

## III. Financial sector assessment

### 3.1 Financial markets

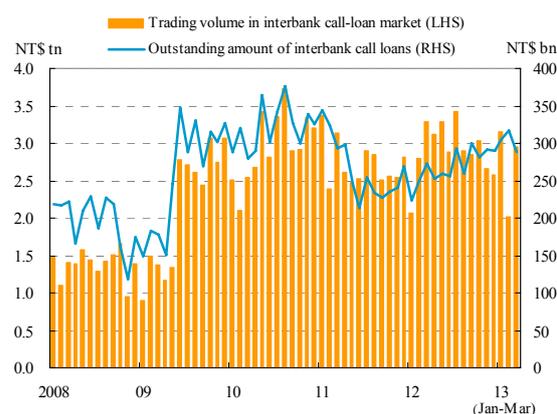
In 2012, the trading volume in interbank call loans expanded, the outstanding amount of bills and bond issuance in the primary markets significantly rose, while the trading volume in the secondary markets remained contracted. The yield spread between long-term and short-term rates still remained at a low level. As for the domestic stock markets, stock indices trended up, while volatility gained stability after trending down, and the annual turnover ratio hit a 10-year low. In the foreign exchange market, the NT dollar exchange rate against the US dollar reversed from appreciation to depreciation but remained relatively stable compared to the exchange rates of other major currencies; moreover, trading volume decreased slightly.

#### 3.1.1 Money and bond markets

##### *Trading volume of interbank call loans slightly expanded*

In 2012, the average daily outstanding amount of interbank call loans and the average monthly trading volume increased by 1.62% and 6.68% year on year, respectively. The rise in the average monthly trading volume was larger than that in the average daily outstanding amount, primarily because financial institutions relied more on interbank overnight call loans to reduce their funding costs and roll over loans more frequently. In 2013 Q1, the trading volume of interbank call loans remained at a high level, although it descended markedly in February owing to the Chinese Lunar New Year holidays (Chart 3.1).

**Chart 3.1 Interbank call-loan market**



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

### **Bills issuance in the primary market significantly rose, but trading volume in the secondary market remained contracted**

In 2012, the outstanding amount of bills issuance significantly expanded in the primary bills market. At the end of 2012, the outstanding amount of bills issuance rose by 21.92% year on year, with commercial paper posting the highest increase of NT\$288.4 billion or 39.23%. The main reason behind this was that interest rates of commercial paper issuance remained at low levels as large private enterprises and state-owned enterprises raised funds through commercial paper issuance.

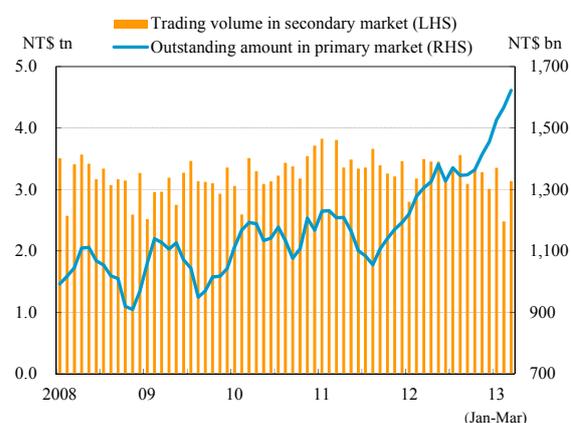
Although bills issuance in the primary market rose, trading volume in the secondary market contracted by 4.02% year on year in 2012 (Chart 3.2). The reason was primarily because banks actively employed a buy and hold strategy toward investing in commercial paper, along with a reduction of the rollover frequency of commercial papers issued by state-owned enterprises as they extended the maturity of commercial paper issued.

In 2013 Q1, the outstanding amount of bills issuance trended up in the primary market, while the trading volume of bills in the secondary market descended markedly in February owing to the Chinese Lunar New Year holidays, before it soared in March.

### **Bond issuance in the primary market significantly rose, but the turnover of outright transactions in the secondary market further decreased**

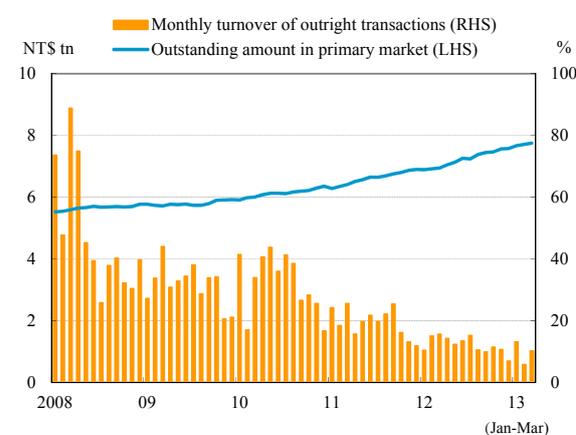
At the end of 2012, the outstanding amount of bond issuance ascended by 9.87% year on year (Chart 3.3), with corporate bonds and financial debentures posting the highest growth of 17.33%. The main reason behind

**Chart 3.2 Primary and secondary bills markets**



Sources: CBC and FSC.

**Chart 3.3 Primary and secondary bond market**



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

Sources: CBC and FSC.

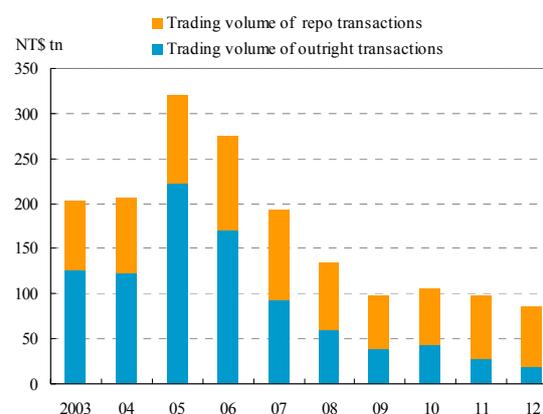
this was the cost of bond issuance remained at a low level, the government relaxed regulatory restrictions on the terms of corporate bond issuance for state-owned enterprises, and domestic banks issued debentures in an effort to promote their capital adequacy ratios. In addition, government bonds registered a year-on-year increase of 6.25% in 2012, affected by treasury funds management and regular and moderate issuance of government bonds.

In 2012, the bond market was still sluggish, and trading volume declined by 11.51% year on year. Of the components, outright transactions dropped significantly by 31.36%, while repo transactions slightly decreased by 4.00% (Chart 3.4). Outright transactions were sluggish owing to ample liquidity and less bonds being traded in the market, primarily because banks actively employed a buy and hold strategy toward investing in government bonds.<sup>45</sup> Meanwhile, inactive corporate bonds and financial debentures issuance constituted a major portion of the growth in the outstanding amount of bond issuance,<sup>46</sup> leading to the average monthly bond turnover ratio in 2012 being significantly lower than the previous year's level. Moreover, because of bond traders' lack of willingness to trade by the end of the year, outright transactions dropped significantly and the monthly turnover ratio fell to a trough of 6.86% in December 2012. In 2013 Q1, the outstanding amount of bonds that have been issued trended up in the primary bond market. Nevertheless, the outright turnover ratio descended to a ten-year low of 5.7% in February owing to the Chinese Lunar New Year holidays, but reversed to increase slightly in March (Chart 3.3).

### **Yield spread remained at a low level**

At the beginning of April 2012, the Ministry of Economic Affairs announced a policy to scrap restrictions on fuel and electricity price increases. In response, the CBC strengthened its open market operations to absorb market liquidity in an attempt to prevent fuel and electricity price rises from pushing inflation expectations upwards, leading to a significant rise in the

**Chart 3.4 Outright and repo transactions in the bond market**



Source: CBC.

<sup>45</sup> Based on CBC data, the average share of central government bonds held by banks accounted for 45.60% in 2012, increasing by 2.23 percentage points over the previous year.

<sup>46</sup> Based on FSC data, the outstanding market share of corporate bonds and debentures issued, excluding international bonds, registered 33.56% at the end of 2012, but the market share of outright transactions of corporate bonds and debentures merely reached 14.17%.

overnight interbank call-loan rate. In the second half of 2012, affected by continued slowdown in the domestic economy, and low private funding demand, the overnight interbank call-loan rate regained stability from August onwards after trending down. However, due to ample market liquidity, the yield on 90-day commercial paper in the secondary market was affected less by the CBC's open market operations and remained relatively stable.

Long-term market rates were affected mainly

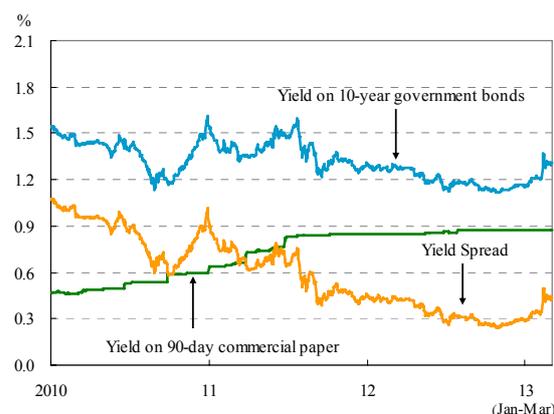
by international financial conditions and domestic stock market performance. In the first half of 2012, the expansion of the European sovereign debt crisis, slowdown in Mainland China's economic growth and faltering US economic recovery weakened domestic economy. As a result, trading value in the stock market significantly contracted and capital flowed into the bond markets, leading to a downward trend in the yield on 10-year government bonds. From the second half of the year, the yield on 10-year government bonds reversed to trend upward in response to rises in US government bond yields and domestic stock prices. However, it declined from September onwards following a drop in the stock market and dipped to an annual low of 1.1153% in November, with the yield spread between short-term and long-term rates moving down to 25 basis points. Afterwards, the yield on 10-year government bonds reversed to trend up, affected by the rebound of the stock market. In 2013 Q1, the yield on 10-year government bonds kept rising, and the yield spread expanded to 44 basis points (Chart 3.5).

### 3.1.2 Equity markets

#### **Stock indices trended up, while volatility stabilized after trending down**

Spurred by the robust performance of global stock markets and massive net buying by foreign investors, the TAIEX of the TWSE market hit an annual high of 8,144 on 2 March after beginning the year at 6,952. However, dampened by lower-than-expected economic performance in Europe and the US, the reintroduction of a stock trading income tax, and rising oil and electricity prices, the TAIEX dipped to an annual low of 6,895 on 4 June. In 2012 Q3, due to the strengthening of global stock markets, the TAIEX climbed and reached a new high of 7,782 on 19

**Chart 3.5 Yield spread**



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

Source: Bloomberg.

September. Afterwards, owing to a case of fraud regarding the commissioned management of government pension funds and additional dividends charged for the Supplementary Insurance Premium of National Health Insurance, the TAIEX dropped but subsequently rebounded to 7,699 at the end of December, increasing by 8.87% year on year. During 2013 Q1, the TAIEX continued on its upward path, and reached 7,919, an increase of 2.85% from the end of 2012 (Chart 3.6).

Taiwan's GreTai Securities Market (GTSM) Index of the OTC market closely tracked the movements of the TAIEX, sliding down after hitting an annual high of 120 in March, but regained its upward tendency in late November and reached 103 at year-end 2012, with an annual rise of 10.01%. Similarly, the figure climbed to 114 at the end of March 2013, an increase of 10.65% from the end of 2012 (Chart 3.6).

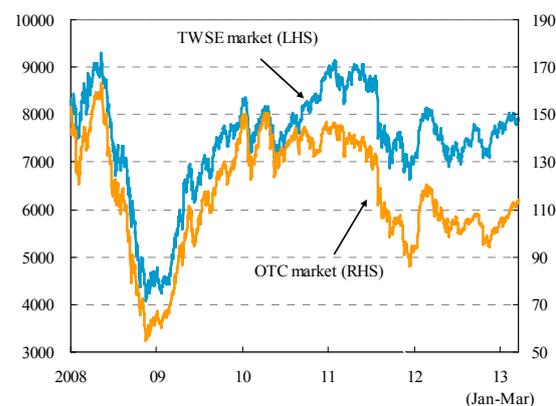
All major stock markets showed positive performances in 2012, though the Thai Index outperformed others with a rise of 35.76%.

Compared to major stock markets around the world, the TAIEX climbed by a solid 8.87%, approximately equal to that of South Korea (Chart 3.7).

Broken down by sector, most sector indices in the TWSE market entered bullish territory in 2012, except the Plastics, Oil, Gas and Electricity, Communications and Internet, and Electronic Products Distribution Industry indices, which were all negative performers. The indices for Automobiles and Building Materials and Construction performed the best, increasing by 32.39% and 24.42%, respectively.

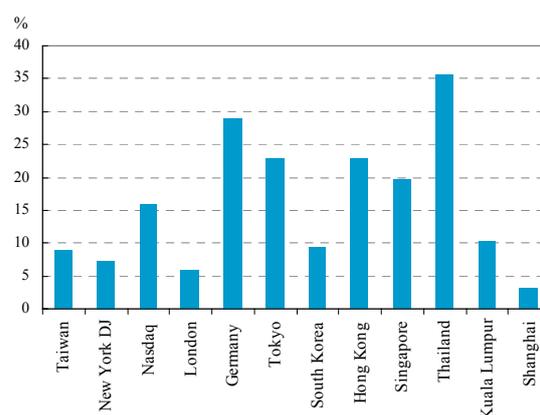
In 2012, the volatility in the TWSE and OTC markets stabilized after trending down, standing at 13.21% and 15.98%, respectively, at the end of December. At the beginning of 2013, the volatility in the TWSE and OTC markets kept trending downward as the local stock indices

**Chart 3.6 Taiwan stock market indices**



Sources: TWSE and GTSM.

**Chart 3.7 Comparison of major stock market performances**



Notes: 1. Figures are for 2012.  
2. Taiwan's data is for the TWSE market.  
Source: TWSE.

continued to gain stability, standing at 10.18% and 10.78%, respectively, at the end of March (Chart 3.8).

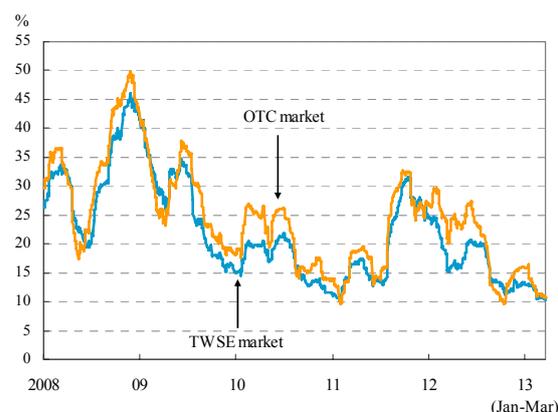
### Annual turnover ratio hit a new low

The TWSE and OTC markets both experienced sluggish conditions in 2012, with the average monthly trading value on the TWSE market registering NT\$1.69 trillion, a dramatic contraction of 22.75% year on year, while its turnover ratio in terms of trading value in the same year declined to 97.33%, touching a 10-year low. The transaction volume in the OTC market performed even more lethargically. The average monthly trading value was only NT\$246 billion in 2012, a decrease of 26.07% year on year. Reflecting this, the annual turnover ratio of the OTC market fell to 174.80% from 223.36% a year earlier, registering a 10-year record low (Chart 3.9). In February 2013, affected by the Chinese Lunar New Year holidays, the turnover ratios and monthly trading values in the TWSE and OTC markets continued their downward direction.

Compared to major stock markets around the world, the annual turnover ratio in the TWSE market in 2012 was approximately equal to the stock markets in New York, Germany and Tokyo, but higher than those in London, Hong Kong, Singapore and Kuala Lumpur (Chart 3.10).

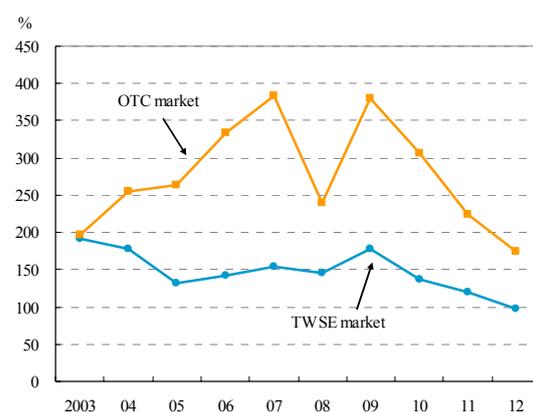
Compared to major stock markets around the world, the annual turnover ratio in the TWSE market in 2012 was approximately equal to the stock markets in New York, Germany and Tokyo, but higher than those in London, Hong Kong, Singapore and Kuala Lumpur (Chart 3.10).

Chart 3.8 Stock price volatility



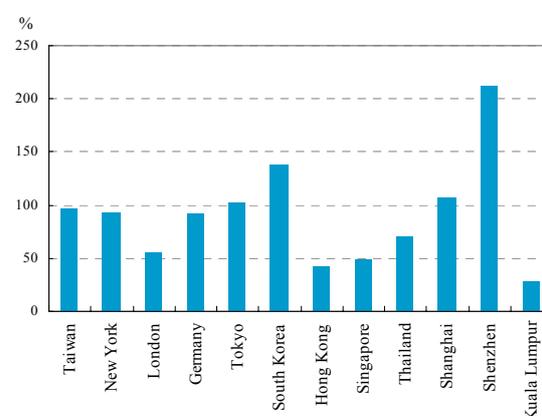
Note: Volatility refers to the annualized standard deviation of 60-day daily index returns.  
Sources: TWSE, GTSM, and CBC.

Chart 3.9 Annual turnover ratios in Taiwan's stock markets



Sources: TWSE and GTSM.

Chart 3.10 Comparison of turnover ratios in major stock markets



Notes: 1. Figures refer to accumulated turnover ratios in 2012.  
2. Taiwan's data is for the TWSE market.  
Source: TWSE.

### 3.1.3 Foreign exchange market

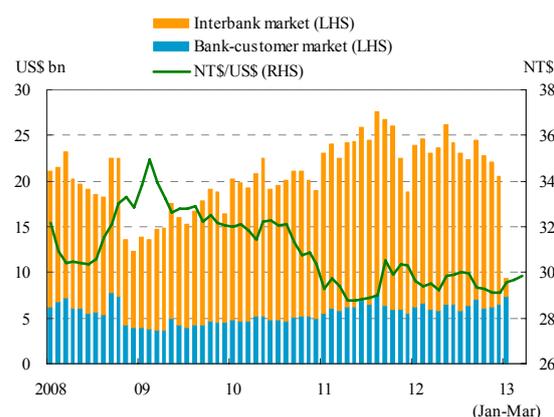
#### **The NT dollar exchange rate reversed from appreciation to depreciation and the trading volume decreased slightly**

In 2012 Q1, the NT dollar exchange rate kept appreciating, reaching 29.232 against the US dollar on 30 April. Afterwards, it turned to a period of depreciation and fell to 30.206 against the US dollar in late July, mainly owing to global political and economic turmoil and foreign capital outflows. However, the NT dollar exchange rate reversed to appreciate and reached an annual high of 29.090 in early November in virtue of foreign capital inflows to Asian emerging markets arising from a third round of quantitative easing in the US in September 2012, but then turned to depreciation and stood at 29.136 against the US dollar at the end of December, increasing by 3.96% year on year (Chart 3.11).

In early 2013, the NT dollar exchange rate fluctuated within a narrow range. However, due to the quantitative monetary easing introduced by the BOJ in late January, the value of the yen went down significantly, which caused the Korean won, the Singapore dollar and other currencies in Asia to depreciate against the US dollar. Furthermore, as a result of purchases of US dollars by firms and increasing capital outflows by foreign investors, the NT dollar exchange rate turned to a period of depreciation, reaching 29.875<sup>47</sup> against the US dollar at the end of March.

Compared to other major currencies in Asia, the appreciation of the NT dollar against the US dollar was 3.96%, lower than the Korean won's 7.58% and the Singapore dollar's 6.17%, but slightly higher than the Malaysian ringgit's 3.72% in 2012, while the only currency to depreciate was the Japanese yen, sliding by 10.14%. In 2013 Q1, the Japanese yen continued to depreciate, falling by 8.23%. Moreover, the NT dollar depreciated by 2.47%, lower than the drop of 3.65% in the Korean won (Chart 3.12).

**Chart 3.11 NTD/USD exchange rate and foreign exchange market trading volume**



Notes: 1. Trading volume is the monthly average of daily data, while exchange rate is end-of-period data.  
2. Latest data for trading volume is as of January 2013.  
Source: CBC.

<sup>47</sup> In early April 2013, owing to the quantitative and qualitative monetary easing introduced by the BOJ and greater concerns over tension on the Korean Peninsula, the NTD/USD exchange rate kept depreciating, reaching 30.060 on 8 April. As a result of the large depreciation and the ensuing sales of US dollars by firms, the NT dollar exchange rate turned to appreciate, reaching 29.616 against the US dollar on 30 April.

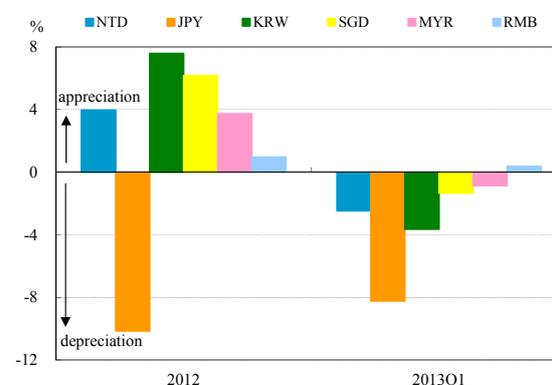
As for the NT dollar against other key international currencies, as a result of the significant depreciation of the yen, the NT dollar appreciated against the yen by 15.69% in 2012; in addition, it appreciated by 1.53% against the euro. Conversely, the NT dollar depreciated by 0.48% and 3.37% against the British pound and the Korean won, respectively, over the same period (Chart 3.13).

Owing to relatively large domestic and international capital movements, the average daily trading volume of the foreign exchange market reached US\$23.4 billion in 2012. Nevertheless, this represented a slight decrease of 3.15% compared to US\$24.2 billion a year earlier, primarily because of a decline in the trading volume of the interbank market (Chart 3.11). A breakdown by counterparty shows that the average daily trading volume in the interbank market accounted for 73.11% of the total in 2012, while the retail bank-customer market made up a 26.89% share. As for types of transactions, foreign exchange swaps accounted for 43.41% of the total, followed by spot trading with 38.17%.

### **NT dollar exchange rate volatility remained relatively stable**

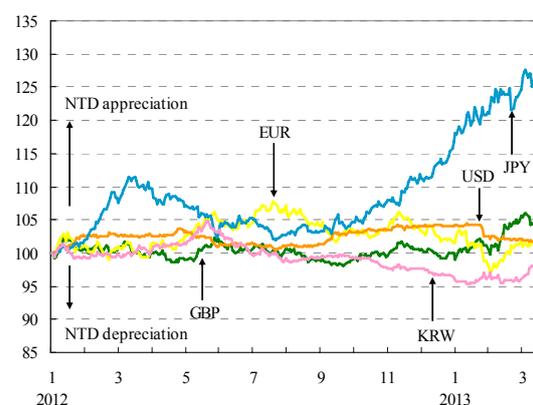
The volatility in the NT dollar exchange rate against the US dollar fluctuated between 1% and 5% in 2012, and registered an annual average of 2.57%. In early 2013, with the quantitative monetary easing introduced by the BOJ, the volatility in the NT dollar exchange rate against the US dollar trended upwards, but fell below 3% from the middle of March. 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

**Chart 3.12 Appreciation and depreciation percentages of major Asian currencies against the US dollar**



Note: Positive figures refer to exchange rate appreciation, and negatives to depreciation.  
Source: CBC.

**Chart 3.13 Movements of NT dollar exchange rate against key international currencies**



Note: 2 January 2012 = 100.  
Source: CBC.

dollar (Chart 3.14).

## 3.2 Financial institutions

### 3.2.1 Domestic banks

In 2012, the total assets of domestic banks accumulated at a slower pace due to the moderate growth rate in loans. Asset quality remained satisfactory and the credit concentration of corporate loans declined continuously; nevertheless, credit exposure in the real estate loans remained high. The estimated VaR for market risk exposures of domestic banks had limited influence on their capital adequacy. Moreover, liquidity risk was moderate as the banking system benefited from ample liquidity. The profitability of domestic banks reached a record high in 2012 with a sustained improvement in capital adequacy, strengthening the capability of domestic banks to bear risks.

#### **Total assets increased continually, while growth slowed**

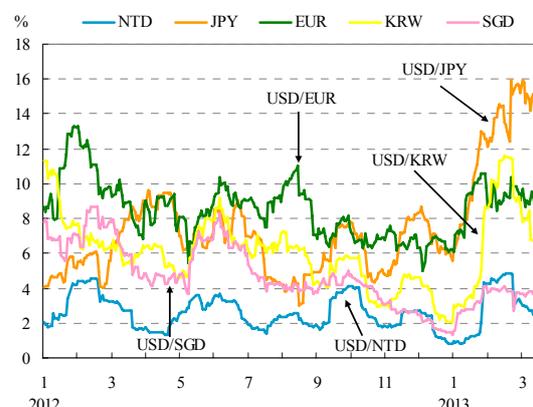
The total assets of domestic banks kept growing and reached NT\$37.03 trillion at the end of 2012, equivalent to 263.69% of annual GDP (Chart 3.15). However, the annual growth rate of total assets decreased to 4.91% from 5.53% a year earlier, due to a slowing trend in loan growth.

#### **Credit risk**

##### **Customer loan growth slowed**

Customer loans were the major source of credit risk for domestic banks. Outstanding loans of

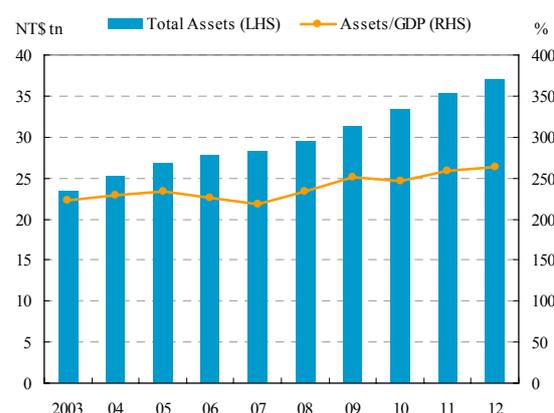
**Chart 3.14 Exchange rate volatility of various currencies against the US dollar**



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

Source: CBC.

**Chart 3.15 Total assets of domestic banks**



Note: Total assets are end-of-period figures.

Sources: DGBAS and CBC.

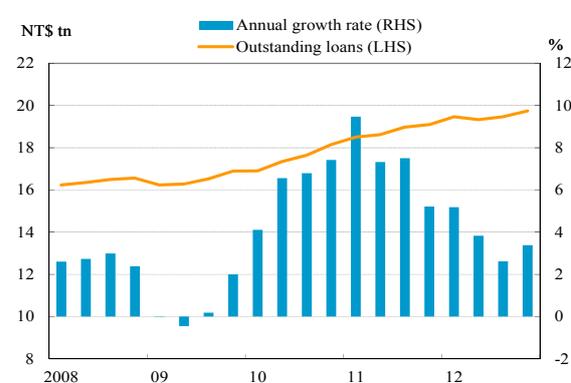
the local business units of domestic banks<sup>48</sup> at the end of 2012 stood at NT\$19.74 trillion (Chart 3.16) and accounted for 53.32% of total assets.

In the first three quarters of 2012, outstanding loans of the local business units of domestic banks accumulated at a slower pace in virtue of state-owned enterprises replacing bank borrowing with commercial paper issuance to meet their funding needs, as well as a notable decline in loans to government agencies. In 2012 Q4, following routine expenditures of government agencies at year-end and increasing funding demand for individual mortgage loans, the annual growth rate of loans resumed its upward trend and rose to 3.39% at the end of December (Chart 3.16). By category of borrowers, the annual growth rate of corporate loans was merely 3.18%, lower than 8.23% a year earlier, owing to sluggish domestic economic growth and falling funding demand. The annual growth rate of governmental loans and individual loans both ascended and registered 5.00% and 4.07%, respectively.

### *Concentration of credit exposure in real estate-related loans improved*

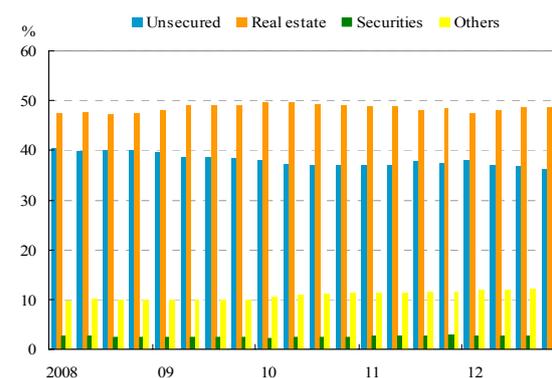
Outstanding real estate-related loans<sup>49</sup> granted by the local business units of domestic banks amounted to NT\$7.22 trillion, accounting for 36.58% of total loans as of the end of 2012. The ratio dropped by 0.38 percentage points over the previous year, reflecting an improved credit concentration of real estate-related loans. Meanwhile, real estate-secured credit granted by domestic banks stood at NT\$11.55 trillion, or 48.72%

**Chart 3.16 Outstanding loans and annual loan growth rate in domestic banks**



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

**Chart 3.17 Credit by type of collateral in domestic banks**



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

<sup>48</sup> The term “local business units of domestic banks” excludes Offshore Banking Units and overseas branches. The term “customer loans” herein refers to discounts, overdrafts, other loans and import bills purchased. It excludes export bills purchased, non-acrual loans and interbank loans.

<sup>49</sup> The term “real estate-related loans” herein refers to house-purchase loans, house-refurbishment loans and construction loans.

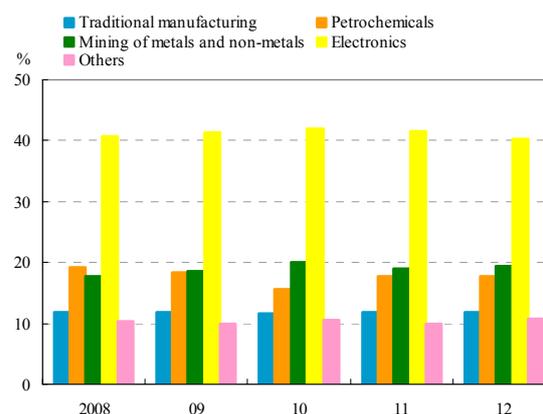
of total credit,<sup>50</sup> at the end of 2012. The ratio increased by 0.40 percentage points over the previous year (Chart 3.17). However, the growth of real estate-secured credit moderated and the annual growth rate declined to 4.95%. Among individual banks, nine had ratios of real estate-secured credit to total credit of over 60%. The number shrank from the peak of fifteen at the end of 2009, reflecting an improvement in the concentration of credit exposure in real estate-related loans.

Thanks to the effect of the CBC's and the FSC's measures to strengthen risk management regarding the real estate-related loans of banks, the concentration of credit exposure in real estate-related loans improved gradually throughout 2012. In addition, the establishment of a property transaction price registration system, which makes transaction prices open for public online inquiry, was expected to promote transaction information transparency and the future development of the real estate market. However, for those banks with credit exposures highly concentrated in real estate-related loans in some areas with ample housing supply, it would be advisable to monitor downward adjustment pressure on housing prices and develop strategies to cope with potentially heightening credit risks.

### *Credit concentration of corporate loans gradually declined*

Outstanding corporate loans of the local business units of domestic banks stood at NT\$8.85 trillion at the end of 2012, while loans to the manufacturing sector registered NT\$3.94 trillion and accounted for the largest share of 44.50% of the total. Within the manufacturing category,<sup>51</sup> the largest proportion of loans was for the electronics industry, which stood at NT\$1.59 trillion and accounted for 40.29% of the total loans to the whole manufacturing sector. The ratio continuously declined over the past two years (Chart 3.18), reflecting a descending credit concentration of corporate loans to the electronics industry.

**Chart 3.18 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.

Source: CBC.

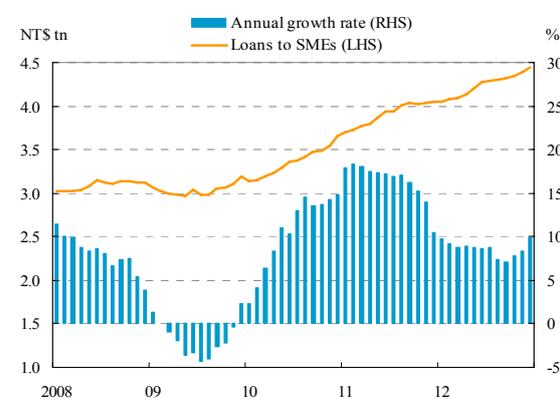
<sup>50</sup> The term "credit" herein includes loans, guarantee payments receivable and acceptances receivable.

<sup>51</sup> Loans to the manufacturing sector are divided into four categories by industry, including: (1) electronics industries, (2) mining of metals and non-metals industries, (3) petrochemicals industries and (4) traditional manufacturing industries. The remainder are classified as "others."

A few TFT-LCD and DRAM manufacturers have suffered great losses in recent years, and some have even applied for debt restructuring or bailouts. The vulnerability of these manufacturers could impact the loan quality of their creditors' banks. Thanks to the gradual recovery of global economic growth since 2012 Q4, the annual growth rate of total export volumes turned positive, which should bolster the prospects of the abovementioned industries. However, domestic banks need to pay close attention to these financial conditions and the business cycles of such borrowers to contain their credit risks.

In the first three quarters of 2012, the supply of credit to SMEs grew at a slower pace due to sluggish market conditions worldwide. With the increase in funding demand resulting from stable global economic recovery commencing in Q4, outstanding corporate loans to SMEs by domestic banks expanded to NT\$4.45 trillion at the end of 2012, representing a rebounding annual growth rate of 9.89%<sup>52</sup> (Chart 3.19). Furthermore, in line with the government's policies geared towards improving economic growth and employment, the Small and Medium Enterprise Credit Guarantee Fund of Taiwan (SMEG) has also implemented several projects to expand guarantees provision. This, together with the Program to Encourage Lending by Domestic Banks to Small and Medium Enterprises launched by the FSC, has encouraged financial institutions to provide more credit to SMEs. As a result, the outstanding amount of loan guarantees applied for by SMEs through the SMEG kept rising and increased 10.23% from year-end 2011 to reach NT\$748.8 billion at the end of 2012, and accounted for 16.84% of total SME loans. The guarantee coverage percentage also increased to 79.29% from 78.96% a year earlier. These statistics point to the favorable conditions for SMEs to acquire necessary funds.

**Chart 3.19 Loans to SMEs by domestic banks**



Source: FSC.

<sup>52</sup> According to FSC data, outstanding corporate loans to SMEs by domestic banks at the end of 2012 rose by NT\$380 billion year on year, which surpassed the 2012 targeted increase of NT\$220 billion.

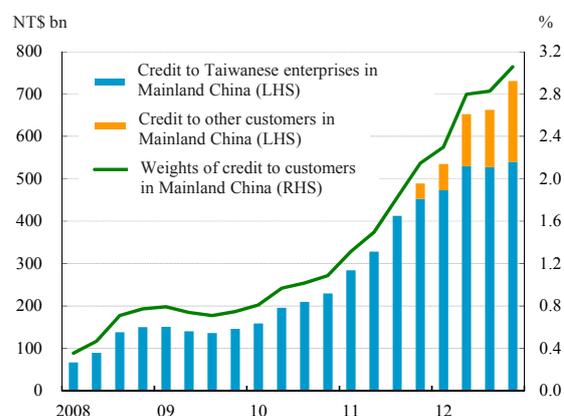
### ***Credit to customers in Mainland China continuously increased but only accounted for a small share of total credit***

Outstanding credit to customers in Mainland China by domestic banks increased continuously and reached NT\$731.1 billion at the end of 2012, accounting for only a small share of 3.06% of total credit (Chart 3.20). The non-performing credit ratio of such credit at the end of 2012 was a mere 0.1%, reflecting satisfactory asset quality. Most of the credit to customers in Mainland China was extended to Taiwanese enterprises, which accounted for 73.93% of such credit. However, credit to other customers in Mainland China increased substantially as offshore banking units of domestic banks ramped up extending credit to such customers.

According to Article 12-1 of Regulations Governing the Banking Activity and the Establishment and the Investment by Financial Institution Between the Taiwan Area and the Mainland Area, the aggregate amount of credit, investment, interbank loans and interbank deposits extended by domestic banks to any individuals, juristic persons, organizations or institutions in Mainland China or their branches in any country or area outside Mainland China should not exceed 100% of the bank's net worth as of the end of the preceding fiscal year. At the end of April 2013, the aggregate amount of such exposures of all domestic banks to their total net worth was 44%. No domestic bank exceeded the statutory limit.

Along with the establishment of the cross strait currency clearing mechanism, financial interactions between the two sides of the Strait have become more extensive, contributing to rapid growth in credit to customers in Mainland China by domestic banks. However, in Mainland China, labor

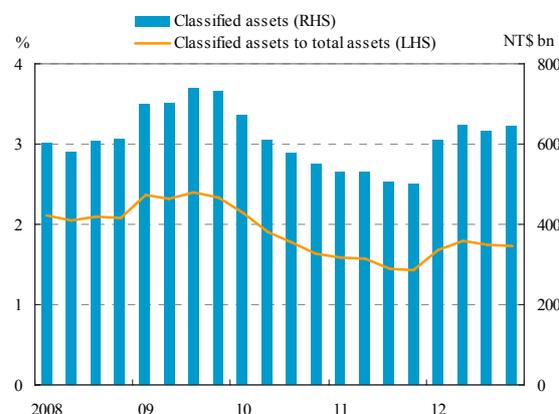
**Chart 3.20 Credit to customers in Mainland China by domestic banks**



Note: Figures for "credit to other customers in Mainland China" started from December 2011.

Source: FSC.

**Chart 3.21 Classified assets of domestic banks**



Note: Excludes interbank loans.

Source: CBC.

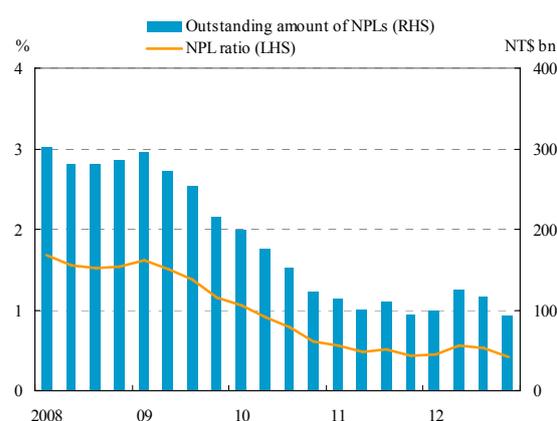
costs have increased steadily and profits of many industries have been hit by overcapacity, which might increase the risks of enterprises operating there and negatively impact the asset quality of their related creditor banks. Accordingly, domestic banks should cautiously monitor the credit risks of borrowers and counterparties in Mainland China.

### ***NPL ratio registered a record low***

Outstanding classified assets<sup>53</sup> and the average classified asset ratio of domestic banks stood at NT\$643.2 billion and 1.74% at the end of 2012, increasing by 27.84% and 0.31 percentage points, respectively, over the previous year (Chart 3.21). The reason was primarily because loans to a few TFT-LCD and DRAM manufacturers were categorized as classified assets by banks. Expected losses of classified assets<sup>54</sup> stood at NT\$83.5 billion at the end of 2012, increasing by NT\$1.8 billion or 2.26% year on year. However, the ratio of expected losses to loan loss provisions stood at 27.85%, indicating sufficient provisions to cover expected losses.

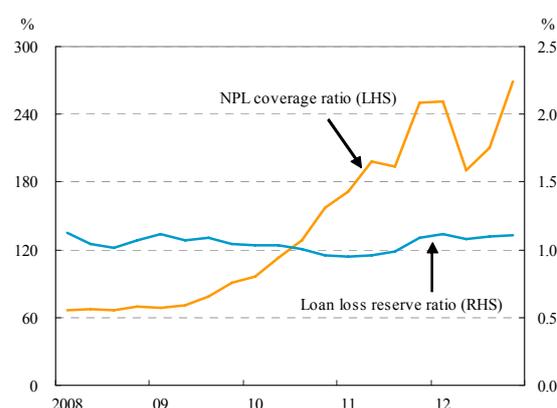
The outstanding NPLs of domestic banks stood at NT\$92.9 billion at the end of 2012, contracting by 1.31% year on year. Meanwhile, the average NPL ratio fell to a record low of 0.41% (Chart 3.22). With the decrease in NPLs, the NPL coverage ratio at the end of 2012 rose to 269.07%. The loan loss reserve ratio increased to 1.11% as a result of an increase in loan loss provisions (Chart 3.23). Among 39 domestic banks, all had NPL ratios of less than 1%, except for

**Chart 3.22 NPL ratio of domestic banks**



Note: Excludes interbank loans.  
Source: CBC.

**Chart 3.23 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.

<sup>53</sup> 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.

<sup>54</sup> Loss herein refers to the losses from loans, acceptances, guarantees, credit card revolving balances, and factoring without recourse.

two with ratios between 1% and 2% at the end of 2012. Compared to the US and neighboring Asian countries, the average NPL ratio of domestic banks in Taiwan was much lower (Chart 3.24).

### Market risk

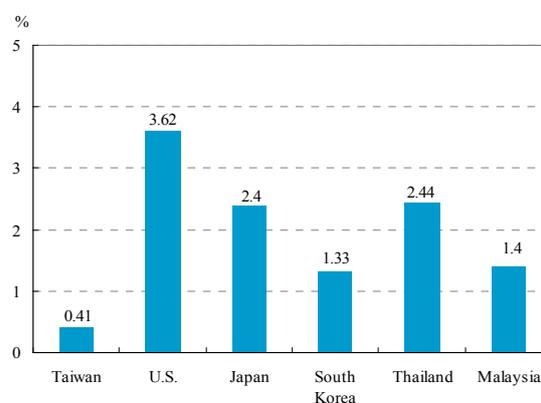
#### *Estimated Value-at-Risk for market risk exposures decreased*

The net position of debt securities accounted for the largest share of total market risk exposures of domestic banks, followed by the net position of equity securities and foreign exchange net position at the end of 2012. Using market data as of the end of February 2013, the estimated total VaR calculated by the CBC's market risk model<sup>55</sup> for foreign exchange, interest rate and equity exposures of domestic banks at the end of 2012 stood at NT\$119.6 billion, decreasing by NT\$9.1 billion or 7.07% compared to the figure a year earlier. Among market risks, equity VaR showed a significant fall of 52.74% owing to the marked decline of stock price volatility from the second half of 2012 onwards. Foreign exchange VaR increased, though the amount was not large. Interest rate VaR changed only slightly as a result of stable interest rates (Table 3.1).

#### *The effects of market risk on capital adequacy ratios were limited*

According to the estimated results mentioned above, the total VaR would cause a decrease of 0.51 percentage points in the average capital adequacy ratio of domestic banks and induce the current ratio of 12.54% to fall to 12.03%. It shows that the effects of market risk may be considered as limited.

**Chart 3.24 NPL ratios of banks in selected countries**



Note: Figure for Japan is end-September 2012 data, while the others are end-December 2012.

Sources: CBC, FDIC, FSA, FSS, BOT and BNM.

<sup>55</sup> 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 model constructs the sample distribution function of each asset's returns 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.

Table 3.1 Market risks in domestic banks

Unit: NT\$ bn

Types of risk	Items	End-Dec. 2011	End-Dec. 2012	Changes	
				Amount	%
Foreign exchange	Net position	60.3	71.0	10.7	17.74
	VaR	1.5	1.8	0.3	20.00
	VaR / net position (%)	2.49	2.54		0.05
Interest rate	Net position	5,848.5	6,314.6	466.1	7.97
	VaR	111.5	113.0	1.5	1.35
	VaR / net position (%)	1.91	1.79		-0.12
Equities	Net position	536.6	539.3	2.7	0.50
	VaR	65.8	31.1	-34.7	-52.74
	VaR / net position (%)	12.26	5.77		-6.49
Total VaR		128.7	119.6	-9.1	-7.07

Note: The total VaR is not equal to the sum of the VaRs of the three types of risks since it has taken the correlation among the three risk categories into consideration.

Source: CBC.

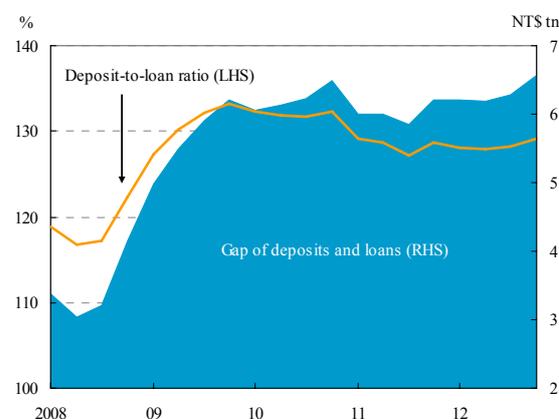
## Liquidity risk

### Liquidity in the banking system remained ample

Given that the increase in deposits slightly exceeded that in loans in 2012, the average deposit-to-loan ratio of domestic banks rose to 129.06% at the end of December. The funding surplus (i.e., deposits exceeding loans) also expanded to NT\$6.57 trillion, indicating that the overall liquidity in domestic banks remained abundant (Chart 3.25).

As for the sources of funds on the liability and equity side, relatively stable customer deposits accounted for the largest share of 76.54% of the total, slightly lower than 77.11% a year earlier, followed by interbank deposits and borrowings at 8.31%, while debt securities issues contributed a mere 3.44% at the end of 2012. Regarding the uses of funds on the asset side, customer loans accounted

Chart 3.25 Deposit-to-loan ratio of domestic banks



Note: Deposit-to-loan ratio = total deposits / total loans.  
Source: CBC.

for the biggest share of 60.50% with a year-on-year fall of 0.21 percentage points, and cash and due from banks slightly declined to a share of 9.44%, while securities investments slightly rose from 19.19% to 20.05% at the end of 2012 (Chart 3.26).

### ***Overall liquidity risk was moderate***

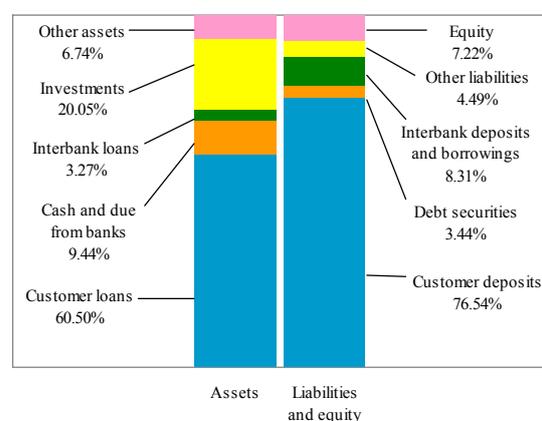
The average NT dollar liquid reserve ratio of domestic banks was 29.33% in December 2012. It increased by 1.37 percentage points compared to the figure a year earlier and was well above the statutory minimum of 10% (Chart 3.27), while the ratio of each domestic bank was higher than 15%. In the same period, Tier 1 liquid reserves, mainly consisting of certificates of deposit issued by the CBC, accounted for 89.97% of total liquid reserves,<sup>56</sup> while Tier 2 and Tier 3 reserves accounted for 9.93% and 0.10%, respectively. This revealed that the quality of liquid assets held by domestic banks remained satisfactory and overall liquidity risk was moderate.

## **Profitability**

### ***Profits rose to a historical high***

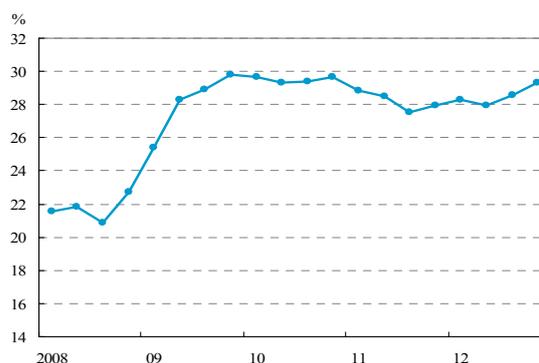
The aggregate net income before tax of domestic banks reached a historical high of NT\$240.7 billion in 2012, with a substantial increase of NT\$39.9 billion or 19.89% year on year, mainly due to a rise in gains on financial instruments and net interest income. Among them, net income before tax of OBUs and overseas branches significantly grew by 74.47%

**Chart 3.26 Asset/liability structure of domestic banks**



Notes: 1. Figures are as of end-December 2012.  
2. Interbank deposits include deposits with the CBC.  
Source: CBC.

**Chart 3.27 Liquid reserve ratio of domestic banks**



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

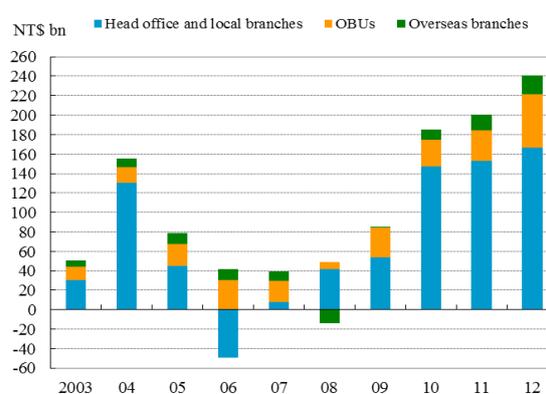
<sup>56</sup> Tier 1 liquid reserves include excess reserves, net due from banks in the call-loan market, re-deposits at designated banks with terms to maturity of no more than one year, certificates of deposit issued by the CBC, government bonds and treasury bills. Tier 2 liquid reserves include NT 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.

and 21.83%, respectively, driven by increases in loan volumes and interest rate spreads. Both of them accounted for nearly one-third of the total net income and greatly contributed to the rise of the profitability of domestic banks (Chart 3.28). In particular, as the relevant authorities have gradually deregulated cross-strait financial activities and the RMB business since 2011, OBUs have enjoyed a remarkable expansion of activities and recorded historically high profits (Box 4).

The weighted average ROE and ROA for domestic banks as a whole rose to 10.33% and 0.67%, respectively, in 2012, from 9.27% and 0.58% in 2011, and reached a ten-year high (Chart 3.29). However, compared to selected Asia-Pacific neighboring countries, the profitability of domestic banks was relatively low (Chart 3.30).

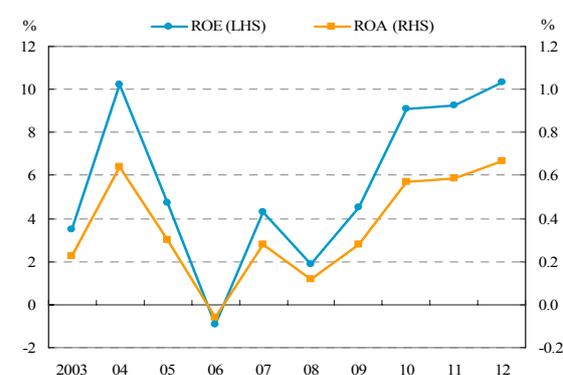
All 39 domestic banks posted profits in 2012. Among them, two banks reported profits of more than NT\$20 billion, but some banks registered lower profits than the previous year due to reductions in net fee income or increases of provisions for loan losses. Moreover, eight banks achieved profitable ROEs of 15% or more, increasing from three banks in 2011, and the ROEs of 24 banks increased compared to those in 2011. In addition, the number of domestic banks whose ROAs reached the international standard of 1% increased to seven (Chart 3.31).

**Chart 3.28 Net income before tax of domestic banks**



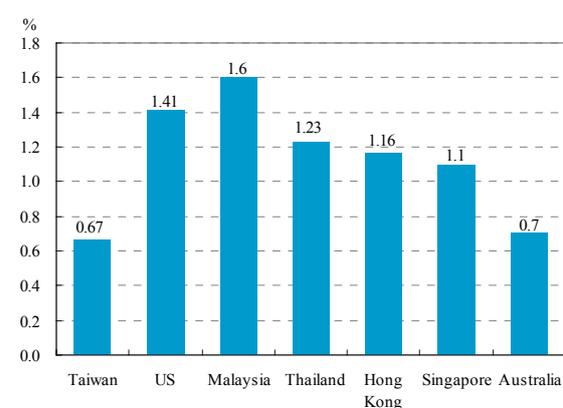
Source: CBC.

**Chart 3.29 ROE & ROA of domestic banks**



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

**Chart 3.30 Comparison of ROAs of banks in selected countries**



Note: Data for Singapore and Australia are for the first three quarters of 2012, while the others are for the whole of 2012.

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

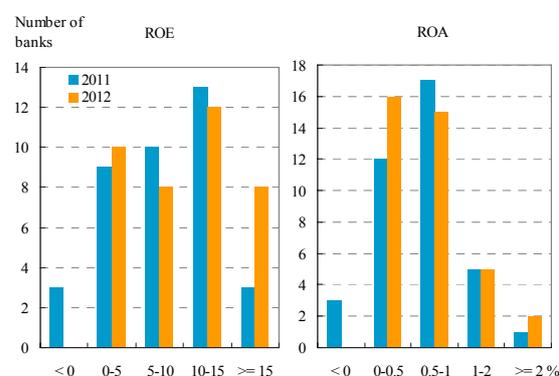
Total net operating income of domestic banks rose by NT\$42.5 billion or 7.53% in 2012. Of which, net interest income continually grew, increasing by NT\$24.7 billion or 6.98% compared to the previous year, and accounted for 62% of the total. Contributed to by a boost in fee incomes from the sale of insurance products, though combined with a decline of fee incomes from trust activities caused by global financial market turmoil, net fee income slightly increased by NT\$1.7 billion or 1.42% year on year and accounted for 20% of the total. Additionally, net gains on financial instruments increased by NT\$31.5 billion, driven by a substantial increase of valuation gains, and accounted for 12% of net operating income (Chart 3.32).

The operating costs of domestic banks increased slightly by NT\$2.5 billion in 2012. This was primarily due to the growth of personnel costs which led to an increase in non-interest expenses<sup>57</sup> by NT\$8.4 billion year on year and accounted for 87.76% of total operating costs. In addition, owing to decreases in charges for loan loss provisions and the recovery of previously impaired loans, loan provisions decreased by NT\$5.8 billion to NT\$44.8 billion in 2012, the lowest level during the past ten years, and accounted for 12.24% of total operating costs (Chart 3.32).

### ***Factors that might affect future profitability***

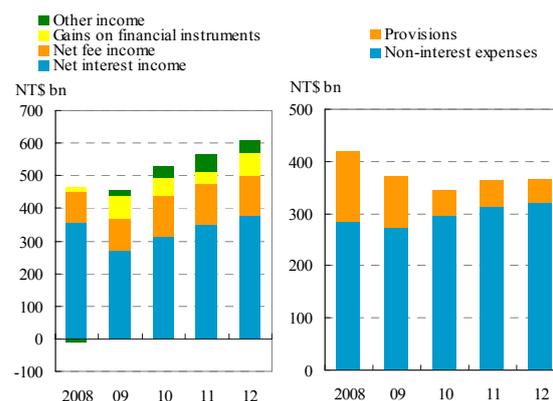
Despite a slight drop in the interest rate spread between deposits and loans during the first half of 2012, banks made efforts to adjust deposit structures and actively granted SME loans with higher loan margins. As a result, the interest rate spread rebounded to 1.43 percentage points in the second half of 2012 (Chart 3.33). This was helpful in boosting domestic banks' profitability. In view of ample liquidity and intense competition in the domestic banking

**Chart 3.31 Distribution of ROEs and ROAs of domestic banks**



Source: CBC.

**Chart 3.32 Composition of incomes and costs of domestic banks**



Source: CBC.

<sup>57</sup> Non-interest expenses include personnel costs and other operating and management expenses.

sector, the interest rate spread is unlikely to widen markedly in the short term. Banks are advised to enhance financial innovation and provide differential financial services, as well as strengthen their risk management, so as to lift their future profitability.

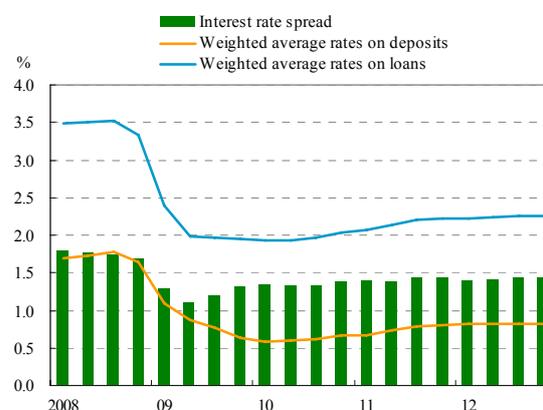
Moreover, in order to help banks improve their ability to respond to a future economic downturn, the FSC announced the Measures to Enhance the Management of Credit Risk of Domestic Banks on 7 January 2013. They provided for a phased implementation of differential incentives and regulatory measures aiming at spurring domestic banks to raise their loan provisions for normal credit assets to 1% or higher as soon as possible. As of the end of March 2013, the average provisions for normal credit assets of the 39 domestic banks was 0.91%, and seventeen of them had ratios above 1%. However, some banks with ratios lower than 1% will need to increase provisions and this will in turn affect their future profits.

## Capital adequacy

### *Capital adequacy ratios<sup>58</sup> ascended*

Eligible capital of domestic banks has continuously expanded as a result of increases in common stock and accumulated earnings, and the expansion of eligible capital was larger than that of risk-weighted assets, leading the average capital adequacy ratio at the end of 2012 to rise from 12.06% in the previous year to 12.54%. The Tier 1 capital ratio also went up to 9.49% from 9.08% the previous year (Chart 3.34), showing continuous improvement in the capital adequacy level. Compared to the US and some neighboring Asia-Pacific countries, the average capital adequacy ratio of domestic banks was higher than that of Australia, but lower than those of the US and other Asian countries (Chart 3.35).

**Chart 3.33 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.

Source: CBC.

<sup>58</sup> In this section, the capital adequacy related ratios of domestic banks at the end of 2012 were audited and certified by certified public accountants.

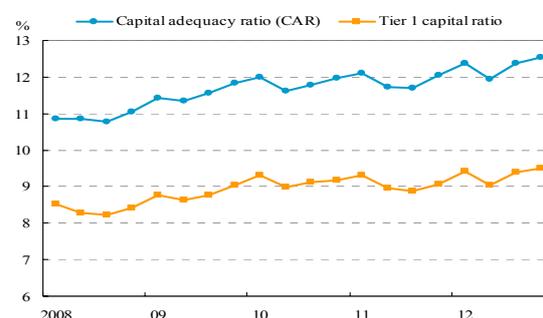
Further breaking down the components of regulatory capital, Tier 1 capital, which features the best risk-bearing capacity, accounted for 75.64% of eligible capital, while Tier 2 capital registered 24.36%, and Tier 3 capital was zero at the end of 2012. Compared to the end of the previous year, there was no significant difference in the capital structure of domestic banks (Chart 3.36).

*All domestic banks held sufficient capital, albeit several of them faced pressure to raise their capital levels*

The capital adequacy ratios of all domestic banks remained above the statutory minimum requirement of 8% at the end of 2012. In addition, there were 24 banks with ratios above 12% (Chart 3.37), seven more than that of the previous year. Among all 39 domestic banks, 22 of them showed year-on-year improvements in their capital adequacy ratios.

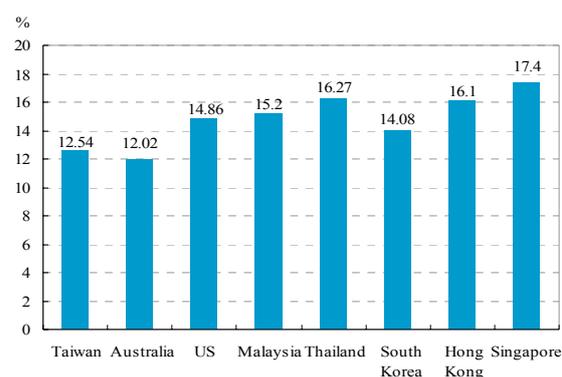
Since the Basel III standards will be phased in gradually beginning 2013, the FSC, referring to Basel III requirements, revised the Regulations Governing the Capital Adequacy and Capital Category of Banks and related calculation methods in November 2012. The Regulations set out the minimum capital requirements during the transition period for each year of 2013-2019. They also specified that the common equity, Tier 1 capital, and capital adequacy ratios should be no less than 7%, 8.5% and 10.5%, respectively,

**Chart 3.34 Capital adequacy ratio of domestic banks**



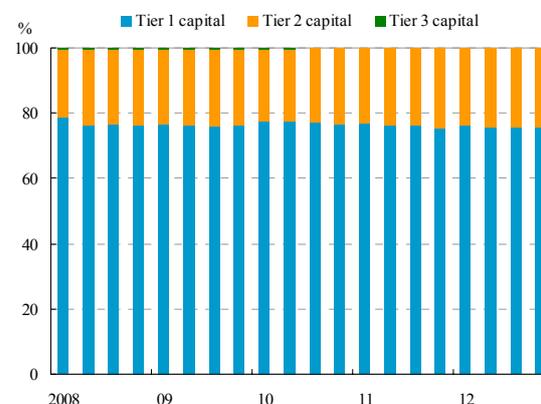
Notes: 1. End-of-period figures.  
2. Capital adequacy ratio = eligible capital / risk-weighted assets.  
3. Tier 1 capital ratio = tier 1 capital / risk-weighted assets.  
Source: CBC.

**Chart 3.35 Comparison of capital adequacy ratios in selected countries**



Note: Figures of Australia, South Korea and Singapore are as of September 2012; the others are as of the end of 2012.  
Sources: CBC, APRA, FDIC, BNM, BOT, FSS, HKMA and MAS.

**Chart 3.36 Domestic banks' eligible capital**



Note: Tier 3 capital figure for the end of 2012 is 0%, and for the other periods figures are from 0% to 0.34%.  
Source: CBC.

commencing 2019 (Box 5). Even though average Tier 1 capital ratios and capital adequacy ratios of domestic banks at the end of 2012 met the minimum requirements set for 2019, several banks with low capital buffers still faced pressure to raise capital levels. Besides Basel III requirements, banks aiming at expanding cross-strait financial activities should also actively reinforce capital levels in order to meet their business needs.<sup>59</sup>

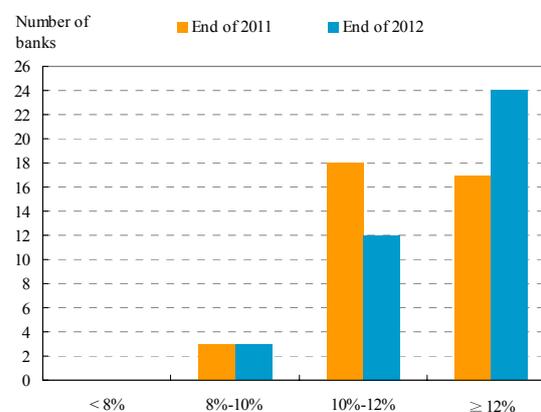
### Credit ratings

#### Average credit rating level slightly improved

According to the rating results<sup>60</sup> released by credit rating agencies, the credit rating index<sup>61</sup> of Taiwan's domestic banks lifted slightly in 2012 (Chart 3.38), reflecting the improvement of the overall credit rating level. The main reason behind it was that one bank, which was set up in January 2012, received the highest rating of AAA(twn), and two banks were upgraded in the second half of 2012.

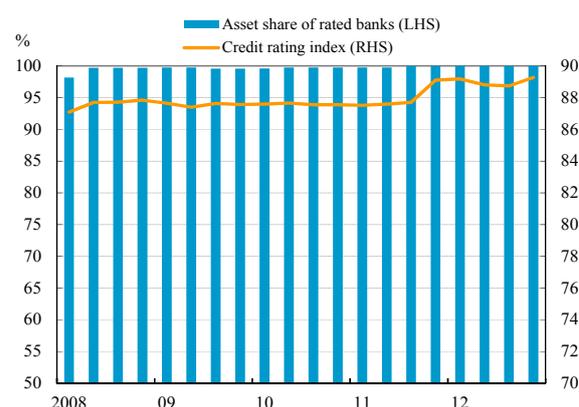
As for the overall risk assessments of Taiwan's banking system made by credit rating agencies, Standard & Poor's Banking Industry Country Risk Assessment (BICRA)<sup>62</sup>

**Chart 3.37 Number of domestic banks classified by capital adequacy ratios**



Source: CBC.

**Chart 3.38 Credit rating indices of rated domestic banks**



Note: End-of-period figures.

Source: CBC.

<sup>59</sup> According to Article 12-1 of the Regulations Governing the Banking Activity and the Establishment and the Investment by Financial Institutions Between the Taiwan Area and the Mainland Area, for business activities of a Taiwanese bank in the mainland area, its aggregate amount of credit, investment and interbank loans and deposits may not exceed 100 % of the bank's net worth as of the end of the preceding fiscal year. In order to strengthen their ability to conduct business in Mainland China, banks should raise their capital levels and net worth.

<sup>60</sup> As of the end of 2012, the majority of Taiwan's domestic banks received long-term issuer ratings from Taiwan Ratings, followed by those with national long-term ratings from Fitch Ratings. Therefore, this section is based primarily on the Taiwan Ratings ratings (tw~), and secondarily on Fitch ratings (~(twn)).

<sup>61</sup> 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 or national long-term ratings from Fitch Ratings. The higher the index is, the better the bank's overall solvency.

<sup>62</sup> The analytical dimensions of Standard & Poor's BICRA include economic risk and industry risk. The economic risk of a banking sector is determined by factors including economic resilience, economic imbalances, and credit risk in the economy, while industry risk is determined by institutional framework, competitive dynamics and system-wide funding. The overall assessments of those factors will lead to the classification of a country's banking system into BICRA groups, ranging from group 1 (lowest risk) to group 10 (highest risk), in order to indicate the relative country risk and banking sector credit quality.

maintained Taiwan's BICRA unchanged at Group 4. Compared to other Asian economies, the risk of Taiwan's banking industry was about the same as that of Malaysia, but much lower than those of Thailand, Mainland China, Indonesia and the Philippines. The overall risk evaluated by Fitch Ratings' Banking System Indicator/ Macro-Prudential Indicator (BSI/MPI)<sup>63</sup> remained at level bbb/1, equivalent to C/1 a year before, and was about the same as those of Japan, South Korea, Malaysia and Thailand (Table 3.2).

### *Rating outlooks for a majority of domestic banks remained stable or positive*

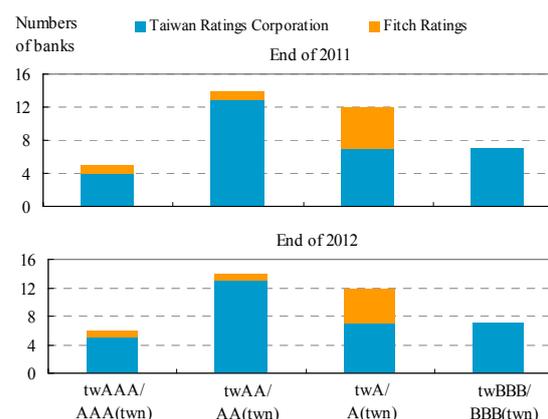
All domestic banks were rated by credit rating agencies for 2012. Most of them maintained credit ratings of twAA/twA (Taiwan Ratings) or AA(twn)/A(twn) (Fitch Ratings) at the end of 2012, and none had credit ratings lower than twBBB/BBB(twn) (Chart 3.39). The results were similar to those received the previous year. Regarding rating outlooks or CreditWatch, 35 banks remained stable or positive, while 4 banks turned negative in 2012 due to deteriorating capital and earnings, a rating downgrade of the bank's parent company, or increasing capital pressure after M&A activity.

**Table 3.2 Systemic risk indicators for the banking system**

Banking System	Standard and Poor's		Fitch	
	BICRA		BSI/MPI	
	2012/2	2013/2	2012/2	2013/2
Hong Kong	2	2	B/3	a/3
Singapore	2	2	B/2	aa/2
Japan	2	2	C/1	bbb/1
South Korea	3	3	C/1	bbb/1
<b>Taiwan</b>	<b>4</b>	<b>4</b>	<b>C/1</b>	<b>bbb/1</b>
Malaysia	4	4	C/1	bbb/1
Thailand	5	5	C/1	bbb/1
Mainland China	5	5	D/3	bb/3
Indonesia	7	7	D/3	bb/3
Philippines	7	7	D/1	bb/1

Sources: Standard and Poor's and Fitch Ratings.

**Chart 3.39 Number of domestic banks classified by credit ratings**



Sources: Taiwan Ratings Corporation and Fitch Ratings.

<sup>63</sup> Fitch Ratings has devised two complementary measures, the BSI and MPI, to 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). In August 2012, Fitch Ratings introduced new BSI methodology, which rules out potential support from shareholders or governments and generates a standalone measure of banking system strength with an aim to highlight systemic weakness that may trigger the need for such support. The new BSI ranges from aa, a, bbb, bb, b, ccc, cc and c. There is no precise mapping between old and new BSI. However, as a rule of thumb, the old BSI A is roughly equivalent to the new BSI aa; the old BSI B to new BSI a; the old BSI C to new BSI bbb and the old BSI D to new BSI bb-/b. 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.

### 3.2.2 Life insurance companies

In 2012, the total assets of life insurance companies grew at an accelerated pace, reaching a historical high at the end of the year, and their profitability also improved and recorded a five-year high due to the improvement of operating performance. Nevertheless, the average RBC ratio of life insurance companies at the end of 2012 was lower than that of a year earlier, and the financial strength of a few companies needs to be bolstered as soon as possible. The credit ratings of the eleven rated life insurance companies generally remained stable in 2012.

#### Assets grew healthily, reaching a historically high level

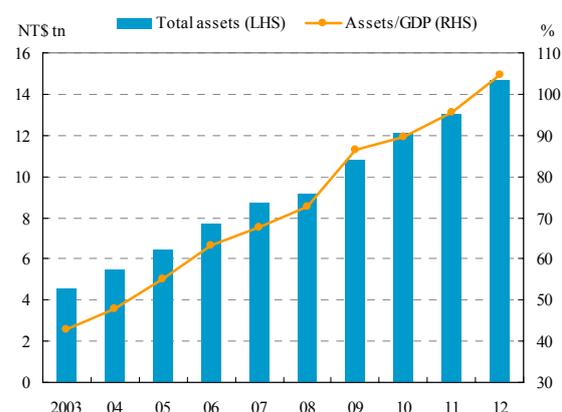
The total assets of life insurance companies continually grew and reached a historically high level of NT\$14.71 trillion at the end of 2012, equivalent to 104.78% of annual GDP (Chart 3.40). Meanwhile, the annual growth rate of total assets significantly rose to 12.64% at the end of 2012, compared to 7.69% a year before.

At the end of 2012, twenty-four domestic life insurance companies<sup>64</sup> held a 98.42% market share by assets, five of which were foreign affiliates holding a 3.24% market share, while six foreign life insurance companies held the remaining 1.58% of total assets. The top three companies in terms of assets held a combined market share of 54.11%, with a slight increase of 0.84 percentage points year on year. The market structure of the life insurance industry roughly remained unchanged in 2012.

#### Domestic and foreign securities investments had higher growth rates

The funds of life insurance companies at the end of 2012 were chiefly invested in foreign and domestic securities which accounted for 35.62% and 34.21% of total assets, respectively. Loans only accounted for 8.46% of total assets, with cash and deposits accounting for 5.57% and real estate for 4.38%. As for the sources of funds, various policy reserves constituted 85.29%, with net worth making up only 4.02%, reflecting the

Chart 3.40 Total assets of life insurance companies



Sources: FSC and DGBAS.

<sup>64</sup> Foreign affiliates included.

high financial leverage of life insurance companies (Chart 3.41).

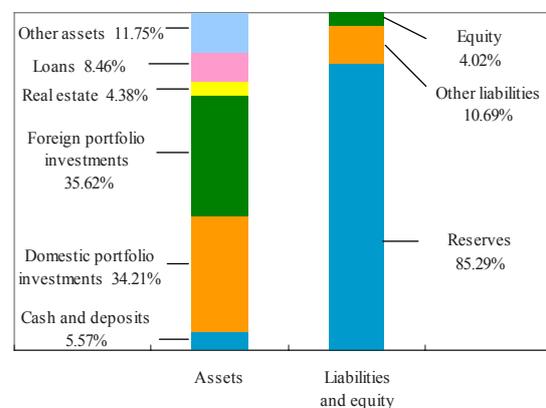
The usable funds of life insurance companies continued growing in 2012, mainly owing to the increase of domestic and foreign securities investments. Of them, benefiting from the relaxation of foreign investment regulations, foreign securities investments grew by a substantial 22.44%. Domestic securities investments also grew modestly by 7.08%.

### Net profits rebounded to a five-year high

Life insurance companies reported a net income before tax of NT\$38 billion, recording a five-year high (Chart 3.42), mainly due to a sharp increase in premium income induced by the expectation of rising premiums,<sup>65</sup> as well as cash dividends received from investment portfolios and valuation profits driven by ascending stock prices.

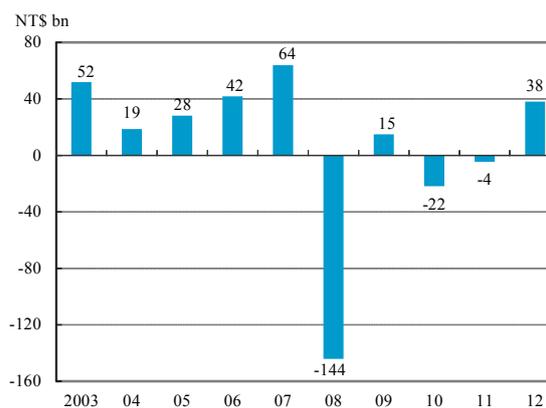
During the same period, average ROE and ROA were 7.43% and 0.27%, respectively, higher than those of the previous year (Chart 3.43). If Kuo Hua Life Insurance Company<sup>66</sup> was excluded, the net income before tax of life insurance companies as a whole would have risen to NT\$41.1 billion, and average ROE and ROA would have stood at 7.01% and 0.30%, respectively.

**Chart 3.41 Asset/liability structure of life insurance companies**



Note: Figures are end-December 2012 data.  
Source: FSC.

**Chart 3.42 Net income before tax of life insurance companies**



Source: FSC.

<sup>65</sup> The FSC announced 2 reductions in the interest rate on reserves for new insurance policies in 2012, which induced public expectations of rising premiums.

<sup>66</sup> Kuo Hua Life Insurance Company, registering a net loss before tax of NT\$3.2 billion in 2012, was taken into receivership by the Insurance Stabilization Fund and was sold by tender to TransGlobe Life Insurance Company.

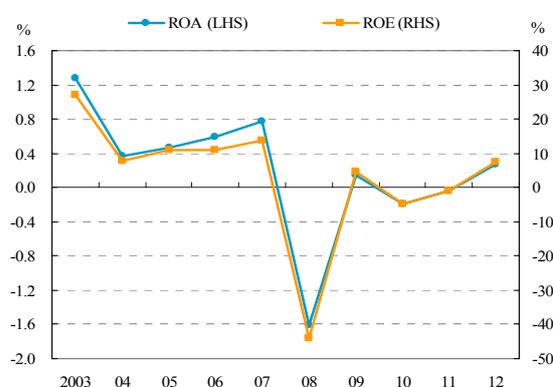
### Average RBC ratio dropped moderately but was still above the statutory minimum

Owing to the increase of unrealized profits from financial products, the regulatory capital of life insurance companies as a whole rose during 2012. However, the average RBC ratio<sup>67</sup> of life insurance companies, excluding Kuo Hua Life Insurance Company, declined to 229.32% at the end of 2012, from 238.38% a year before. The reason was primarily because the increase in RBC of life insurance companies, caused by greater domestic and foreign securities investments and stricter capital requirements for real estate investments,<sup>68</sup> was higher than that of their regulatory capital. Nevertheless, the average RBC ratio still remained above the statutory minimum of 200%. By individual companies, there were twelve companies with ratios over 300%, the same as at the end of 2011. However, five companies, whose combined assets accounted for 4.44% of the total, had ratios below 200% (Chart 3.44). The financial structure of those companies needs to be improved as soon as possible.

### Overall credit ratings kept stable, except for some with negative credit outlooks

None of the eleven life insurance companies rated by Taiwan Ratings or Fitch Ratings received credit rating adjustments in 2012, with all maintaining credit ratings above twA.<sup>69</sup>

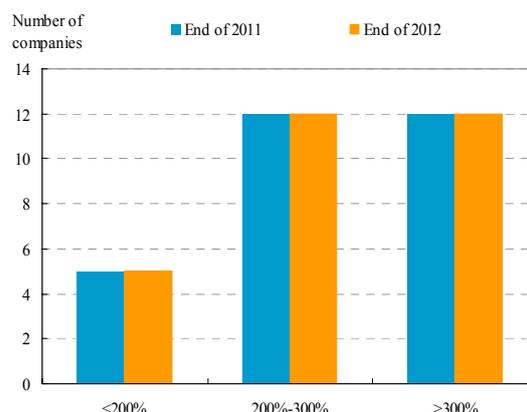
Chart 3.43 ROE & ROA of life insurance companies



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

Source: FSC.

Chart 3.44 Number of life insurance companies classified by RBC ratios



Note: Kuo Hua Life Insurance Company, which was taken into receivership by the Insurance Stabilization Fund, is excluded.

Source: FSC.

<sup>67</sup> Risk-based capital ratio = regulatory capital / risk-based capital. According to Article 143-4 of the Insurance Act, the risk-based capital ratio of the insurance industry cannot be below 200%.

<sup>68</sup> According to the explanation of RBC ratio calculation for 2012 by the FSC on 22 November 2012, the risk weight of real estate was raised from 0.0744 to 0.0781. However, as for vacant land or real estate not in accordance with the criterion of instant application with yield, the mark-up on capital set aside was raised from 30% to 40%.

<sup>69</sup> Cathay Life Insurance Company, though not having its credit rating adjusted by Taiwan Ratings or Fitch Ratings, was downgraded by Moody's from Baa1 to Baa2.

The three biggest companies by assets were all rated twAA+, showing strong capability to fulfill all financial commitments.

The credit outlooks of most rated companies remained stable. Only four companies were put onto the list of negative outlook by Taiwan Ratings for the reason that the prevailing low interest rate environment might be unfavorable for improving their profitability, and growing risk positions and volatile capital markets might undermine their capital adequacy.

### **The challenges faced by life insurance companies**

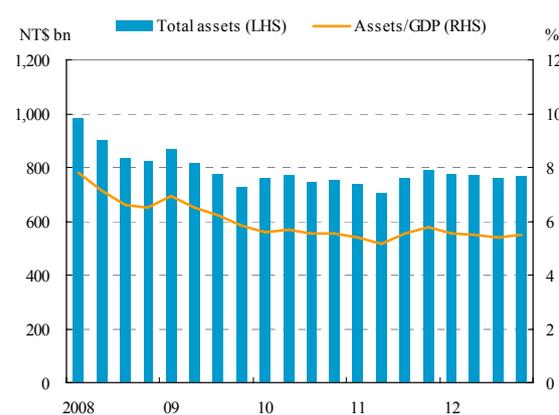
In general, the overall operations and financial health of life insurance companies improved in 2012. However, the problem of capital inadequacy faced by a few life insurance companies showed that, apart from capital injection and stricter supervision of those companies, replenishing the Insurance Stabilization Fund and establishing a resolution mechanism for the insurance industry will be important issues to be tackled in the future.

Moreover, globally interest rates have stayed at extremely low levels during recent years owing to easy monetary policies adopted by major countries. Once interest rates rebound, on one hand it will contribute to improving the situation of interest rate spread losses faced by life insurance companies, but on the other hand it might induce valuation losses for their huge bond investments and raise liquidity risk if policy holders herd to surrender their policies. Life insurance companies should prepare for and deal with those risks cautiously.

### **3.2.3 Bills finance companies**

The total assets of bills finance companies lingered at a low level in 2012, while profitability remained stable. The quality of credit assets remained sound, yet the liquidity risk stayed high. Although the average capital adequacy ratio of bills finance companies as a whole declined somewhat, the ratio of each company still kept above the statutory minimum.

**Chart 3.45 Total assets of bills finance companies**



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

### Total assets lingered at a low level

The total assets of bills finance companies declined gradually and lingered at a low level in 2012. The total assets of bills finance companies stood at NT\$768.3 billion at the end of 2012, which was equivalent to 5.47% of annual GDP and decreased by 2.82% year on year (Chart 3.45). Of eight bills finance companies, the top three companies held a combined market share of 74.46% by assets, while each of the other firms had a market share below 7%.

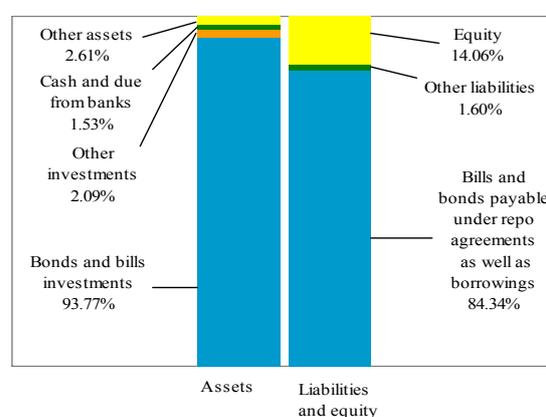
Regarding the structure of assets and liabilities of bills finance companies, bonds and bills investments constituted 93.77% of total assets at the end of 2012, a decrease of 0.24 percentage points year on year. The sources of funds were mainly made up of short-term repo transactions and borrowings which accounted for 84.34% of total assets, while the net worth was only 14.06% of total assets (Chart 3.46).

### Credit risks

#### Outstanding balance of guarantees rebounded gradually

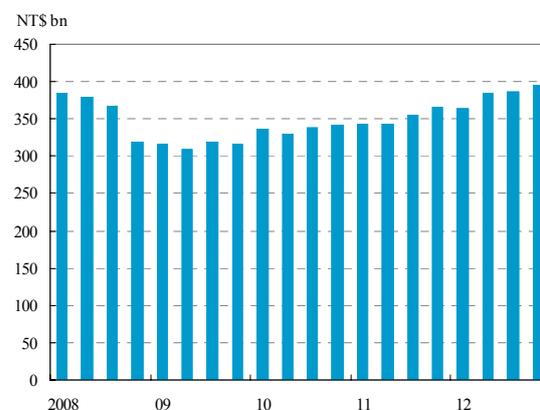
The commercial paper guarantees business is the major source of credit risks for bills finance companies. Following the increased issuance of commercial paper by private corporations for short term funding, the outstanding guarantees business undertaken by bills finance companies rebounded gradually, registering NT\$395.7 billion at the end of 2012, with an increase of NT\$29.4 billion or 8.04% year on year (Chart 3.47). The average multiple of guarantees outstanding to net worth of bills finance companies stood at 4.08 times at the end of 2012, higher than 3.90 times a year before, while each bills finance company conformed

**Chart 3.46 Asset/liability structure of bills finance companies**



Note: Figures are end-December 2012 data.  
Sources: CBC and FSC.

**Chart 3.47 Outstanding commercial paper guarantees of bills finance companies**



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

to the regulatory ceiling of five times.<sup>70</sup>

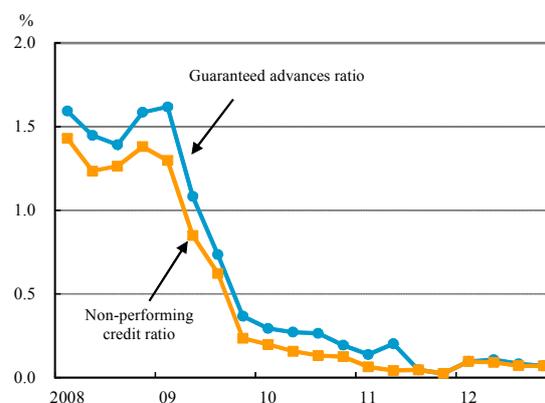
### **Credit quality remained sound**

The average guaranteed advances ratio and the non-performing credit ratio of bills finance companies both stayed at the low level of 0.07% at the end of 2012, though rising slightly year on year, reflecting sound credit quality (Chart 3.48). At the same time, the ratios of credit loss reserves to non-performing credits as well as to guaranteed advances stood at the same value of 2,807.64%, indicating that the reserves set aside remained sufficient to cover potential credit losses.

### **Liquidity risk improved, yet remained high**

The funds of bills finance companies mainly came from interbank call loans and short-term repo transactions, and over 50% of funds went to long-term bond investments. The significant maturity mismatch between assets and liabilities showed that bills finance companies still faced high liquidity risk. However, major liabilities of bills finance companies contracted by 3.34% year on year, and, in turn, the average multiple of major liabilities to net worth declined to 6.68 times at the end of 2012, compared to 7.15 times a year before. None of the bills finance companies exceeded the regulatory ceilings of ten or twelve times<sup>71</sup>. This showed that the high

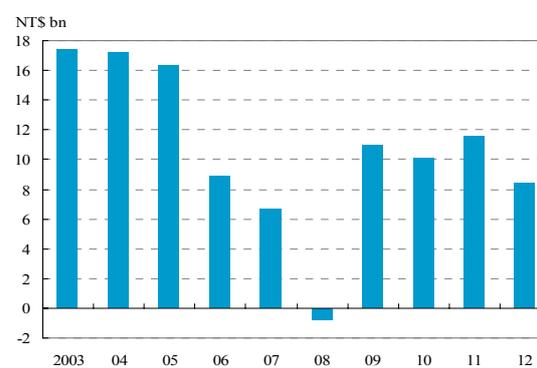
**Chart 3.48 Guaranteed advances ratio of bills finance companies**



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.

**Chart 3.49 Net income before tax of bills finance companies**



Source: CBC.

<sup>70</sup> According to Directions for Outstanding Amount of Guarantees and Endorsements of Short-term Bills by Bills Houses, the ceiling of the ratio of outstanding commercial paper guaranteed to net worth for a bills finance company 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 2012, the capital adequacy ratio of each bills finance company was above 12%, so the ceiling of five times was set for each one.

<sup>71</sup> In order to reduce the operating and liquidity risk of bills finance companies, the FSC amended Directions for Ceilings on the Total Amounts of the Major Liabilities and Reverse Repo Transactions Conducted by Bills Houses on 9 April 2010, contracting the major liabilities of bills finance companies. 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 2012, 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.

liquidity risk situation was gradually improving.

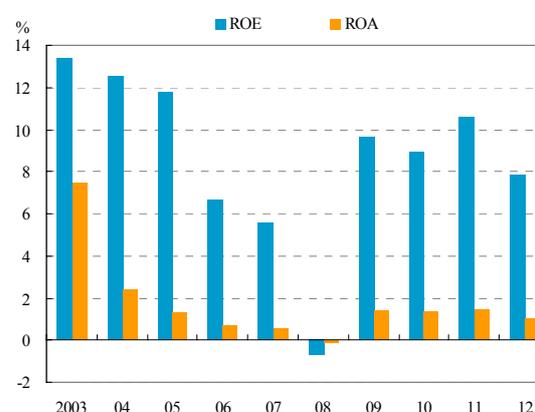
### Operating profitability remained stable

Bills finance companies posted a net income before tax of NT\$8.44 billion in 2012, a year-on-year decrease of NT\$3.09 billion or 26.82% (Chart 3.49). This was mainly driven by a decrease of NT\$4.7 billion from capital gains on property transactions over the previous year. Nevertheless, if the above capital gains were excluded, the operating profitability of bills finance companies was almost the same as the previous year. Over the same period, average ROE and ROA declined to 7.81% and 1.08%, respectively, lower than 10.56% and 1.49% in 2011 (Chart 3.50). However, the increase of bills issuance as well as stable growth of the commercial paper guarantees business could be conducive to the future profitability of bills finance companies.

### Average capital adequacy ratio declined gradually

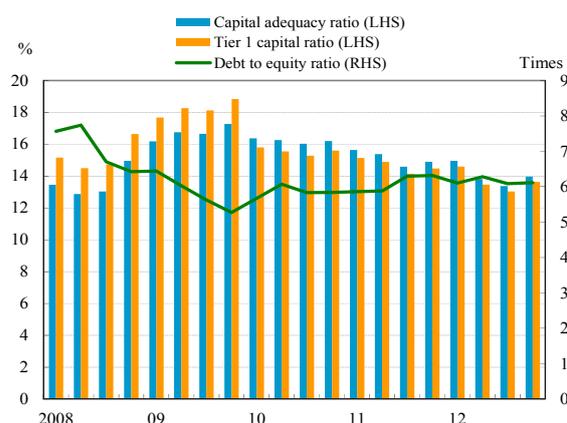
The average capital adequacy ratio registered 13.96% at the end of 2012, lower than 14.90% the previous year. The Tier 1 capital ratio also declined to 13.64% from 14.48% a year before. Both of the decreases were mainly due to the rise of risk-weighted assets. However, the capital adequacy ratio for each bills finance company still remained above 12%, well above the statutory minimum of 8%. Additionally, the average multiple of debt to equity of bills finance companies slightly declined to 6.11 times at the end of 2012, lower than 6.31 times the previous year (Chart 3.51), reflecting a decrease in financial leverage in bills finance companies.

Chart 3.50 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 3.51 Capital adequacy and leverage of bills finance companies



Source: CBC.

## Box 4

### Domestic banks' offshore banking units: Retrospect and prospect

#### 1. Progress in the development of offshore banking units in Taiwan

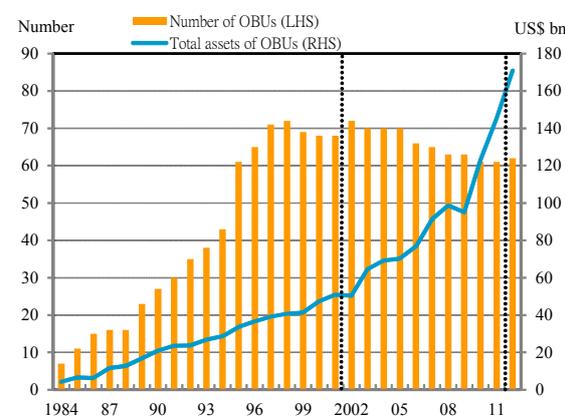
With a view to establishing a regional financial center, the government promulgated the Offshore Banking Act in December 1983, authorizing banks to set up offshore banking units (OBUs) within the territory of the Republic of China (Taiwan) and engage in offshore financial activities. OBUs were granted special treatment in terms of foreign exchange transactions, financial operations and taxes.

The first OBU commenced its operations in June 1984, with the total number increasing to its highest number of 72 in 1998 and slowly declining to 62 at the end of 2012 (including 37 run by domestic banks and 25 by foreign banks in Taiwan) in the wake of banks' mergers and acquisitions. Nevertheless, owing to the opening up of lines of business, the total assets of all OBUs recorded accelerated growth, amounting to US\$170.9 billion (Chart B4.1), of which domestic banks' OBUs accounted for 81.1%, while foreign banks' OBUs accounted for 18.9%. Progress in the development of OBUs can be generally separated into three stages:

#### 1.1 Opening up of offshore banking activities in December 1983

Since the government opened up offshore banking activities for OBUs to conduct business in December 1983, the Offshore Banking Act has been revised four times, successively expanding the scope of activities and revising the relevant taxation rules for OBUs. The major businesses conducted with natural persons, juridical persons, government agencies or financial institutions outside the territory include: accepting foreign currency deposits; extending credit in foreign currency; selling foreign currency financial debentures or other certificates of debt issued by their head offices; conducting import/export-related foreign exchange business; processing foreign currency remittances; engaging in foreign currency transactions, borrowing or lending of funds; and other foreign currency

**Chart B4.1 Number and total assets of OBUs**



Source: CBC.

businesses approved by the relevant authorities.

### **1.2 Opening up of cross-strait financial activities in June 2001**

Aiming at developing OBUs into a funding center for Taiwanese firms operating overseas and in Mainland China, the government gradually liberalized the direct remittance business undertaken by OBUs to financial institutions in the mainland, expanded the counterparties and scope of cross-strait financial activities, and eased the credit limitations in seven steps from June 2001. The authorities took a further step to revise the Regulations Governing the Banking Activity and the Establishment and the Investment by Financial Institution between the Taiwan Area and the Mainland Area in September 2011, allowing OBUs to do business with natural persons, juridical persons, groups, other agencies, and with the branches or subsidiaries that are set up by Mainland China-based financial institutions but located in jurisdictions or areas outside Mainland China. Meanwhile, the legal requirements regarding the scope of cross-strait financial activities were put back under the governance of the Offshore Banking Act.

### **1.3 Opening up of RMB business in July 2011**

In order to further expand the breadth for the development of OBU business, the FSC and the CBC issued the Regulations Governing the Conduct of RMB Business for the OBUs and Overseas Branches of Taiwan's Domestic Banks in July 2011, authorizing OBUs to conduct RMB business. Subsequent to the signing of the Memorandum on Cross-Strait Currency Clearing Cooperation by the two respective central banks across the Taiwan Strait, the government repealed the above Regulations in September 2012. The administration of RMB business conducted by OBUs was also placed back under the Offshore Banking Act as its legal basis.

## ***2. The current condition and performance of domestic banks' OBUs***

Since the deregulation of cross-strait financial activities and RMB business, the asset scale of domestic banks' OBUs has been significantly augmented, with total assets amounting to US\$138.6 billion at the end of 2012, growing by 21.3% year on year. As deposits, loans and cross-strait remittances grew remarkably, profits also rose noticeably. All of these positive factors greatly contributed to the operational performance of the domestic banks as a whole.

## 2.1 The balances of deposits and loans grew rapidly

In recent years, the balances of both deposits and loans have increased quite quickly. Among them, deposits amounted to US\$39.7 billion at the end of 2012, with most of the annual growth rates standing at over 12% during recent years, while loans reached US\$59.1 billion, growing much faster than deposits, with most of the annual growth rates lying between 20% and 40% (Chart B4.2).

## 2.2 Cross-strait remittance business expanded noticeably

After the relaxation of OBU's cross-strait financial activities in 2001, the cross-strait remittance business conducted by domestic banks' OBUs increased gradually. With cross-strait communication becoming more frequent from 2010, the remittance business processed by domestic banks' OBUs grew vastly, with inward remittances and outward remittances registering a total of US\$203 billion and US\$66 billion, respectively, in 2012 (Chart B4.3).

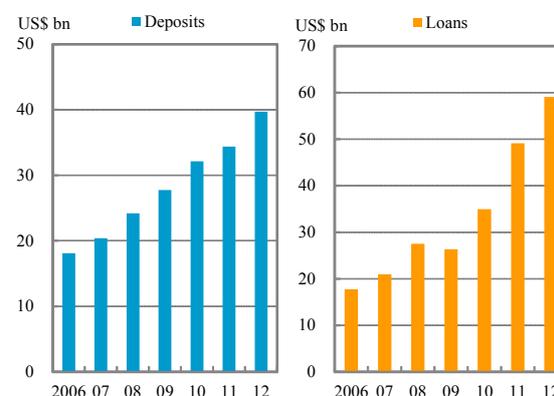
## 2.3 RMB deposit balances continued hitting fresh record highs

As of the end of April 2013, there were 38 domestic banks' OBUs that launched RMB business. RMB deposit balances totaled US\$29.4 billion, growing by 1.39 times compared to the end of the same month in 2012 (Chart B4.4).

## 2.4 Profits ascended to a new record

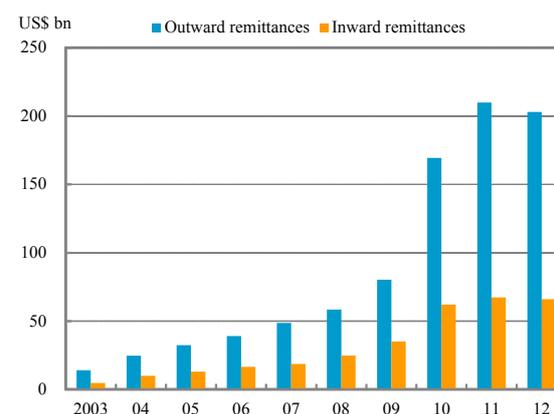
Benefitting from the fast-growing RMB business, the net income before tax earned by domestic banks' OBUs reached US\$1.9 billion (NT\$55.4 billion) in 2012, a record high. Furthermore, the return on assets (ROA) rose to 1.48% (Chart B4.5).

**Chart B4.2 Deposit & loan balances of domestic banks' OBUs**



Source: CBC.

**Chart B4.3 Cross-strait remittance undertaken by domestic banks' OBUs**



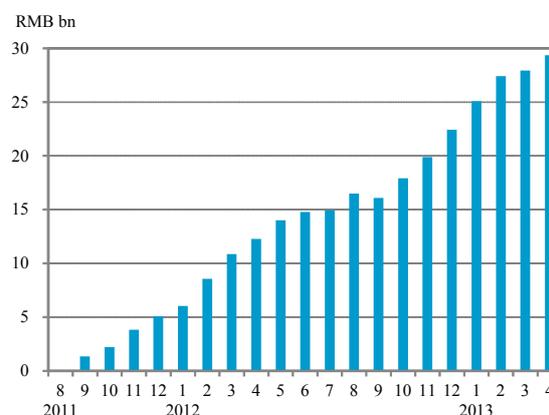
Source: CBC.

### 3. The future development of offshore banking activities

To expand participation in offshore banking activities, the FSC and the CBC jointly proposed a draft on revisions to some articles of the Offshore Banking Act that would authorize securities firms to set up offshore securities units (OSUs) within the territory, allowing them to engage in lines of business that pertain to the securities firms' professional practices, including brokerage, proprietary dealing, and underwriting activities of foreign currency securities. The revised draft has been submitted to the Executive Yuan and forwarded to the Legislative Yuan for deliberation. The Legislative Yuan embarked on the review in March 2013.

Going forward, when securities firms conduct offshore securities business, banks can help deal with the flow of funds to meet the firms' demands for foreign currency funding. For banking institutions and securities firms, both can complement each other in their business functions. This not only broadens the scope and scale of offshore banking activities but also helps Taiwan develop into a regional financial center and concurrently achieves the goal of fostering a Taiwan-centric wealth management platform.

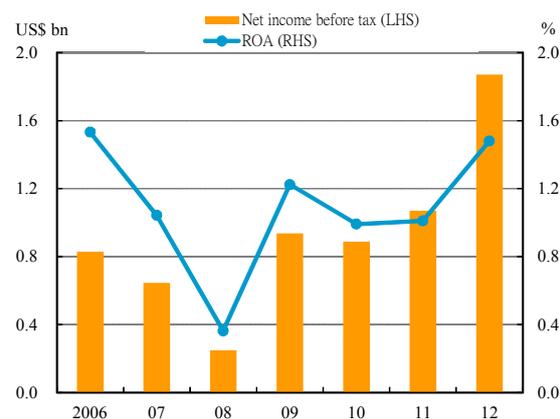
**Chart B4.4 RMB deposits with domestic banks' OBU**



Note: The OBUs were authorized to launch RMB deposit business beginning July 2011.

Source: CBC.

**Chart B4.5 Profitability of domestic banks' OBUs**



Source: CBC.

## Box 5

### Implementation of Basel III in domestic banks in Taiwan

In order to tackle deficiencies in financial supervision exposed during the global financial crisis of 2008-09, the Basel Committee on Banking Supervision (BCBS) has progressively published several documents relating to international capital and liquidity standards for banks since 2010. These standards, collectively known as Basel III, urged national authorities to strengthen microprudential supervision, including increases in the levels and quality of capital, the expansion of the coverage of risk-weighted assets, and the introduction of a leverage ratio and two liquidity ratios. Furthermore, aiming at systemic risks that could be caused by procyclicality and interconnectedness of banking activities, Basel III introduced macroprudential measures, comprising a new capital conservation buffer, a countercyclical capital buffer and an additional capital surcharge for systemically important banks. In Taiwan, the standards will be phased in beginning 2013, with full implementation as of 1 January 2019.

With a view to raising the risk-bearing capacity and international competitiveness of domestic banks, and in compliance with global regulatory reforms, the Financial Supervisory Commission (FSC), referring to Basel III, revised the Regulations Governing the Capital Adequacy and Capital Category of Banks in November 2012, effective from January 2013. Summarized below are the contents of Basel III-related regulations in Taiwan and the work to be further promoted in the future.

#### *1. Contents of the capital adequacy regulations in Taiwan*

The new capital adequacy regulations are Basel III compliant in principle but fine-tuned according to the operational characteristics of banks in Taiwan. Key points are as follows:

##### **1.1 Raising capital quality**

The FSC, referring to the Basel III capital standards, introduced the definition of common equity Tier 1 capital, amended the requirements of non-common equity Tier 1 capital and Tier 2 capital (including bail-in provisions),<sup>1</sup> and removed the category of Tier 3 capital from the regulations. Additionally, those capital instruments that were issued before 12 September 2010 and not qualified as non-common equity Tier 1 capital and Tier 2 capital will be required to be phased out beginning January 2013 by setting a cap of 90% of the nominal amount of these instruments in 2013 and reducing the cap by 10 percentage points in each subsequent year.

## 1.2 Lifting capital levels

The regulations introduce a capital conservation buffer and incorporate it into minimum regulatory capital standards. Furthermore, the regulations set out the minimum capital requirements during the transition period for each year of 2013-2019 and specify that the common equity, Tier 1 capital and capital adequacy ratios should be no less than 7%, 8.5% and 10.5%, respectively, commencing 2019 (Table B5.1).

## 1.3 Introducing a leverage ratio

The minimum leverage ratio is set at 3% during the period of parallel run testing between 2013 and 2018. The ratio requirement will be formally implemented on 1 January 2018.

## 1.4 Introducing a countercyclical capital buffer

In order to avoid the occurrence of systemic risks, the FSC will consult with the CBC and other relevant agencies, when necessary, to impose on banks an additional provision of countercyclical capital buffers of up to 2.5%.

**Table B5.1 Minimum capital requirements and transition period**

Items	2013	2014	2015	2016	2017	2018	2019 onwards
Capital adequacy ratio (%)	8.0	8.0	8.0	8.625	9.25	9.875	10.5
Tier1 capital ratio (%)	4.5	5.5	6.0	6.625	7.25	7.875	8.5
Common equity ratio (%)	3.5	4.0	4.5	5.125	5.75	6.375	7.0

Source: CBC.

## 2. Future work to be further promoted

Based on the timeline set out by the BCBS, Taiwan will phase in Basel III capital requirements beginning 2013. Nevertheless, with the major contents of implementation focused on microprudential dimensions, capital requirements related to macroprudential dimensions will also need to be strengthened, and liquidity ratio regulations should, therefore, be deliberated and laid down.

### 2.1 Considering the operational mechanisms of a countercyclical capital buffer

Article 5 of the Regulations Governing the Capital Adequacy and Capital Category of Banks provides the legal basis for implementing countercyclical capital buffers. However, the relevant guidelines and operational mechanisms of a capital buffer have not

been stipulated. In view of the fact that a countercyclical capital buffer is within the scope of macroprudential supervision and highly pertinent to the CBC's credit policy, the CBC will promote relevant study and cooperate with the FSC in the stipulation of provisioning criteria and regulations that are applicable to the domestic banking system.

## **2.2 Imposing additional supervisory requirements on systemically important domestic banks to reduce potential risks**

In November 2011, the BCBS issued a final version of the document - Global Systemically Important Banks (G-SIBs): Assessment Methodology and the Additional Loss Absorbency Requirement. Subsequently, the Financial Stability Board (FSB) published a list of G-SIBs<sup>2</sup> and suggested that national authorities should identify their domestic systemically important banks (D-SIBs) and adopt appropriate policy measures to mitigate their negative externalities.<sup>3</sup>

Domestic banks in Taiwan were not included in the list of G-SIBs. Nevertheless, the authority will adopt additional supervisory measures for local banks that possibly could induce systemic risks, so as to improve their loss absorbency ability and reduce potential impacts.

## **2.3 Deliberating on the liquidity ratio regulations**

The BCBS introduced two liquidity ratios: the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). Both ratios are currently being observed and under adjustment and expected to be implemented from 2015 and 2018, respectively.<sup>4</sup> In line with the timeline for the implementation of liquidity ratios set out by the BCBS, the FSC and the CBC, weighing the Basel III standards and the domestic practices of banks' liquidity management, have actively embarked on deliberations related to the liquidity regulations applicable to domestic banks.

- Notes: 1. The bail-in provision means that the priority order for the distribution of the earnings and assets of the holder of non-common equity Tier 1 and Tier 2 capital instruments is the same as that of a common stock holder when the relevant authority assigns officials to take conservatorship over the issuing bank, orders such a bank to suspend and wind up business, or liquidates the bank.
2. The FSB published an initial list of 29 banking groups identified as G-SIBs in November 2011. It updated the list in November 2012, indicating the number of G-SIBs was reduced to 28. See FSB (2012), *Update of group of global systemically important banks*, November 1.
3. BCBS (2012), *A Framework for dealing with domestic systemically important banks*, October.
4. The BCBS introduced standards on LCR and NSFR in December 2010. Subsequently, taking into account their latent impacts on financial markets, credit supply and economic growth, it revised the calculation of LCR in January 2013. The revised standards will adopt a phase-in

arrangement that introduces the LCR as planned on 1 January 2015, but with the minimum requirement set at 60%. This will then rise by 10 percentage points per annum to reach 100% on 1 January 2019.

## 3.3 Financial infrastructure

### 3.3.1 Payment and settlement systems

#### Overview of systemically important payment systems in 2012

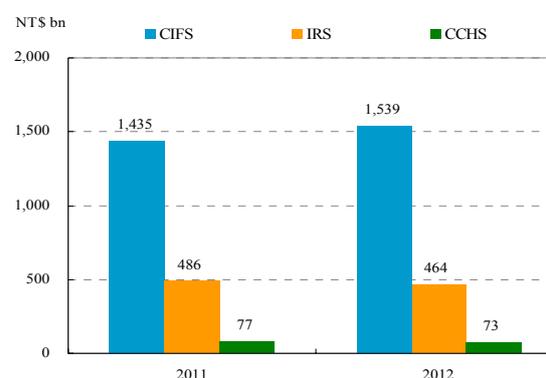
The three systemically important payment systems (SIPs), which process domestic interbank payments, operated soundly in 2012. Compared to the previous year, the average daily transaction value of the CBC Interbank Funds-Transfer System (CIFS) increased while those of the others declined slightly (Chart 3.52). In addition, the CIFS, which handles large payments and the final settlement of interbank fund transfers, continued to be the most important one, with average daily transaction value reaching NT\$1.54 trillion and accounting for 74% of the total.

#### Reinforcing the risk management of check clearing

When institutions participating in the check clearing system are unable to fulfill their clearing and settlement obligations, it will bring unexpected liquidity and credit risks to other participating institutions and, in turn, might cause systemic risks. To control check clearing and settlement risks, the CBC urged the Taiwan Clearing House (TCH) to establish a risk control mechanism in order to ensure the completion of intraday clearing when any of the participating institutions is unable to make their payments.

To induce the TCH to fulfill its responsibilities of check clearing and settlement based on the above-mentioned risk control mechanism, the CBC allowed the TCH to open a transitional settlement account with the CBC so as to settle the net amounts of check settlements and monitor operations simultaneously. Accordingly, the TCH applied to the CBC for settlement accounts in January 2013 and has settled the net amounts of check clearing and settlement through the designated accounts since 25 February of the same year.

**Chart 3.52 Average daily transaction value of the three SIPs**

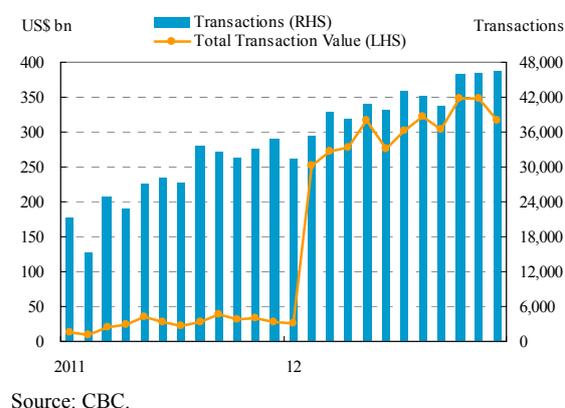


Source: CBC.

### Establishment of the foreign currency payment system

To assist the establishment of a domestic US dollar bills market and protect customer interests, the CBC promoted the setting up of a domestic US dollar settlement system in September 2008. Mega International Commercial Bank (Mega Bank) was designated by the Bankers Association as the sole domestic US dollar settlement bank. The new US dollar settlement system officially started in December 2010, with the benefits of effectively shortening the time of remittance and reducing remittance fees when local US dollar remittance would no longer need to be processed by foreign correspondent banks. In 2012, the US dollar settlement system processed 490 thousand transactions with a total value of US\$3.36 trillion, significantly increasing by 47.24% and ten times, respectively, over the previous year. It was mainly contributed to by the inclusion of NTD/USD currency swaps between the CBC and commercial banks since February 2012 (Chart 3.53).

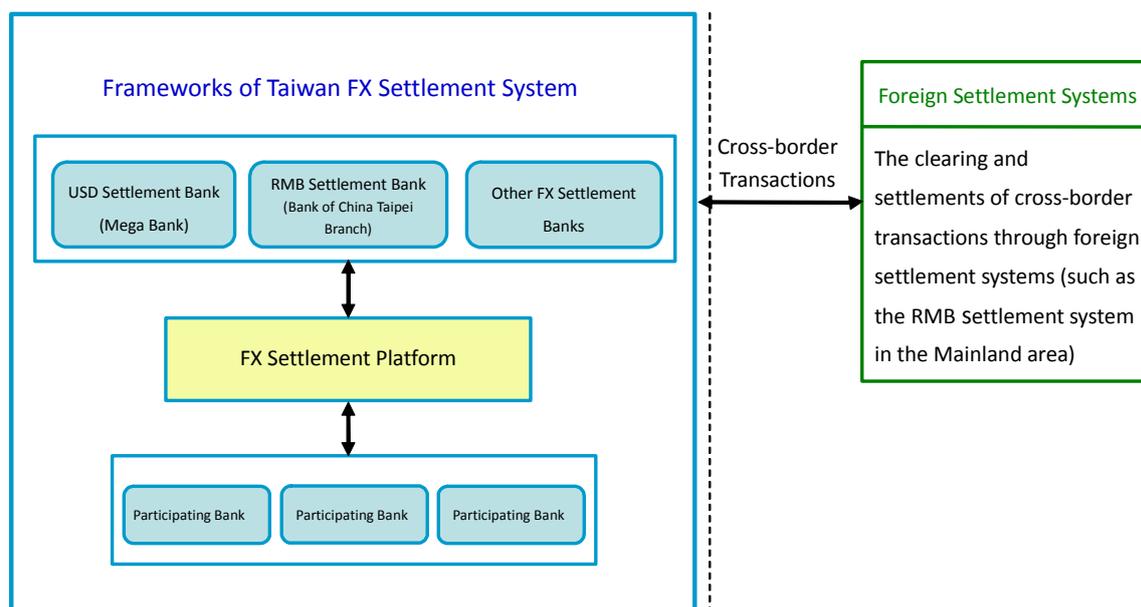
Chart 3.53 Average daily transaction value of the three SIPs



In addition, to reinforce domestic financial infrastructure, the CBC planned to encourage the Financial Information Service Co., Ltd. to establish a foreign exchange (FX) settlement platform that would meet international standards (Chart 3.54). The new platform was launched on 1 March 2013 and only US dollar remittance was included in the platform in the initial stage. However, domestic and cross-border RMB remittance services would be provided by the end of July, and the settlement of other FX transactions will be put into consideration in the next stage. The contributions of the platform are as follows:

- Effectively using financial resources and achieving economies of scale as the settlements of US dollar, RMB and other FX transactions are processed on one platform.
- Maintaining competition fairness by preventing the settlement banks from accessing the client information of participating banks, as the FX transactions of participating banks are handled by the FX settlement platform which acts as an intermediary.
- Meeting international standards and dealing with both domestic and foreign FX payment transactions (including cross-border RMB remittance) at the same time, so as to help the development of the domestic financial services industry.

Chart 3.54 Framework of FX Settlement Systems



Source: CBC.

### 3.3.2 Cross-Strait Currency Clearing Mechanism inaugurated and designated foreign exchange banks allowed to begin renminbi business

Taiwan's Straits Exchange Foundation and Mainland China's Association for Relations across the Taiwan Straits jointly signed the Cross-Strait Financial Cooperation Agreement on 26 April 2009. In terms of monetary management under the agreement, the monetary supervision authorities on both sides made efforts regarding several cooperative issues such as cash notes exchange and supply, and also took steps to develop a cross-strait currency clearing mechanism in order to strengthen mutual cooperation in monetary management. To promote cross-strait business activities and financial cooperation, the CBC and the PBC together signed the Memorandum on Cross-Strait Currency Clearing Cooperation on 31 August 2012, and officially established the Cross-Strait Currency Clearing Mechanism.

#### Main contents of Cross-Strait Currency Clearing Mechanism

- Establishing a framework of cross-strait currency clearing and settlement whereby the two central banks separately designate one currency clearing institution to provide corresponding currency settlement and clearing services in accordance with the relevant

laws and regulations of both sides.

- Building up a supervisory cooperation mechanism between the two central banks, including information exchange, protection of confidentiality, business examination, crisis management, and communication mechanisms, etc.

### **History of development**

After the signing of the Memorandum on Cross-Strait Currency Clearing Cooperation, the CBC and the PBC actively moved on to the designation of each side's clearing bank and the signing of a currency clearing agreement (Table 3.3 and 3.4). Finally, DBUs in Taiwan officially launched their onshore renminbi business centers on 6 February 2013, and the Shanghai branch of the Bank of Taiwan (BOT), the NTD settlement bank in the mainland area, commenced the business of exchanging NT dollar banknotes on 2 April 2013.

As of 30 April 2013, 58 local banks had inaugurated renminbi business, taking in deposits totaling RMB 24.7 billion and processing 12,888 remittances amounting to RMB 6.4 billion through the Bank of China's (BOC) Taipei branch.

### **Expected benefits and future prospects**

The establishment of the Cross-Strait Currency Clearing Mechanism is an epoch-making action, bringing great advantages for domestic financial institutions, enterprises, individuals and the development of the whole financial industry. The benefits are summarized as follows:

- Increasing the options of currencies used in cross-strait trade and raising the flexibility of fund management for corporations.
- Helping the government to promote the Program to Develop Financial Services with Cross-Strait Characteristics and meeting the growing needs for wealth management, including the provision of renminbi business, the issue of renminbi bonds and other renminbi-denominated products by financial institutions.
- Allowing overseas financial institutions to participate in the mechanism, which is beneficial for Taiwan to become an offshore center for renminbi transactions.

In addition, to provide adequate renminbi liquidity, the CBC has begun preliminary discussions with the PBC on the establishment of a reciprocal currency swap agreement which is scheduled for further cooperation.

**Table 3.3 Development history of renminbi business in Taiwan**

Date	Development History
2012.12.11	The PBC designated the Taipei branch of the BOC as the renminbi clearing bank in Taiwan.
2013.1.25	The PBC and the BOC Taipei branch signed the renminbi clearing agreement.
2013.1.28	The CBC approved the application of the BOC Taipei branch to be the renminbi clearing bank in Taiwan.
2013.1.30	The CBC and the BOC Taipei branch jointly held a seminar on the regulations governing renminbi business and renminbi clearing.
2013.2.6	Authorized foreign exchange banks (DBUs) in Taiwan started offering renminbi-related business services, in line with public expectations of business commencement before the Lunar New Year holidays.
2013.2.8	The CBC approved Chinatrust Commercial Bank to issue renminbi-denominated bonds (Formosa bonds) in Taiwan, with a total amount of RMB 1 billion, a term of three years, and a coupon rate of 2.9%.
2013.3.11	The CBC approved Deutsche Bank AG to issue renminbi-denominated bonds (Formosa bonds) in Taiwan, with a total amount of no more than RMB 2 billion, the coupon rates ranged from 1.5% to 2.5% for three-year bonds and from 1.6% to 2.7% for five-year bonds, respectively.

Source: CBC.

**Table 3.4 Development history of NT dollar business in the mainland area**

Date	Development History
2012.9.17	The CBC selected the BOT Shanghai branch as the NT dollar clearing bank in the mainland area.
2013.1.4	The CBC approved the designation of the BOT Shanghai branch as the NT dollar clearing bank in the mainland area.
2013.1.9	The CBC approved the export and import of NT dollar banknotes.
2013.2.4	Mainland China's State Administration of Foreign Exchange approved the import and export of NT dollar banknotes.
2013.4.2	The BOT Shanghai branch commenced the business of exchanging NT dollar banknotes.

Source: CBC.

### 3.3.3 Securities firms permitted to set up OSUs

In order to attract Taiwanese overseas funds to flow back to Taiwan, as well as effectively utilizing the capital and credibility of parent securities firms to broaden the participation of the international financial business in Taiwan, the government proposed a project termed the Money Management Platform for Taiwanese Citizens, permitting securities firms to conduct offshore securities business. Accordingly, the FSC, jointly with the CBC, drew up the draft of the amended Offshore Banking Act to authorize securities firms to establish OSUs to conduct offshore securities business. The amended Act will grant tax preference to the OSUs, with reference to the taxation of OBUs, and formulate relevant supervisory regulations to be comparable to existing relevant laws governing securities-related activities. The key amendments to the Offshore Banking Act are summarized in Table 3.5.

The Legislative Yuan has been reviewing the above-mentioned draft of the Offshore Banking Act since March 2013, after receiving it from the Executive Yuan on 29 January that year. It is expected that the legislation of the amended Offshore Banking Act will contribute to promoting Taiwan as a regional financial center, and fulfill the goal of Money Management Platform for Taiwanese Citizens simultaneously. In addition, it will be conducive to bolstering economic growth and increasing employment opportunities, as well as cultivating and attracting international financial professionals.

**Table 3.5 Key points of the amended Offshore Banking Act**

Key amendments	Contents
1. Securities firm qualifications	A securities firm that is a securities underwriter, securities dealer and securities broker at the same time, according to Article 16 of the Securities and Exchange Act, may, through their head office, apply to the competent authorities to obtain approval for the establishment of an OSU with a separate set of accounts to conduct offshore securities business within the territory of the R.O.C.
2. Scope of offshore securities business	<ol style="list-style-type: none"> <li>1. Selling foreign currency corporate bonds or other certificates of debt issued by head offices to natural persons, juridical persons, government agencies and financial institutions within or outside the territory of the R.O.C;</li> <li>2. Undertaking brokerage, intermediation and agency activities of foreign currency securities or other foreign currency financial products approved by the competent authorities for natural persons, juridical persons, government agencies and financial institutions within or outside the territory of the R.O.C;</li> <li>3. Borrowing or lending, and buying or selling foreign currency securities or other foreign currency financial products approved by the competent authorities, by virtue of securities activities, between the mentioned OSU and other financial institutions, or between the mentioned OSU and natural persons, juridical persons, government agencies and financial institutions outside the territory of the R.O.C;</li> <li>4. Underwriting securities issued outside the territory of the R.O.C;</li> <li>5. Conducting account custody, agency and consultation business related to the above-mentioned business for natural persons, juridical persons, government agencies and financial institutions within or outside the territory of the R.O.C;</li> <li>6. Conducting consultation business of asset allocation or financial planning as well as sales services of foreign currency securities or other foreign currency financial products approved by the competent authorities, commissioned by natural persons, juridical persons, government agencies and financial institutions within or outside the territory of the R.O.C;</li> <li>7. Other foreign exchange business related to securities activities, approved by the competent authorities.</li> </ol>
3. Authorizing a branch office to handle the OSU's business	1. The OSU may authorize a branch office of its parent firm, which has been approved by the CBC to undertake foreign exchange business related to securities activities, to handle the above-mentioned business. Such business handled by the branch office should be booked in the OSU.

	2. The business authorized to be handled by the branch office includes cross-straits securities activities approved by the competent authorities. The OSU should handle the control and supervision of such activities in accordance with the regulations related to cross-strait securities activities, and should coordinate as well as be responsible for such control and supervision.
4. Authorizing the competent authorities to draft the relevant regulations	<ol style="list-style-type: none"> <li>1. The restrictions prescribed in the Foreign Exchange Control Act and the Securities and Exchange Act, except those stipulated specially in the Offshore Banking Act, do not apply to the above-mentioned business undertaken by OSUs.</li> <li>2. The finance, business, funding, risk management and the terms as well as aggregate outstanding of call loans or borrowing from other financial institutions of the OSU, and the regulations governing the selling or buying of foreign currency and other items between the foreign exchange business designated bank, offshore banking unit or offshore financial institution, shall be drafted by the FSC jointly with the CBC.</li> </ol>
5. Tax exemption	<ol style="list-style-type: none"> <li>1. The business of the OSU shall be exempt from business income tax, business tax and stamp duties; however, income, revenues and certificates derived from transactions with natural persons, juridical persons, government agencies and financial institutions within the territory of the R.O.C. shall be subject to taxation or exemption stipulated in the relevant tax laws.</li> <li>2. Interest paid by the OSU to financial institutions, natural persons, juridical persons or government agencies outside the territory of the R.O.C and income derived from the transactions of structured products, shall be exempt from withholding tax.</li> <li>3. The above-mentioned tax exemption period will be fifteen years from the time the amended articles of the Offshore Banking Act become effective.</li> </ol>

Source: CBC.

### **3.3.4 Major financial institutions and listed companies started to compile financial reports in accordance with the IFRSs from 2013**

The FSC announced the International Financial Reporting Standards (IFRSs) adoption roadmap on 14 May 2009, containing a two-phase mandatory adoption<sup>72</sup> of IFRSs and early use of IFRSs. Listed companies and major financial institutions supervised by the FSC, which are the first-phase adopters, should prepare financial statements in accordance with IFRSs from 1 January 2013. The final adoption version of IFRSs would follow the Traditional Chinese version of the 2010 edition issued by the FSC.

While financial statements under the IFRSs have the following characteristics, those who might read such financial reports should pay close attention to the following:

<sup>72</sup> First-phase adopters, including the companies listed in the stock exchange, OTC market or emerging stock markets and financial institutions supervised by the FSC (except for credit cooperatives, credit card companies, insurance brokers and insurance agents), will be required to prepare IFRSs financial statements from 2013. As for second-phase adopters, including unlisted public companies, credit cooperatives and credit card companies, they should apply IFRSs from 2015.

- Consolidated financial reports will be the main focus of disclosure requirements as they display integrated operating results of group enterprises more completely.
- The IFRSs adopt fair value measurement principles, which could better present enterprises' operating performances and enhance financial transparency, but might result in more volatile revenues in the reports.
- The IFRSs are principle-based rather than rule-based accounting standards. Report readers should be aware of the relevant notes disclosed in financial statements, such as the selection of significant accounting policies, crucial accounting estimates and valuation methods, in order to improve their understanding of enterprise value.