy ratio would come to 11.94%, up by 0.17 percentage points from the end of 2009. These figures reflect that the capital adequacy of domestic banks slightly improved in 2010. Compared to the US and some Asia-Pacific neighboring countries, the average capital adequacy ratio of domestic banks is about the same as that of Australia, but much lower than those of the US and some Asian countries (Chart 4.34).

Further breaking down the components of regulatory capital, Tier 1 capital, which features the best risk bearing capacity, accounted for 76.64% of eligible capital, while Tier 2 capital registered 23.20% and Tier 3 capital contributed a mere 0.16% at the end of 2010. The ratios have remained broadly unchanged from the end of the previous year.

All domestic banks held sufficient capital, though they are set to face stricter capital standards in the future

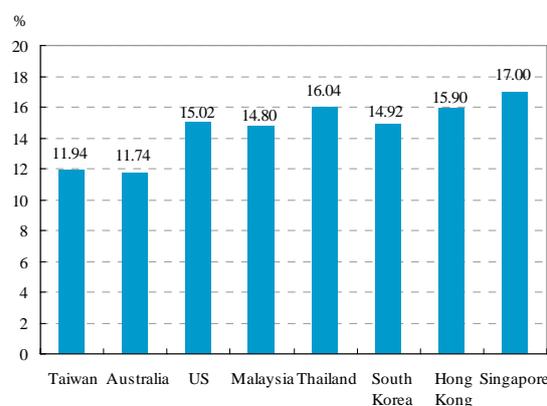
Chart 4.33 Capital adequacy ratio of domestic banks



- Notes: 1. End-of-period figures.
 2. The data are on a semiannual basis prior to June 2006 and on a quarterly basis beginning June 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 - aforementioned unamortized deferred assets.

Source: CBC.

Chart 4.34 Comparison of capital adequacy ratios in selected countries



- Notes: 1. Figures for Australia, South Korea and Singapore are end-September 2010 data, while the others are end-December 2010 data.

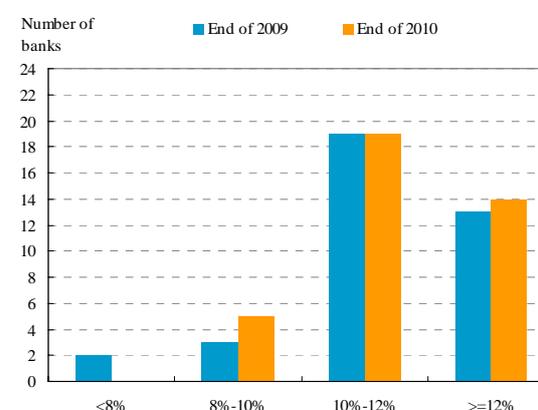
2. The figure for Taiwan is adjusted capital adequacy ratio.

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

⁶⁸ Article 4 and 14 of the Regulations Governing the Capital Adequacy and Capital Category of Banks as amended on 30 June 2009 requires that unamortized losses recorded on the sale of non-performing assets should be deducted from Tier 1 capital. This requirement does not apply to sales made on or before 4 January 2007. The amount mentioned here occurred before the end of 2006.

All domestic banks had capital adequacy ratios higher than the statutory minimum (8%) at the end of 2010, and there were fourteen banks with ratios above 12% (Chart 4.35). Even though domestic banks' capital adequacy ratios were gradually increasing, the FSC elevated the risk weight for non-self-use residence loans to 100% in April 2011 in order to enhance domestic banks' risk management of real estate-related loans. The required regulatory capital of domestic banks is expected to increase in the future. Moreover, the Basel Committee on Banking Supervision (BCBS) announced a new global regulatory standard on bank capital adequacy and liquidity (Basel III) in December 2010. Accordingly, in addition to the requirement of more capital and higher quality of capital than under current Basel II rules, banks are required to carry an additional "capital conservation buffer" and "countercyclical buffer," making for a great impact on the global banking system. Although the reform will be implemented over an eight-year transitional period, domestic banks should start to adjust their capital plans and dividend payout policies as soon as possible.

Chart 4.35 Number of domestic banks classified by adjusted capital adequacy ratios



Source: CBC.

Table 4.2 Systemic risk indicators for the banking system

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

Note: Figures are end-February 2011 data.
Sources: Standard and Poor's and Fitch Ratings.

Credit ratings

Average credit rating level remained stable

Based on Standard & Poor's "Banking Industry Country Risk Assessment (BICRA)"⁶⁹ and Fitch Ratings' "Banking System Indicator / Macro-Prudential Indicator (BSI/MPI),"⁷⁰

⁶⁹ 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).

⁷⁰ Fitch Ratings has devised two complementary measures, the Banking System Indicator (BSI) and Macro-Prudential Indicator (MPI), to

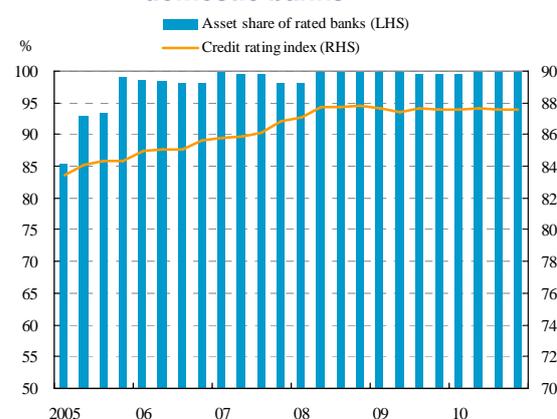
Taiwan's banking system rating remained unchanged in Group 4 and at level C/1, respectively, in February 2011 (Table 4.2). Compared to other Asian economies, the risks of Taiwan's banking industry were higher than those of Hong Kong and Singapore, about the same as those of Japan, South Korea, Malaysia and Thailand, but much lower than those of Mainland China, Indonesia and the Philippines.

According to the rating results of individual banks released by credit rating agencies, one bank was downgraded in 2010, but a new bank with a high credit rating was established, resulting in an unchanged credit rating index.⁷¹ This reflected that the overall credit rating of domestic banks remained stable (Chart 4.36).

Credit ratings are expected to be stable in the future

Most of the thirty-seven rated banks maintained credit ratings of twAA/twA (Taiwan Ratings) or AA(twn)/A(twn) (Fitch Ratings) at the end of 2010, remaining unchanged from the previous year, and only one bank had no credit rating (Chart 4.37). In addition, only one bank received a negative rating outlook or CreditWatch at the end of 2010, showing that credit ratings are expected to be stable in the future.

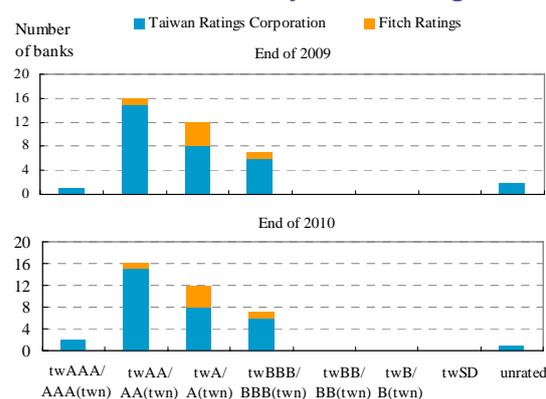
Chart 4.36 Credit rating index of rated domestic banks



Note: End-of-period figures.

Source: CBC.

Chart 4.37 Number of domestic banks classified by credit ratings



Sources: Taiwan Ratings Corporation and Fitch Ratings.

assess banking system vulnerability. The two indicators are brought together in a 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 to stress on above-trend levels 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.

⁷¹ 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.

4.2.2 Life insurance companies

The total assets of life insurance companies continued growing in 2010, albeit at a reduced pace, while operating performance deteriorated and investment performance continued to be susceptible to the volatility of global stock markets as well as foreign exchange markets.

The average risk-based capital (RBC) ratio at the end of 2010 rose as a result of the amendment of relevant regulations and remained above the statutory minimum of 200%. The overall credit rating of life insurance companies was better than in the previous year.

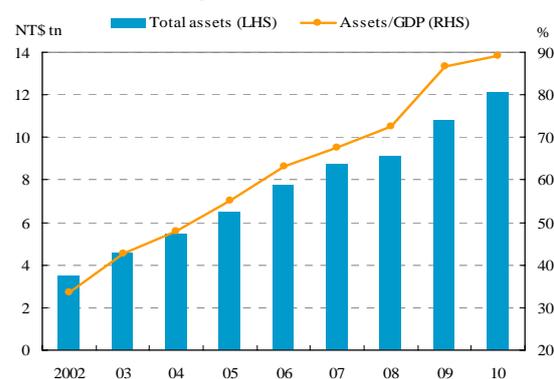
The range of asset growth slowed

The total assets of life insurance companies continually accumulated and reached NT\$12.13 trillion at the end of 2010, equivalent to 89.10% of annual GDP (Chart 4.38). This represented an increase of 12.23%, slightly slower than in the previous year.

In comparison with the end of 2009, the increase in assets was chiefly contributable to (1) a surge of domestic and overseas securities investments, thanks to the rebound of global stock markets; (2) a slight growth of real estate investments created by the recent local market boom; and (3) a continual accumulation of the assets of insurance products held in segregated custody accounts, the major component of other assets, owing to the prosperity of domestic and overseas stock markets.

The structure of the life insurance industry changed slightly during 2010. Twenty-three domestic life insurance companies⁷² held a 98.59% market share by assets at the end of 2010, while seven foreign life insurance companies sustained only 1.41%. The top three companies in terms of assets held a combined market share of 53.05%, while in terms of premium income, they held a combined market share of 55.26%. The combined market share in terms of assets of the top three companies declined by 1.12 percentage points, while that in terms of premium income rose by 2.33 percentage points year on year.

Chart 4.38 Total assets of life insurance companies



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

⁷² Including foreign affiliates.

Funds invested in securities had a higher growth

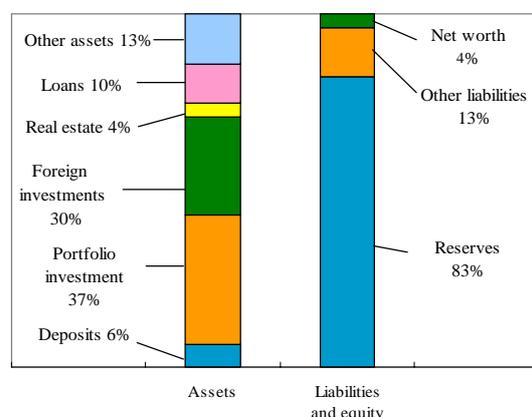
The funds of life insurance companies at the end of 2010 were chiefly invested in domestic securities and foreign investments, accounting for 37% and 30%, respectively, while 10% of funds was in loans, 6% in cash and deposits and 4% in real estate. As for the sources of funds, various policy reserves constituted 83%, while net worth accounted only for 4% (Chart 4.39). The usable funds of life insurance companies continued growing in 2010, and, motivated by the boom in global stock markets, funds invested in domestic securities and foreign investments increased by 13.47% and 21.95%, respectively, year on year, reaching a historical high level. In addition, real estate investments also enjoyed a growth of 8.20%.

The insurance industry did not increase its ratio of real estate investments over the past few years.⁷³ However, expecting the insurance industry to consider both its earning capacity and its reasonable exploitation of society's land resources when making real estate investment decision, the FSC amended the relevant regulations⁷⁴ concerning real estate investment of insurance companies in February 2011, which will be reviewed timely, in order to limit investment in vacant land more strictly.

Enormous losses was reported in 2010

Influenced by a slump in domestic and overseas stock markets as well as increased hedging costs due to the volatility of the foreign exchange rate, life insurance companies experienced poor performance and registered enormous losses of NT\$29.8 billion in the first half of 2010. As NT dollar appreciation enlarged foreign exchange losses in the second half of 2010, which offset the benefit from the recovery of domestic and overseas stock markets and resulted in poor investment performance in the same period, life insurance companies suffered enormous

Chart 4.39 Asset/liability structure of life insurance companies



Note: Figures are end-December 2010 data.
Source: FSC.

⁷³ According to a press release by the FSC on 6 April 2011, the ratio of real estate investment of the insurance industry remained at about 4% from 2006 to 2010.

⁷⁴ The FSC amended and promulgated "The Identifying Criterion and Handling Principles of Instant Application with Yield Concerning Real Estate Investment Undertaken by Insurance Industry" on 24 February 2011, adding the regulation that the investment of vacant land should comply with certain standards which exclude the application of parking lot and advertisement renting etc. from the identifying criterion of instant application with yield.

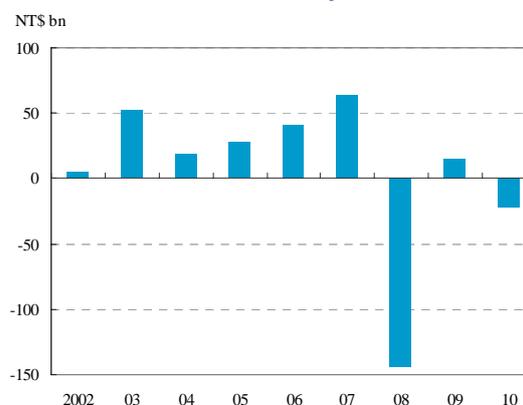
losses of NT\$21.8 billion in 2010, far behind the net profit before tax of NT\$14.9 billion in 2009 (Chart 4.40). During this period, average ROE and ROA slid to -4.76% and -0.19%, respectively (Chart 4.41). Should one company⁷⁵ which was taken into receivership by the FSC be excluded, the 2010 net loss before tax of life insurance companies as a whole would be reduced to NT\$15.6 billion, with average ROE and ROA of -2.99% and -0.14%, respectively.

In the second half of 2010, life insurance companies benefited from a rebound in domestic and overseas stock markets due to sustained strong growth in emerging Asian economies and the surging capital inflows resulting from the easy monetary policy of the US, and their average return on investment rose to 4.44% in 2010, higher than 3.55% in 2009. As the CBC continually raised interest rates from June 2010 onwards, it was anticipated that the return on investment of life insurance companies would gradually rise, and the potential losses driven by negative interest rate spreads would be alleviated.

However, the investment performance of life insurance companies will still face hardship as the rapid movement of short-term international capital between global financial markets raised the volatility of global stock markets and foreign exchange markets.

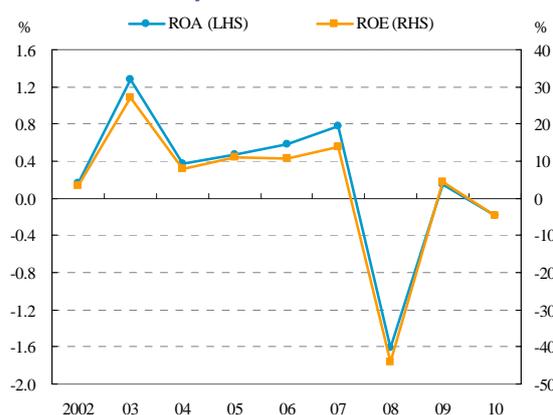
In addition, the FSC, after amending the Regulations Governing the Business of Overseas Investments by the Insurance Industry in August 2010, allowed insurance companies, under certain terms, to invest in specific securities issued by the government and corporations in Mainland China, and real estate was later included in October 2010. In December 2010, the FSC, amended the regulations again, and stipulated that if insurance companies, operating

Chart 4.40 Net income before tax of life insurance companies



Source: FSC.

Chart 4.41 ROE & ROA of life insurance companies



Notes: 1. ROA = net income before tax / average assets.
2. ROE = net income before tax / average equity.

Source: FSC.

⁷⁵ Kuo Hua Life Insurance Co. was taken into receivership by the Insurance Stabilization Fund on 4 August 2009 and registered a net loss before tax of NT\$6.14 billion in 2010.

within the 45% limit of funds used in overseas investments, conduct the business of traditional foreign currency policies, then they could expand the limit of overseas investments according to more flexible formulae. These measures intended to improve the efficiency of usable funds and investment revenues as well as the flexibility of overseas investment allocations of insurance companies. However, while raising their overseas investment positions, life insurance companies were required to carry out their risk control mechanisms thoroughly in accordance with the regulations mentioned above and to self-evaluate the compliance of the Practical Guidelines for Risk Management of the Insurance Industry on a quarterly basis, in order to mitigate investment risk under the environment of more complex international financial market.

Average RBC ratio retained above the statutory minimum

In order to alleviate the pressure for life insurance companies to raise more capital and conform to the global trend of fair value accounting, the FSC amended the capital adequacy regulations in June 2010 to recognize the added value in the real estate investments as qualified regulatory capital.⁷⁶ As the amended regulations came into effect from 30 June 2010, the overall regulatory capital of life insurance companies increased markedly, and the average RBC⁷⁷ ratio rose slightly from 220.15% to 226.60% at the end of 2010, above the statutory minimum of 200%, even though they suffered enormous losses in 2010. By individual companies, there were twelve companies with ratios over 300%, increasing by three companies year on year, and there were five companies with ratios below 200%, the same as the end of 2009 (Chart 4.42), whose combined assets accounted for 4.14% of the total.

Overall credit ratings better than previous year

Of the eight life insurance companies rated by credit rating agencies, only one company was downgraded in 2010, much better than four companies in the previous year. Moreover,

Chart 4.42 Number of life insurance companies classified by RBC ratios



Source: FSC.

⁷⁶ However, the regulation on 10 June 2010 only applied to real estate for investment purposes, which had been held for over three years and the building upon it had been finished, in accordance with the principle of instant application with yield.

⁷⁷ According to Article 143-4 of the Insurance Act, the risk-based capital ratio (= regulatory capital / risk-based capital) of the insurance industry can not be below 200%.

only one company was listed on negative rating on CreditWatch at the end of February 2011, in contrast with three a year earlier, reflecting the upgrading of overall credit ratings. The top three companies in terms of assets and premium market share were rated above twA+ or A+(twn), respectively, signifying their strong ability to meet all financial commitments.

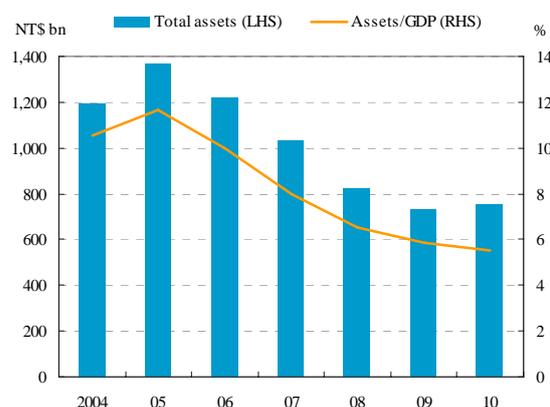
4.2.3 Bills finance companies

The total assets of bills finance companies rebounded slightly in 2010. Although earnings declined a little year on year, and the average capital adequacy ratio descended due to the amendment of relevant regulations, the quality of credit assets remained sound. The problem of maturity mismatch between assets and liabilities in bills finance companies still existed, and liquidity risk remained rather high; however, the major liability to equity ratio conformed to the statutory ceiling. The outstanding balance of the commercial paper guarantee business undertaken by bills finance companies gradually rose, but was still below the statutory ceiling.

Total assets rebounded slightly

By virtue of rising bonds and bills investment positions, the total assets of bills finance companies stood at NT\$754 billion at the end of 2010, equivalent to 5.54% of annual GDP and increased by 3.42% year on year (Chart 4.43). Of the nine bills finance companies, the top three companies held a combined market share of 73.48% by assets, while none of the other firms had a market share above 6% except for one company. For the past few years, owing to the synergy created by broadening operating scale and integrating resources, the tendency of bills finance companies to be merged with banks prevailed, and it seems inevitable that the assets and business scale of bills finance companies will contract further.

Chart 4.43 Total assets of bills finance companies



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

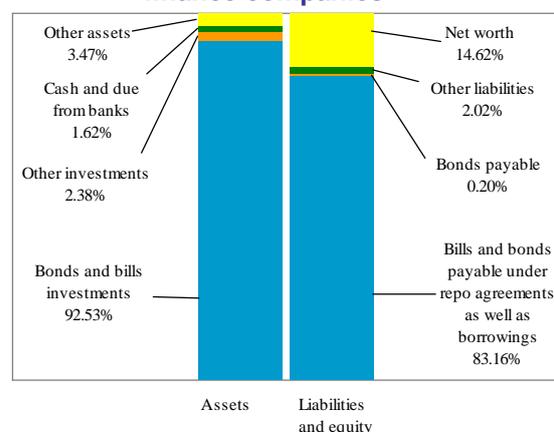
Regarding asset/liability structure at the end of 2010, bonds and bills investments on the asset side accounted for 92.53% of total assets, an increase of 1.25 percentage points year on year, while bills and bonds payable under repo agreements as well as borrowings on the liability side accounted for 83.16% of total assets and corporate bonds payable represented only 0.20% (Chart 4.44).

Profitability slightly decreased year on year

Bills finance companies posted a net income before tax of NT\$10.1 billion in 2010, slightly lower than NT\$11.0 billion in 2009 (Chart 4.45). The decrease in profitability was mainly driven by the fact that government bonds investments with higher yields had matured one after another, while newly issued bonds holdings had much lower yields, resulting in a dramatic decrease of interest revenues. At the same time, average ROE and ROA declined to 8.95% and 1.37%, respectively, lower than 9.65% and 1.41% in 2009 (Chart 4.46).

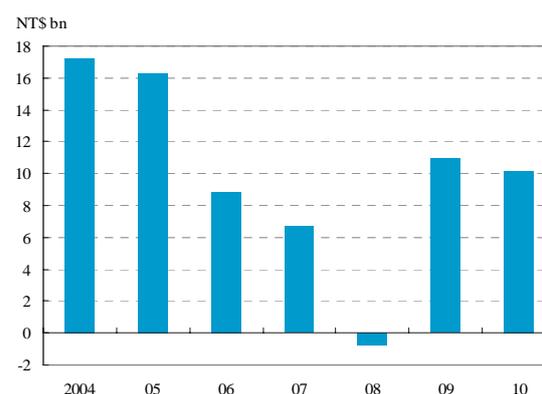
The CBC's decisions to raise policy rates from June 2010 compelled bills finance companies to face the pressure of rising funding costs as well as more unrealized losses of bills and bonds positions, which might be harmful to the future operation of bills finance companies. Nevertheless, driven by rising funding needs of corporate sector caused by continued global economic recovery, the commercial paper issuance went up again in 2010. In addition, the business of US dollar bills, which was approved to operate from December 2010,⁷⁸ may be conducive to the opening up of bills sources and enhancing profitability for

Chart 4.44 Asset/liability structure of bills finance companies



Note: Figures are end-December 2010 data.
Source: CBC.

Chart 4.45 Net income before tax of bills finance companies



Source: CBC.

⁷⁸ In order to help the corporate sector to obtain short-term foreign funds and expand domestic financial instruments and scope, the CBC and the FSC agreed to set up an on-shore US dollar bills market which began from 6 December 2010. At the initial stage, it was based on commercial paper issued by domestic corporations guaranteed by banks only.

bills finance companies.

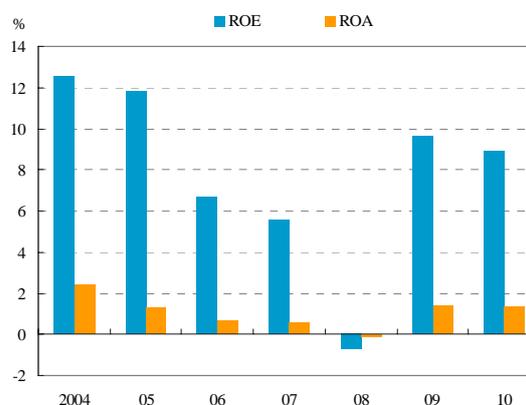
Asset quality remained satisfactory

The guaranteed advances ratio was only 0.19% at the end of 2010, declining year on year, owing to a sharp drop of the guaranteed advances amount, and the non-performing credit ratio also declined to 0.12% (Chart 4.47). At the same time, the ratio of the aggregate amount of loss and guarantee reserves to guaranteed advances, as well as to non-performing credit, was 1309.08% and 2026.46%, respectively. It showed the reserves set aside remained sufficient to cover potential losses of guarantee business, though the amount decreased by a large measure.

Average capital adequacy ratio decreased, yet remained above 12% for each firm

After the FSC amended the Regulations Governing the Capital Adequacy Ratio of Bills Finance Companies, which requires companies to hold additional capital for operational risk, the capital adequacy level of bills finance companies dropped accordingly, and the average capital adequacy ratio registered 16.20% at the end of 2010, decreasing by 1.08 percentage points year on year. Furthermore, the Tier 1 capital ratio declined from 18.84% to 15.60% year on year, yet remained above 12% for each firm. The average multiple of debt to equity of bills finance companies also went up slightly to 5.84 times at the end of 2010 (Chart 4.48), reflecting a small elevation in financial leverage.

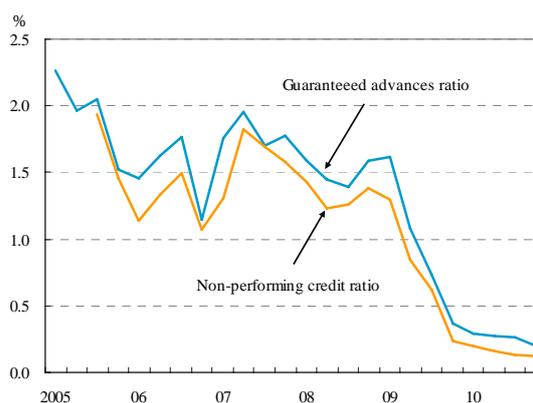
Chart 4.46 ROE & ROA of bills finance companies



Notes: 1. ROE = net income before tax / average equity.
2. ROA = net income before tax / average assets.

Source: CBC.

Chart 4.47 Guaranteed advances ratio of bills finance companies



Notes: 1. Guaranteed advances ratio = overdue guarantee advances / (overdue guarantee advances + guarantees).
2. Non-performing credit ratio = non-performing credit / (overdue guarantee advances + guarantees).

Source: CBC.

Liquidity risk remained high as maturity mismatch between assets and liabilities persisted

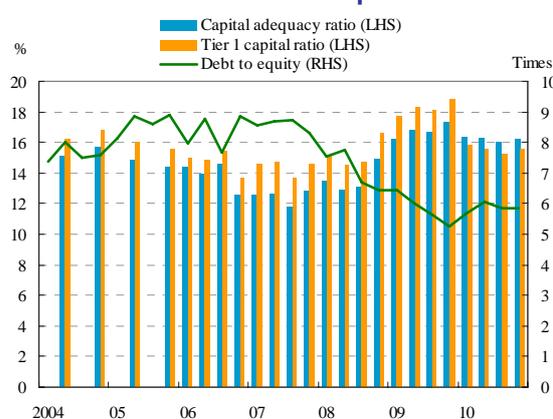
At the end of 2010, bonds and bills investments constituted 92.53% of total assets, while bonds investments accounted for 42.36% (Chart 4.49), the ratio declining year on year, yet still somewhat high. The sources of funds were mainly made up of interbank call loans and repo transactions, accounting for 83.16% of total assets. It was evident that a maturity mismatch between assets and liabilities still remained, and the demand for liquidity risk management was necessary.

For the purpose of fulfilling differential supervisory strategies and in order to reduce the operational and liquidity risk in bills finance companies, the FSC amended the regulations in April 2010, restricting the ceilings⁷⁹ of major liabilities according to the capital scale of bills finance companies. After implementation, the multiple of major liabilities to net worth of each bills finance company complied with the regulated ceilings, registering an average multiple of 6.35 times at the end of 2010.

Outstanding balance of guarantees rebounded gradually

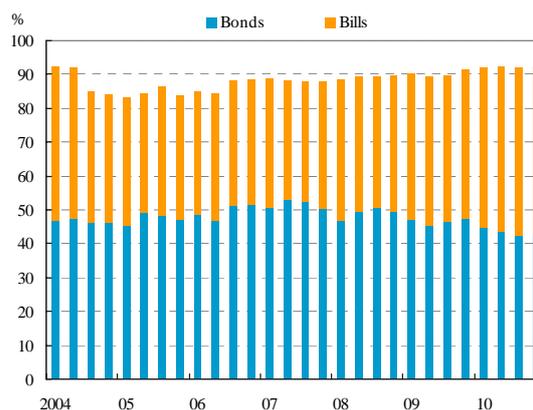
Because the funding demand of the corporate sector increased due to global economic recovery in 2010, the outstanding balance of commercial paper guarantees business undertaken by bills finance companies also rose manifestly, registering NT\$341.8 billion at the end of the year, an increase of NT\$25.5

Chart 4.48 Capital adequacy and leverage of bills finance companies



Source: CBC.

Chart 4.49 Bond & bill positions as percentage of assets at bills finance companies



Note: End-of-period figures.

Source: CBC.

⁷⁹ According to the amended Directions for Ceilings on the Total Amounts of the Major Liabilities and Reverse Repo Transactions Conducted by Bills Houses by the FSC on 9 April 2010, the major liabilities of a bills finance company could not exceed six times, eight times or ten times its net worth depending on the level of its capital adequacy ratio of below 10%, above 10% but below 12% or above 12%. If a bills finance company is a subsidiary of a financial holding company or its bank shareholder meets safe and sound criteria, the ceiling will be raised by an additional two times its net worth. As of the end of December 2010, the capital adequacy ratio of each bills finance company was above 12%, so the ceilings were ten times or twelve times for each bills finance company.

billion or 8.06% year on year (Chart 4.50). In February 2010, the FSC restricted the multiple of guarantees and endorsements business to net worth undertaken by bills finance companies according to different capital adequacy ratio levels. At the end of the year, the average multiple registered 3.45 times and the multiple of all bills finance companies was below 4.2 times, conforming to the regulation-setting ceiling of five times.⁸⁰

Chart 4.50 Outstanding commercial paper guarantees



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

⁸⁰ According to the amended “Directions for Outstanding Amount of Guarantees and Endorsements of Short-term Bills by Bills Houses” by the FSC on 24 February 2010, the ceiling of the multiple of outstanding commercial paper guaranteed to net worth for all bills finance companies could not exceed one, three, four and five times, respectively, depending on the level of its capital adequacy ratios of below 10%, above 10% but below 11%, above 11% but below 12%, or above 12%. As of the end of December 2010, the capital adequacy ratio of each bills finance company was above 12%, so the ceiling of five times was set for each one.

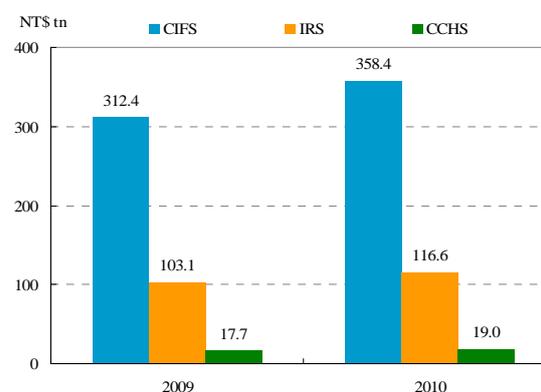
4.3 Financial infrastructure

4.3.1 Payment and settlement systems

Overview of systemically important payment systems

In 2010, the total transaction value of the three systemically important payment systems (SIPs)⁸¹ processing domestic interbank payments increased by NT\$60.8 trillion from the previous year to NT\$494 trillion. Among them, the CBC Interbank Funds-Transfer System (CIFS) was the most important and handled the final settlement of interbank funds transfers. In 2010, the transaction value of the CIFS reached NT\$358.4 trillion, and accounted for 72.6% of the total (Chart 4.51).

Chart 4.51 Transaction value of the three SIPs



Source: CBC.

Coping with the centenary bug problem in financial information systems

All financial information systems in Taiwan met the potential centenary bug problem of rolling over to three-digit year numbers when Taiwan entered into the 100th year of the republic on 1 January 2011. To ensure the smooth rollover of financial information systems, the FSC, the CBC and the Bureau of Agricultural Finance of the Council of Agriculture urged all financial institutions and clearing system operators to take prudent measures and carry out advanced testing. The FSC also assigned the Financial Information Service Co., LTD. (FISC) to monitor the proper operations and potential problems of the information systems in all financial institutions when entering into 2011. Due to the high level of preparedness, all financial information systems functioned well when the rollover time came.

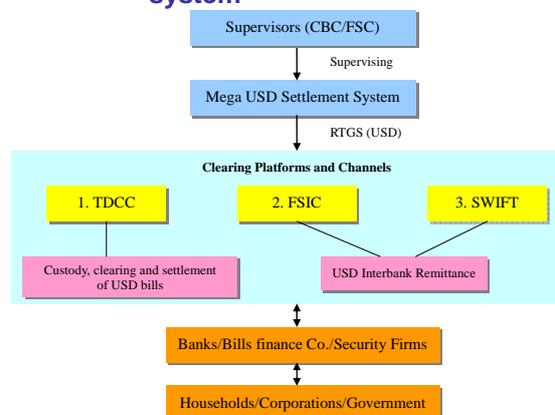
Establishing a domestic US dollar clearing and settlement system

The institutional framework

⁸¹ The three SIPs include the CBC Interbank Funds-Transfer System (CIFS), the Interbank Remittance System (IRS) and the Check Clearing House System (CCHS).

To establish a domestic US dollar bills market, the CBC approved the Bills Finance Association to set up a domestic US dollar bills clearing and settlement system in 2007. This new system, similar to the NT dollar bills clearing and settlement system, designates the Taiwan Depository & Clearing Corporation (TDCC) to take responsibility for custody, clearing and settlement of US dollar bills and employs a delivery versus payment (DVP) mechanism. Additionally, dishonored US dollar commercial paper is encompassed in the “Dishonored Check Record Information” system run by the Taiwan Clearing House.

Chart 4.52 The operational framework of the USD clearing and settlement system



Source: Mega International Commercial Bank.

In 2008, the Bankers Association further designated Mega International Commercial Bank (Mega Bank) as the sole domestic US dollar settlement bank. The US dollar settlement system, established and operated by Mega Bank, adopts an RTGS mechanism which is similar to the NT dollar interbank settlement system. Aside from settlement services for US dollar bills transactions, it also provides US dollar interbank remittance services (Chart 4.52).

Current operations and benefits

The US dollar bills market was launched on 6 December 2010. In the initial stage, only commercial paper (CP) and asset-backed commercial paper (ABCP) were traded in the market, with CP being the dominant one. To meet the settlement needs of the new market, the Mega US dollar settlement system came online at the same time and 44 financial institutions participated in the system. From 6 December 2010 to the end of January 2011, US dollar commercial paper issuances amounted to US\$110 million and the trading volume of the secondary market was US\$550 million, while the accumulated amount of US dollar interbank remittances reached US\$20.96 billion.

Through the new US dollar bills market, domestic firms with qualified credit ratings can issue US dollar commercial paper to meet their US dollar financing needs for business. Moreover, US dollar interbank remittance services provide the banking industry with a facility to transfer US dollar funds from one bank to another on the same day. It not only shortens the US dollar payment process and allows real-time settlement of domestic interbank

US dollar transfers as a result of improved fund management efficiency but also reduces the interbank remittance fees that used to be charged by foreign correspondent banks.

4.3.2 The CBC gradually raised policy rates and enhanced targeted prudential supervision on housing loans

In view of rising market interest rates and property prices due to the accelerating domestic economic recovery, together with heightened inflationary pressures, the CBC has raised policy rates four times since June 2010 (Table 4.3) and taken a series of targeted prudential measures on housing loans since October 2009. The prudential measures included actively urging banks to closely monitor the risks in housing loans and promulgating the regulations governing the extension of housing loans in specific areas (Box 4). These regulations are aimed at assisting financial institutions to avoid providing funds to speculators in the real estate market and encouraging financial institutions to adopt prudent credit risk management.

Table 4.3 CBC policy rate adjustments

Effective date	Discount rate	The rate on accommodations with collateral	The rate on accommodations without collateral
1 April 2011	1.750	2.125	4.000
31 Dec. 2010	1.625	2.000	3.875
1 Oct. 2010	1.500	1.875	3.750
25 June 2010	1.375	1.750	3.625
19 Feb. 2009	1.250	1.625	3.500

Source: CBC.

4.3.3 The expiration of the interim blanket guarantee for deposits at the end of 2010

In the wake of the deepening international financial crisis, the financial system in Taiwan was temporarily in turmoil in 2008 Q4. To enhance depositors' confidence and stabilize the financial system, the government announced the temporary measure of a blanket deposit guarantee in October 2008, which was effective until the end of 2009, accompanied by a package of measures to strengthen financial supervision and regulations. Afterwards, considering the prolonged instability of the global and local economy in 2009, and extensions of the blanket deposit guarantee schemes adopted by several neighboring Asian countries, the government announced in October 2009 an extension of the blanket deposit guarantee to the end of 2010.

The blanket deposit guarantee effectively stabilized depositor confidence and further improved financial stability during this crucial period. As the local economy gradually recovered and the asset quality and profitability of domestic financial institutions also improved substantially in 2010, the government decided to exit from the blanket deposit

guarantee scheme and resume a system of limited deposit insurance coverage according to schedule. To ensure financial stability while exiting the blanket deposit guarantee, the government adopted several measures. These included the FSC working out and implementing the exit strategy, the CBC intensively monitoring the liquidity of financial institutions, and the CDIC strengthening public awareness, through the press and media, of the exit of the blanket deposit guarantee and the content of the new limited deposit insurance scheme (Box 6). With the cooperation and coordination of the supervisory authorities, Taiwan returned to a limited deposit insurance scheme beginning from 1 January 2011 while maintaining the proper functioning of financial systems.

4.3.4 Cross-strait financial interactions continued to proceed

Three Cross-Strait Financial Supervisory Memorandums of Understanding (MOUs) governing banking, insurance, as well as securities and futures were signed by the FSC and Mainland China's regulatory commissions on 16 November 2009 and entered into force on 16 January 2010. Moreover, on 16 March 2010, the FSC amended three regulations governing permission of companies conducting banking, insurance, and securities and futures business to engage in cross-strait commerce and investment activities. Since then, cross-strait financial interactions have progressed further, including: (1) the financial services industry early harvest provisions of the Cross-Straits Economic Cooperation Framework Agreement (ECFA) became effective on 1 January 2011, which offered domestic financial institutions favorable conditions when entering Mainland Chinese financial market; and (2) the FSC issued the Regulatory Principles for Investments in Mainland China's Enterprises by Banks, Financial Holding Companies and Their Affiliated Enterprises, which permits and assists domestic banks and financial holding companies to establish a business presence in Mainland China under the principles of prudent and gradual relaxation of investment restrictions.

Since 2010, Taiwan's financial institutions have been actively setting up branches and taking equity stakes in Mainland China's financial institutions, and Mainland China's financial institutions also have started to establish representative offices in Taiwan. To maintain domestic financial stability and economic soundness, when expanding business in Mainland China, Taiwan's financial institutions have to comply with exposure limits ordered by the FSC and, at the same time, uphold prudential controls toward the business risks that might emerge from accessing the Mainland China market.

The financial services industry early harvest provisions of the ECFA came into effect

The final agreement of the ECFA was signed during the 5th round of the Straits Exchange Foundation (SEF) and the Association for Relations Across the Taiwan Straits (ARATS) talks on 29 June 2010 and was approved by the Legislative Yuan on 17 August 2010. Furthermore, the financial services industry early harvest provisions of the ECFA took effect on 1 January 2011 and provide advantageous conditions for domestic institutions to set up branches in Mainland China and offer better financial services to Taiwanese firms there.

Table 4.4 Financial services industry early harvest provisions of the ECFA

Items	Financial Sectors	Specific Commitments
Commitments of the Taiwan side on liberalization of financial services sector	Banking and other financial services (excluding securities, futures and insurance)	The banks in Mainland China which have been permitted to incorporate representative offices in Taiwan and whose representative offices have so incorporated for one full year may apply for incorporation of branches in Taiwan.
Commitments of the Mainland China side on liberalization of financial services sector	Banking and related services	<ol style="list-style-type: none"> 1. For Taiwan's banks to set up wholly owned banks or branches (not branches affiliated to a wholly owned bank) in the Mainland China with reference to the Regulation on Administration of Foreign-funded Banks, they shall have representative offices in Mainland China for more than one year before application. 2. For the operating branches of Taiwan's banks in Mainland China to apply to conduct RMB business, they shall have been operating in Mainland China for more than two years and been profitable in the preceding year before application. 3. For the operating branches of Taiwan's banks in Mainland China to apply to conduct RMB business for Taiwan's corporations in Mainland China, they shall have been operating in Mainland China for more than one year and been profitable in the preceding year. 4. The operating branches of Taiwan's banks in Mainland China may set up special agencies providing financial services to small businesses, the specific requirements of which shall follow the relevant rules in Mainland China. 5. Fast tracks shall be established for Taiwan's banks applying to set up branches (not branches affiliated to wholly owned banks) in central and western, as well as northeastern regions of Mainland China. 6. In conducting profitability assessment on the branches of Taiwan's banks in Mainland China, the relevant authorities shall take into account the overall performance of the Taiwanese bank under assessment.
	Insurance and related services	Groups formed by Taiwan's insurance companies through integration or strategic mergers shall be allowed to apply for entry into Mainland China's insurance market with reference

		to market access conditions for foreign-funded insurance companies: (1) total assets held by the group of over US\$5 billion; (2) Taiwanese insurance companies in the group, any of which has been established for more than 30 years; and (3) a representative office established in Mainland China for over two years by any one of the group.
	Securities, futures and related services	<ol style="list-style-type: none"> 1. Proper facility shall be provided to qualified Taiwan-funded financial institutions applying for qualification of Qualified Foreign Institutional Investor (QFII) in Mainland China. 2. Taiwan's Stock Exchanges and Futures Exchanges shall be included as soon as possible in the list of overseas exchanges recognized by Mainland China for qualified domestic institutional investors (QDII) to invest in financial derivatives; and 3. Relevant procedures shall be simplified for Taiwan's securities practitioners applying for and obtaining qualifications and certificates of practice in Mainland China.

Source: ECFA website.

Regulatory principles for the banking industry to invest in Mainland China

In order to help the domestic banking industry accelerate their moves to establish a presence in Mainland China and provide their customers with a more complete range of financial services, the FSC promulgated in December 2010, and amended in March 2011, the Regulatory Principles for Investments in Mainland China Enterprises by Banks, Financial Holding Companies, and Their Affiliated Enterprises.⁸² Its important contents include the following:

- Establishing restrictions on the types and numbers of investee firms and the investment amount, which are summarized in Table 4.5.
- Stipulating caps on the total investment amounts by banking industry in Mainland China:
 - When banks or their overseas banking subsidiaries enter the Mainland China market by establishing branches or subsidiary banks or taking equity stakes in Mainland China's banks, or subsidiaries more than 50% owned by any bank investing in Mainland China, the total of the investment and cumulative appropriation of operating capital in Mainland China shall not exceed 15% of the bank's net worth at the time of application.

⁸² To ease the limit, the FSC amended the Principles on 16 March 2011. Key points of the amendments include the following: (1) a provision that limited investment to only one financial services firm in Mainland China was repealed; (2) banks and financial holding companies are required to work with subsidiaries that invest in Mainland China to ensure that they establish a risk management mechanism for the financial services firms in which they invest, that such risk exposures be incorporated into the figures for total risk exposures of the bank or financial holding company, and that such mechanisms be reported to the board of directors of the bank or financial holding company for approval; and (3) at the time of application, the applicant must submit documentation on its risk management mechanism and the corporate group's method for controlling total risk exposure to Mainland China.

- The total investment amounts in Mainland China held by financial holding companies and their affiliates may not exceed 10% of the net worth of financial holding companies at the time of application.

Table 4.5 Summary of the regulatory principles for investments in Mainland China's enterprises by the banking industry

Investor	Investee firms	Investment restrictions
Financial holding companies, banks and overseas subsidiaries	Financial institutions	1. Limited to only one institution. 2. Subsidiaries that are more than 50% owned by banks or affiliates of financial holding companies, unless in accordance with relevant laws, are forbidden from investing in financial institutions in Mainland China.
Subsidiaries 100% owned by banks or financial holding companies	Financial leasing companies and other finance-related industries (except for financial institutions) that have been approved	1. Not limited to one financial services firm. 2. Shareholding ratio should be no less than 25% of the total voting shares of the investee firm.
Subsidiaries 100% owned by industrial banks	Venture capital, financial leasing companies and other finance-related industries (except for financial institutions) that have been approved	1. Not limited to one financial services firm. 2. Shareholding ratio should be no less than 25% of the total voting shares of the investee firm.
Subsidiaries with more than 50% of their shares owned by a bank	Other industries	Shareholding ratio should be no more than 5% of the total paid-in capital or issued stock of the investee firm.
Subsidiaries of financial holding companies	Other industries	Shareholding ratio should be no more than 15% of the total paid-in capital or issued stock of the investee firm.

Source: FSC.

Cross-Strait interaction of financial institutions

After the signing and implementation of the ECFA and the newly-issued regulations governing business and investment activities between Taiwan and Mainland China, several domestic financial institutions have already established branches in Mainland China or taken equity stakes in Mainland China's financial institutions, and four Mainland China's banks have set up representative offices in Taiwan (Table 4.6). The two-way interaction across the Taiwan Strait is entering a new stage.

Table 4.6 Cross-Strait interaction of financial institutions

Financial Sectors	Taiwan's financial institutions	Mainland China's financial institutions
Banking	<ol style="list-style-type: none"> 1. Nine banks were approved by the FSC to establish branches in Mainland China. Six of them have commenced business already, while the other three are applying for the approval of Mainland China's authorities. 2. Six banks have set up representative offices in Mainland China. 	Four banks were approved by the FSC to establish representative offices in Taiwan.
Insurance	Seven insurance companies were approved by the FSC to take equity stakes in Mainland China's insurance companies, while five of them have already obtained equity stakes.	
Securities and futures	<ol style="list-style-type: none"> 1. Thirteen firms have set up 28 representative offices in Mainland China. 2. Two securities investment trust companies were approved by the FSC to establish branches in the Mainland China, and one was approved to create a joint venture with a Mainland China's securities company. 3. Seven securities investment trust companies applied to Mainland China's authority for qualified QFII status. Three of them have gotten approval, and one of the three has further gotten official approval of investment quota. 	Eleven firms approved by Mainland China's authorities have registered as qualified domestic institutional investors (QDII) to invest in Taiwan.

Note: Data are until 22 March 2011.

Source: FSC.

4.3.5 Taiwan's Financial Industry should be well prepared to adopt the upcoming IFRS 9

On 14 May 2009, the FSC announced the full adoption of the International Financial Reporting Standards (IFRS) via a two-phase process⁸³ starting from the beginning of 2013. Some standards including IFRS 9 "Financial Instruments," IAS 19 "Employee Benefits," IAS 40 "Investment Property" and IAS 1 "Presentation of Financial Statements" will have

⁸³ In phase I, listed companies and financial institutions supervised by the FSC, except for credit cooperatives, credit card companies, and insurance intermediaries, will be required to adopt the IFRS starting from 2013, with optional early adoption starting from 2012 when approved by the FSC. In phase II, unlisted public companies, credit cooperatives and credit card companies will be required to adopt the IFRS starting from 2015, with optional early adoption starting from 2013.

significant influences on Taiwan's financial industry. Among them, the impact of the IFRS 9 will be the most critical.

On 12 November 2009, the IASB published the IFRS 9. Its implementation will be divided into three phases. The first phase, with regard to new standards for classification and measurement of financial assets and financial liabilities, as well as derecognition of financial instruments, is finalized and will be effective from 1 January 2013. The second phase for impairment of financial assets measured at amortized cost and the third phase for hedge accounting are still in the draft stage and are expected to be finalized in the third quarter of 2011. As Taiwan's financial industries will adopt the IFRS 9 in the future, its impacts will not only be on finance and accounting, information systems, remuneration practices, investor relationships, taxation, regulations and other legal matters, but also on financial conditions, profitability and capital charges of financial institutions. In particular, the impacts of the second phase, switching from the current "incurred loss model" to the "expected loss model," will be most significant. Therefore, financial institutions shall be well-advised to prepare early and evaluate the potential impacts so as to develop effective measures in response to the implementation of the IFRS 9 (Box 7).

Box 6**Measures in response to the exit of the blanket deposit insurance scheme**

When the global financial crisis erupted in 2008, numerous countries expanded their deposit insurance coverage in order to diminish potential systemic risks. The Taiwanese government also announced a temporary measure of a blanket deposit guarantee in October 2008, which was effective until the end of 2009. This measure effectively restored the confidence of depositors and stabilized the local financial system. However, considering the prolonged instability of the global and local economies and financial systems in 2009 and the extensions of the blanket deposit guarantee schemes adopted by various neighboring Asian countries, the government announced in October 2009 an extension of the blanket deposit guarantee to the end of 2010.

To ensure the stability of the financial system when exiting from the blanket deposit guarantee scheme, the related authorities reached, after deliberate discussions, an agreement that the FSC was responsible for working out and implementing exit strategies, and that the CBC and the CDIC would take preventive measures to eliminate any potential emergent liquidity problems of financial institutions and to enhance public awareness of the exit of the blanket deposit guarantee.

1. Measures adopted by the FSC

The FSC devised and implemented the exit strategy of the blanket deposit guarantee scheme as follows:

- The FSC established a supervisory working group, with members from the FSC, the CBC, the MOF, the CDIC and related authorities, in July 2010 to periodically review the progress of the exit strategy implementation and to monitor the asset quality, liquidity and changes in the deposits and loans outstanding of individual banks.
- The CDIC proposed a package of measures to address the potential impacts of the exit of the blanket deposit insurance scheme in April 2010, which was reviewed by the related authorities and was approved by the Executive Yuan. Moreover, on 12 August 2010, the FSC, the MOF and the CBC jointly announced that the maximum deposit insurance coverage amount would be raised to NT\$3 million starting from 1 January 2011. This policy resulted in an increase in the ratio of deposit accounts fully covered by deposit insurance to 98.6%.
- The FSC approved the Revised Implementation Scheme for the Deposit Insurance Risk-based Premium System on 24 November 2010, which raised the deposit insurance premium rates for insured banks and credit cooperatives and modified the risk grades,

in order to accelerate the accumulation of deposit insurance funds and to enhance the risk bearing capability of the CDIC.

- After consulting with the CBC and related authorities, the FSC proposed the revision of the Deposit Insurance Act to cover the interest of domestic currency deposits as well as the principal and interest of foreign exchange deposits in the scope of the deposit insurance scheme. This proposal was finalized and became effective on 29 December 2010.

2. Measures adopted by the CBC

The CBC was mainly in charge of the emergency liquidity assistance program of the exit strategy and actively participated in the aforementioned supervisory working group. Key measures adopted by the CBC are summarized as follows:

- Closely monitored the potential deposit movements induced by the exit of the blanket deposit insurance scheme within the banking industry, as well as actively oversaw the liquidity of banks and bills finance companies and provided the banking industry with sufficient liquidity, according to the Central Bank of the Republic of China (Taiwan) Act, so as to maintain financial stability.
- Required banks to report the ratios of the sum of large-amount deposits to total deposits in May 2010 in order to analyze the potential impact of the prospective movements of large-amount deposits within the banking industry.

Furthermore, on 25 September 2008, the CBC announced expansion of the scope of Repo facility operations, which included the expansion of eligible counterparties to cover securities firms and insurance companies, the extension of the term of the facility to within 180 days from 30 days, and the allowance of financial institutions to apply for the CBC's approval for Repo facility operations if they have emergent funding demands, in addition to the operations announced by the CBC.

3. Measures adopted by the CDIC

To ensure the smooth transition from the blanket coverage to the new limited insurance scheme, the CDIC held several local and international seminars in 2010 to call public attention to the reform of the deposit insurance scheme and to remind insured banks to enhance liquidity management improve business risk control and hold adequate capital.

In addition, starting from August 2010, the CDIC strengthened public awareness through mass media, posters in banks' premises and seminars on the exit of the blanket deposit guarantee and the introduction of the new limited deposit insurance scheme.

Box 7**Impacts of the IFRS 9 on Taiwan's financial industry and necessary measures*****1. Main content of the International Financial Reporting Standards (IFRS) 9***

On 12 November 2009, the International Accounting Standards Board (IASB) issued the IFRS 9 “Financial Instruments.” The implementation of this standard is divided into three main phases and will replace IAS 39, referring to Taiwan’s SFAS 34 “Financial Instruments: Recognition and Measurement.” The first phase, covering the new standards for classification and measurement of financial assets, financial liabilities and derecognition of financial instruments, is finalized and will be effective from 1 January 2013. The second phase for impairment of financial assets measured at amortized cost and the third phase for hedge accounting are still in the draft stage and are expected to be finalized in the third quarter of 2011. This box introduces the contents of the first and second phases that will have significant impacts on financial institutions and lists the main differences between the IFRS 9 and Taiwan’s SFAS 34 in Table B7.1.

1.1 The first phase: classification and measurement of financial assets

The IFRS 9 divides financial assets into two classifications, those measured at amortized cost and those measured at fair value. It is quite different from the accounting treatment in Taiwan’s SFAS 34, which breaks down all financial assets into five different classifications. If satisfying both the “business model” test and the “contractual cash flow characteristics” test¹ at initial recognition, a financial instrument must be measured at amortized cost and assess impairment losses subsequently. Otherwise, it must be measured at fair value. In addition, if a hybrid contract contains a host that is within the scope of the IFRS 9, embedded derivatives will no longer be separated from the host contract. Instead, the entire hybrid contract is assessed and measured as a whole at amortized cost or at fair value.

1.2 The second phase: exposure draft for impairment of financial assets measured at amortized cost

From January 2011, the banking sector in Taiwan has recognized impairment losses using the “incurred loss model” stated in the third amendment to Taiwan’s SFAS 34. When there is any objective evidence of impairment for financial assets, banks need to determine whether any impairment losses should be recognized and set provisions.² This approach is the same as IAS 39.

Under the incurred loss model, impairment losses are recognized only when there is objective evidence of impairment or a loss event. However, it is criticized in the regard that interest revenue is overstated in the periods before a loss event occurs and an impairment allowance is recognized too little and too late under this model. Addressing this, the IASB issued the exposure draft “Financial Instruments: Amortized Cost and Impairment” (the original edition) on 5 November 2009, which proposed an expected loss model for financial assets measured at amortized cost and considered initial expected credit losses as part of effective interest rate determinants. However, the expected loss model proposed in the original was considered too complicated and was not easy to implement. Hence, the IASB and the FASB jointly published a supplement to the IASB’s original edition on 31 January 2011, which improves the impairment accounting for financial assets managed in an open portfolio, such as bank loans. This supplement retains the fundamental concept of expected credit losses proposed in the original but excludes expected credit losses from the determinants of the effective interest rate, the same as IAS 39. This revised draft is expected to be finalized in the third quarter of 2011.

Table B7.1 The main differences between the IFRS 9 and Taiwan’s SFAS 34

Items	Taiwan’s SFAS 34	IFRS 9
Classification of financial assets	Five classifications: 1. Fair value through profit or loss 2. Available-for-sale 3. Loan and receivable 4. Held-to-maturity 5. Cost less impairment	Two classifications: 1. Fair value through profit or loss 2. Amortized cost
Impairment of financial assets	Incurred loss model	Expected loss model
Unquoted equity instruments	Measured at cost	Measured at fair value
Hybrid instruments	Need to judge if embedded derivatives are closely related to the host financial asset.	If a hybrid contract contains a host that is within the scope of the IFRS 9, embedded derivatives will no longer be separated from the host contract. Instead, the hybrid contract is assessed as a whole.
Reclassifications	Allowed to reclassify assets under several circumstances.	Allowed to reclassify assets only when an entity changes its business model.

Source: CBC.

2. Impacts of the IFRS 9 on the financial industry in Taiwan

The IFRS 9 significantly changes the classification of financial assets. It is expected to have significant impacts on the financial industry, including: (1) how to implement the

two aforementioned tests to determine whether financial assets are measured at amortized cost or not; (2) how to establish the fair value model for unquoted equity instruments which used to be measured at cost under IAS 39; and (3) what the impacts of new classification of financial assets on capital adequacy will be.

As for the expected loss model of the second phase, it is quite different from the current incurred loss model and requires significant changes of finance systems by enterprises. Especially for financial institutions, the implementation cost will be significant and a transition period for implementation will be needed. Therefore, financial institutions may face the following challenges and impacts, including: (1) how to develop a system to estimate future cash flows and credit losses over the life of a financial asset or group of financial assets; (2) how to collect or obtain historical loss data or credit rating information for assets with similar credit risk characteristics; and (3) how to interact with regulatory requirements, especially Basel III capital requirements.

3. Necessary measures for financial institutions

The conversion to the IFRS will substantially impact not only finance and accounting, but also information systems, remuneration practices, investor relationships, as well as taxation, regulations and other legal matters. For the financial industry, the first significant impact is on information systems. In order to reduce the modifying cost for information systems, all departments within a financial institution should take enough time to adopt user acceptance tests before the new information system is in place. Secondly, though the IFRS 9 simplified the classification of financial assets, it will require more judgments when it is applied. Hence, all related departments within a financial institution should review the types of financial assets they hold and classify them according to the new classification models. Moreover, the IFRS is very different from the current accounting treatment in Taiwan and is expected to impact the financial positions, incomes and capital charges of financial institutions. Financial institutions should prepare early by evaluating the potential impacts, developing effective responsive measures and communicating with senior managers and investors in order to mitigate potential impacts.

Notes: 1. If the objective of the entity's business model is to hold the financial asset to collect the contractual cash flows, rather than to sell the instrument prior to its contractual maturity to realize its fair value changes, it satisfies the "business model" test. If the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, it satisfies the "contractual cash flow characteristics" test.

2. In accordance with current provision regulations, banks were required to break down all assets into five categories and set aside provisions with different reserve ratios of 0.5%, 2%, 10%, 50% and 100%, respectively. Although the banking sector adopted the “incurred loss model” to recognize impairment allowances from January 2011, the supervisory requirement is still effective as a minimum regulatory standard.